AWS B2.1/B2.1M-BMG:2026

Base Metal Grouping for Welding Procedure and Performance Qualification

American Welding Society®

AWS B2.1/B2.1M-BMG:2026

Base Metal Grouping for Welding Procedure and Performance Qualification

5th Edition

Revises AWS B2.1/B2.1M-BMG:2021

Prepared by the
American Welding Society (AWS) B2 Committee on Procedure and Performance Qualification

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This document provides the AWS base metal grouping for welding procedure and performance qualification and is identical to Annex C of AWS B2.1/B2.1M:2026, Specification for Welding Procedure and Performance Qualification.

American Welding Society®

ISBN Print: 978-1-64322-396-4
ISBN PDF: 978-1-64322-467-1
©2026 by American Welding Society
All rights reserved
Printed in the United States of America

Photocopy Rights. No portion of this standard may be reproduced, stored in a retrieval system, or transmitted in any form, including mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner.

Authorization to photocopy items for internal, personal, or educational classroom use only or the internal, personal, or educational classroom use only of specific clients is granted by the American Welding Society provided that the appropriate fee is paid to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, tel: (978) 750-8400; Internet: www.copyright.com.

Statement on the Use of American Welding Society Standards

All standards (codes, specifications, recommended practices, methods, classifications, and guides) of the American Welding Society (AWS) are voluntary consensus standards that have been developed in accordance with the rules of the American National Standards Institute (ANSI). When AWS American National Standards are either incorporated in, or made part of, documents that are included in federal or state laws and regulations, or the regulations of other governmental bodies, their provisions carry the full legal authority of the statute. In such cases, any changes in those AWS standards must be approved by the governmental body having statutory jurisdiction before they can become a part of those laws and regulations. In all cases, these standards carry the full legal authority of the contract or other document that invokes the AWS standards. Where this contractual relationship exists, changes in or deviations from requirements of an AWS standard must be by agreement between the contracting parties.

AWS American National Standards are developed through a consensus standards development process that brings together volunteers representing varied viewpoints and interests to achieve consensus. While AWS administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy of any information or the soundness of any judgments contained in its standards.

AWS disclaims liability for any injury to persons or to property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, or reliance on this standard. AWS also makes no guarantee or warranty as to the accuracy or completeness of any information published herein.

In issuing and making this standard available, AWS is neither undertaking to render professional or other services for or on behalf of any person or entity, nor is AWS undertaking to perform any duty owed by any person or entity to someone else. Anyone using these documents should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. It is assumed that the use of this standard and its provisions is entrusted to appropriately qualified and competent personnel.

This standard may be revised, corrected through publication of amendments or errata, or supplemented by publication of addenda. Information on the latest editions of AWS standards including amendments, errata, and addenda is posted on the AWS web page (www.aws.org). Users should ensure that they have the latest edition, amendments, errata, and addenda.

Publication of this standard does not authorize infringement of any patent or trade name. Users of this standard accept any and all liabilities for infringement of any patent or trade name items. AWS disclaims liability for the infringement of any patent or product trade name resulting from the use of this standard.

AWS does not monitor, police, or enforce compliance with this standard, nor does it have the power to do so.

Official interpretations of any of the technical requirements of this standard may only be obtained by sending a request, in writing, to the appropriate technical committee. Such requests should be addressed to the American Welding Society, Attention: Director, Standards Committee Operations, 8669 NW 36 St, #130, Miami, FL 33166 (see Annex I). With regard to technical inquiries made concerning AWS standards, oral opinions on AWS standards may be rendered. These opinions are offered solely as a convenience to users of this standard, and they do not constitute professional advice. Such opinions represent only the personal opinions of the particular individuals giving them. These individuals do not speak on behalf of AWS, nor do these oral opinions constitute official or unofficial opinions or interpretations of AWS. In addition, oral opinions are informal and should not be used as a substitute for an official interpretation.

This standard is subject to revision at any time by the AWS B2 Committee on Procedure and Performance Qualification. It must be reviewed every five years, and if not revised, it must be either reaffirmed or withdrawn. Comments (recommendations, additions, or deletions) and any pertinent data that may be of use in improving this standard are requested and should be addressed to AWS Headquarters. Such comments will receive careful consideration by the AWS B2 Committee on Procedure and Performance Qualification and the author of the comments will be informed of the Committee's response to the comments. Guests are invited to attend all meetings of the AWS B2 Committee on Procedure and Performance Qualification to express their comments verbally. Procedures for appeal of an adverse decision concerning all such comments are provided in the Rules of Operation of the Technical Activities Committee. A copy of these Rules can be obtained from the American Welding Society, 8669 NW 36 St, #130, Miami, FL 33166.

This page is intentionally blank.

Personnel

AWS B2 Committee on Procedure and Performance Qualification

A. Anderson, Chair	*ITW—Miller Electric Manufacturing Company*
T. A. Davenport, Vice Chair	*PPCP Inc.*
M. E. Barrett, 2nd Vice Chair	*Westinghouse Electric Company*
J. Padron, Secretary	*American Welding Society*
J. Alston	*Jefferson Lab*
J. P. Bell	*Yates Construction*
D. T. Braun	*Southside Virginia Community College*
M. W. Bumgarner	*Bumgarner Consulting LLC*
H. R. Castner	*Retired*
M. C. Cook	*ACME Constructors, Inc.*
J. L. Cooley	*YMC Mechanical*
C. R. Cross	*The Lincoln Electric Company*
J. D. Farren	*Office of Naval Research*
B. T. Guy	*Illinois Tools Works*
M. Herrle	*Consultant*
P. Kumar	*Special Technical Services*
D. Mata	*Kiewit Nuclear Solutions*
L. D. Melendez	*TC Energy*
T. C. Mueller	*Synergistic Technical Solutions Ltd.*
J. L. Pasqua	*Salco Products*
F. M. Rice	*Tincher's Welding, LLC*
A. B. Rigato	*Pacific Northwest National Laboratory*
W. M. Ruof	*Bechtel Plant Machinery, Inc.*
J. J. Sekely	*Welding Services, Inc.*
M. L. Thomas	*Rocky Mountain Testing, LLC*
R. K. Wiswesser	*Welder Training and Testing Institute, Inc.*

Advisors to the AWS B2 Committee on Procedure and Performance Qualification

B. W. Beckman	*International Training Institute*
M. Bernasek	*C-Spec*
B. J. Hable	*Consultant*
K. Y. Lee	*DNV*
B. B. MacDonald	*Consultant*
T. A. Mihalik	*International Training Institute*
C. D. Morell	*QSAI*
A. W. Sindel	*TRC*
W. J. Sperko	*Sperko Engineering Services, Inc*
R. F. Waite	*Robert F. Waite, PE PC*
G. M. Wisbrock	*Consultant*

AWS B2B Subcommittee on Welding Qualification

T. A. Davenport, Chair	*PPCP Inc.*
M. C. Cook, Vice Chair	*ACME Constructors, Inc.*

J. Padron, Secretary	*American Welding Society*
J. Alston	*Jefferson Lab*
A. Anderson	*ITW—Miller Electric Manufacturing Company*
M. E. Barrett	*Westinghouse Electric Company*
J. P. Bell	*Yates Construction*
D. T. Braun	*Southside Virginia Community College*
M. W. Bumgarner	*Bumgarner Consulting LLC*
H. R. Castner	*Retired*
J. L. Cooley	*YMC Mechanical*
J. D. Farren	*Office of Naval Research*
J. Hernandez	*SBC Global*
T. C. Mueller	*Synergistic Technical Solutions Ltd.*
J. L. Pasqua	*Salco Products*
A. B. Rigato	*Pacific Northwest National Laboratory*
J. J. Sekely	*Welding Services, Inc.*
M. L. Thomas	*Rocky Mountain Testing, LLC*
R. K. Wiswesser	*Welder Training and Testing Institute, Inc.*

Advisors to the AWS B2B Committee on Welding Qualification

B. W. Beckman	*International Training Institute*
M. Bernasek	*C-Spec*
B. J. Hable	*Consultant*
K. Y. Lee	*DNV*
A.S. Luby	*Moraine Park Technical College*
T. A. Mihalik	*International Training Institute*
C. D. Morell	*QSAI*
A. W. Sindel	*TRC*
W. J. Sperko	*Sperko Engineering Services, Inc*
G. Trepus	*Boeing Research and Technology*
G. M. Wisbrock, Jr.	*Consultant*

AWS B2C Subcommittee on Materials

M. Bernasek, Chair	*C-Spec*
J. Padron, Secretary	*American Welding Society*
A. Anderson	*ITW—Miller Electric Manufacturing Company*
J. L. Cooley	*YMC Mechanical*
J. D. Farren	*Office of Naval Research*
M. F. Herrle	*Arise*
A. B. Rigato	*Pacific Northwest National Laboratory*
W. M. Ruof	*Bechtel Plant Machinery, Inc.*

Advisors to the AWS B2C Committee on Materials

C. E. Cross	*Los Alamos National Laboratory*
A. Donlevy	*International Titanium Association*
B. J. Hable	*Consultant*
P. Pollak	*Pollak & Associates*
L. T. Vernam	*AlcoTec Wire Corporation*
G. M. Wisbrock, Jr.	*Consultant*

Table of Contents

Page No.

Personnel v
List of Tables viii

1. Scope 1

Annex C (Normative)—Base Metal Grouping 3
Annex I (Informative)—Requesting an Official Interpretation on an AWS Standard 141
Annex J (Informative)—Guidelines for Requesting Adoption of New Materials Under the AWS B2.1 Standard . . . 143

List of AWS Documents on Welding Procedure and Performance Qualification. 147

List of Tables

Table		Page No.
C.1	Listing of Base Metal Specifications—Ferrous Alloys	4
C.1	Listing of Base Metal Specifications—Nonferrous Alloys	42
C.2	M-Number Listing of Base Metals—Ferrous Alloys	63
C.2	M-Number Listing of Base Metals—Nonferrous Alloys	96
C.3	Listing of Base Metal Specifications—Iron Castings	124
C.4	Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys	126

Base Metal Grouping for Welding Procedure and Performance Qualification

1. Scope

This publication is an extract of AWS B2.1/B2.1M:2026, Specification for Welding Procedure and Performance Qualification, and is identical to Annex C, Base Metal Grouping, in the 2026 edition of that standard. This publication revises AWS B2.1/B2.1M-BMG:2021. Underlined text or a vertical line in the margin indicates a revision from the 2021 edition.

This publication may be referred to by other codes and standards that have welding procedure and performance requirements in order to avoid duplication of materials tables in those publications.

Base metals and filler metals have been grouped into categories that will minimize the number of qualification tests required. Substitution of one base metal or filler metal for another, even when within the allowable rules, should only be made after an evaluation of the factors involved. For some materials, additional tests may be required. Materials not listed require separate qualification.

This page is intentionally blank.

Annex C (Normative)
Base Metal Grouping
(see 3, 4.3.12, 4.3.15, and Table 5.3)

This annex is part of this standard and includes mandatory elements for use with this standard.

C1. Base Metal Specifications

Table C.1 indexes ASTM, ABS, API, AS, AS/NZS, CSA, AMS, ISO, NACE, and MSS base metals in numerical order to provide ease of reference when determining into what grouping a particular base metal specification falls.

Table C.2 groups base metals for welding procedure and performance qualification on the basis of mechanical properties, chemical composition, and metallurgical compatibility to minimize the number of welding qualification where this can logically be done.

The column "ISO 15608 Group" in Table C.1 and C.2 is a listing of the assignments of materials in accordance with the grouping criteria of ISO 15608, *Welding — Grouping system for metallic materials*, and it is consistent with the assignments found in ISO/TR 20173, *Grouping systems for materials — American materials*. While this listing is provided as a convenience to users worldwide, it is provided for information only. AWS B2.1 does not refer to this grouping as a basis for establishing the range of base metals qualified for either procedure or performance qualification.

Table C.3 lists base metal specifications for iron castings in accordance with AWS D11.2 groups.

C2. Material Number (M-Number) Groupings

Base metal has been divided into general categories, e.g., Material Numbers (M-Numbers) 1, 1A, 3, 3A, 4, 4A, etc., and further divided into groups within each general category.

The category grouping does not imply that base metals may be substituted for other base metals within the same Material Number (M-Number) without consideration for weldability.

C3. Iron Castings Specifications

Base metal specifications for iron castings are divided into D11.2 groups.

C4. Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications

List of base metal specifications for Standard Welding Procedure Specifications for naval applications—ferrous alloys.

Table C.1
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AAR	AAR M201	1	1	11.1	A	—	Casting
AAR	AAR M201	1	2	11.1	B	—	Casting
AAR	AAR M201	1	3	11.1	B+	—	Casting
AAR	AAR M201	1	4	11.1	C	—	Casting
AAR	AAR TC128	10C	1	11.1	B	—	Plate
ABS	ABS	1	1	1.1	E	K01801	Plate, Bar, Shape
ABS	ABS	1	1	1.1	D	K02101	Plate, Bar, Shape
ABS	ABS	1	1	1.1	B	K02102	Plate, Bar, Shape
ABS	ABS	1	1	1.1	A	K02300	Plate, Bar, Shape
ABS	ABS	1	1	1.2	AH32	K11846	Plate, Bar, Shape
ABS	ABS	1	1	1.2	DH32	K11846	Plate, Bar, Shape
ABS	ABS	1	1	1.2	EH32	K11846	Plate, Bar, Shape
ABS	ABS	1	1	1.2	FH32	K11846	Plate, Bar, Shape
ABS	ABS	1	2	1.2	AH36	K11852	Plate, Bar, Shape
ABS	ABS	1	2	1.2	DH36	K11852	Plate, Bar, Shape
ABS	ABS	1	2	1.2	EH36	K11852	Plate, Bar, Shape
ABS	ABS	1	2	1.2	FH36	K11852	Plate, Bar, Shape
ABS	ABS	1	2	1.3	AH40	K11857	Plate, Bar, Shape
ABS	ABS	1	2	1.3	DH40	K11857	Plate, Bar, Shape
ABS	ABS	1	2	1.3	EH40	K11857	Plate, Bar, Shape
ABS	ABS	1	2	1.3	FH40	K11857	Plate, Bar, Shape
API	API 2H	1	1	1.2	42	—	Plate
API	API 2H	1	2	1.2	50	—	Plate
API	API 2MT1	1	1	1.2	50	—	Plate
API	API 2W	1	1	1.2	50	—	Plate
API	API 2W	1	2	1.3	60	—	Plate
API	API 2Y	1	1	1.2	42	—	Plate
API	API 2Y	1	1	1.2	50	—	Plate
API	API 2Y	1	2	1.2	50T	—	Plate
API	API 2Y	1	2	1.3	60	—	Plate
API	API 5L	1	1	1.1	A25, Cl. I	—	Smls. & Welded Pipe, Tube
API	API 5L	1	1	1.1	A25, Cl. II	—	Smls. & Welded Pipe, Tube
API	API 5L	1	1	1.1	L175 or A25	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L175P or A25P	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L210 or A	—	Smls. & Welded Pipe
API	API 5L	1	1	11.1	L245 or B	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245M or BM	—	Welded Pipe
API	API 5L	1	1	1.1	L245MO or BMO	—	Welded Pipe
API	API 5L	1	1	1.1	L245MS or BMS	—	Welded Pipe
API	API 5L	1	1	1.1	L245N or BN	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245NO or BNO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245NS or BNS	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245Q or BQ	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245QO or BQO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245QS or BQS	—	Smls. & Welded Pipe
API	API 5L	1	1	1.1	L245R or BR	—	Smls. & Welded Pipe
API	API 5L	1	1	11.1	L290 or X42	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290M or X42M	—	Welded Pipe
API	API 5L	1	1	1.2	L290MO or X42MO	—	Welded Pipe
API	API 5L	1	1	1.2	L290MS or X42MS	—	Welded Pipe
API	API 5L	1	1	1.2	L290N or X42N	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290NOor X42NO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290NS or X42NS	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290Q or X42Q	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290QO or X42QO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290QS or X42QS	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L290R or X42R	—	Smls. & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
API	API 5L	1	1	11.1	L320 or X46	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L320M or X46M	—	Welded Pipe
API	API 5L	1	1	1.2	L320MO or X46MO	—	Welded Pipe
API	API 5L	1	1	1.2	L320MS or X46MS	—	Welded Pipe
API	API 5L	1	1	1.2	L320N or X46N	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L320NO or X46NO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L320NS or X46NS	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L320Q or X46Q	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L320QO or X46QO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L320QS or X46QS	—	Smls. & Welded Pipe
API	API 5L	1	1	11.1	L360 or X52	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L360M or X52M	—	Welded Pipe
API	API 5L	1	1	1.2	L360MO or X52MO	—	Welded Pipe
API	API 5L	1	1	1.2	L360MS or X52MS	—	Welded Pipe
API	API 5L	1	1	1.2	L360N or X52N	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L360NO or X52NO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L360NS or X52NS	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L360Q or X52Q	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L360QO or X52QO	—	Smls. & Welded Pipe
API	API 5L	1	1	1.2	L360QS or X52QS	—	Smls. & Welded Pipe
API	API 5L	1	2	11.1	L390 or X56	—	Smls. & Welded Pipe
API	API 5L	1	2	2.1	L390M or X56M	—	Welded Pipe
API	API 5L	1	2	2.1	L390MO or X56MO	—	Welded Pipe
API	API 5L	1	2	2.1	L390MS or X56MS	—	Welded Pipe
API	API 5L	1	2	1.3	L390N or X56N	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L390Q or X56Q	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L390QO or X56QO	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L390QS or X56QS	—	Smls. & Welded Pipe
API	API 5L	1	2	11.1	L415 or X60	—	Smls. & Welded Pipe
API	API 5L	1	2	2.1	L415M or X60M	—	Welded Pipe
API	API 5L	1	2	2.1	L415MO or X60MO	—	Welded Pipe
API	API 5L	1	2	2.1	L415MS or X60MS	—	Welded Pipe
API	API 5L	1	2	1.3	L415N or X60N	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L415Q or X60Q	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L415QO or X60QO	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L415QS or X60QS	—	Smls. & Welded Pipe
API	API 5L	1	2	11.1	L450 or X65	—	Smls. & Welded Pipe
API	API 5L	1	2	2.1	L450M or X65M	—	Welded Pipe
API	API 5L	1	2	2.1	L450MO or X65MO	—	Welded Pipe
API	API 5L	1	2	2.1	L450MS or X65MS	—	Welded Pipe
API	API 5L	1	2	3.1	L450Q or X65Q	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L450QO or X65QO	—	Smls. & Welded Pipe
API	API 5L	1	2	3.1	L450QS or X65QS	—	Smls. & Welded Pipe
API	API 5L	1	3	11.1	L485 or X70	—	Smls. & Welded Pipe
API	API 5L	1	3	2.2	L485M or X70M	—	Welded Pipe
API	API 5L	1	3	2.2	L485MO or X70MO	—	Welded Pipe
API	API 5L	1	3	2.2	L485MS or X70MS	—	Welded Pipe
API	API 5L	1	3	3.1	L485Q or X70Q	—	Smls. & Welded Pipe
API	API 5L	1	3	3.1	L485QO or X70QO	—	Smls. & Welded Pipe
API	API 5L	1	3	3.1	L485QS or X70QS	—	Smls. & Welded Pipe
API	API 5L	1	4	2.2	L555M or X80M	—	Welded Pipe
API	API 5L	1	4	2.2	L555MO or X80MO	—	Welded Pipe
API	API 5L	1	4	3.1	L555Q or X80Q	—	Smls. & Welded Pipe
API	API 5L	1	4	3.1	L555QO or X80QO	—	Smls. & Welded Pipe
API	API 5LS	1	1	11.1	X46	—	Spiral Welded Pipe
AS	AS 1448	1	1	1.1	K3	—	Forging
AS	AS 1448	1	2	11.2	K4	—	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AS	AS 1448	1	2	11.2	K5	—	Forging
AS	AS 1448	1	3	11.2	K6	—	Forging
AS	AS 1448	1	1	1.2	K8	—	Forging
AS	AS 1448	1	2	1.2	K9	—	Forging
AS	AS 1448	1	3	11.1	K10	—	Forging
AS	AS 1448	1	1	1.1	S1	—	Forging
AS	AS 1448	1	1	1.1	S3	—	Forging
AS	AS 1448	1	2	11.2	S4	—	Forging
AS	AS 1448	1	2	11.2	S5	—	Forging
AS	AS 1448	1	3	11.2	S6	—	Forging
AS	AS 1548	1	2	1.2	5-490	—	Plate
AS	AS 1548	1	1	1.2	7-430	—	Plate
AS	AS 1548	1	1	1.2	7-460	—	Plate
AS	AS 1548	1	2	1.2	7-490	—	Plate
AS	AS 1548	1	1	1.2	PT430	—	Plate
AS	AS 1548	1	1	1.2	PT460	—	Plate
AS	AS 1548	1	2	1.2	PT490	—	Plate
AS/ASME	AS or SA/AS 1548	1	1	1.1	PT430	—	Plate
AS/ASME	AS or SA/AS 1548	1	1	1.1	PT460	—	Plate
AS/ASME	AS or SA/AS 1548	1	2	1.2	PT490	—	Plate
AS	AS 4728	1	1	1.1	200 L0	—	E.R.W. Pipe
AS	AS 4728	1	1	1.1	240 L0	—	E.R.W. Pipe
AS	AS 4728	1	1	1.2	290 L0	—	E.R.W. Pipe
AS	AS A945	1	2	1.2	50	—	Plate
AS	AS A945	1	2	1.3	65	—	Plate
AS/NZS	AS/NZS 1594	1	1	1.1	HA1	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.1	HA3	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.1	HA4N	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.1	HA200	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.1	HA250	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.1	HA250/1	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.2	HA300	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.2	HA300/1	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.2	HA350	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	2.1	HA400	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.1	HU250	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.2	HU300	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.2	HU300/1	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.4	HW350	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	1.2	XF300	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	1	2.1	XF400	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 1594	1	3	2.2	XF500	—	Plate, Sheet, Strip
AS/NZS	AS/NZS 3597	11B	—	3.1	700PV	—	Plate
AS/NZS	AS/NZS 3678	1	1	1.1	200	—	Plate
AS/NZS	AS/NZS 3678	1	1	1.2	250	—	Plate
AS/NZS	AS/NZS 3678	1	1	1.2	250L15	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.2	300	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.2	300L15	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.2	350	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.2	350L15	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.3	400	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.3	400L15	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.3	450	—	Plate
AS/NZS	AS/NZS 3678	1	2	1.3	450L15	—	Plate
AS/NZS	AS/NZS 3678	3	1	1.4	WR350	—	Plate
AS/NZS	AS/NZS 3678	3	1	1.4	WR350L0	—	Plate
AS/NZS	AS/NZS 3679.1	1	1	1.1	250	—	Bar, Section

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AS/NZS	AS/NZS 3679.1	1	1	1.1	250L0	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	1	1.1	250L15	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.2	300	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.2	300L0	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.2	300L15	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.2	350	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.2	350L0	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.2	350L15	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.3	400	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.3	400L0	—	Bar, Section
AS/NZS	AS/NZS 3679.1	1	2	1.3	400L15	—	Bar, Section
ASTM	A27	1	2	1.1	70-40	J02501	Casting
ASTM	A27	1	1	11.1	60-30	J03000	Casting
ASTM	A27	1	1	1.1	U-60-30	J03000	Casting
ASTM	A27	1	1	11.1	65-35	J03001	Casting
ASTM	A27	1	2	11.1	70-36	J03501	Casting
ASTM/ASME	A or SA-31	1	1	11.1	B	K03100	Rivet
ASTM	A36	1	1	11.1	—	K02600	Plate, Bar, Shape
ASTM/ASME	A or SA-36	1	1	11.1	—	—	Bar
ASTM/ASME	A or SA-36	1	1	11.1	—	K02595	Plate
ASTM/ASME	A or SA-36	1	1	11.1	—	K02596	Plate
ASTM/ASME	A or SA-36	1	1	11.1	—	K02597	Plate
ASTM/ASME	A or SA-36	1	1	1.1	—	K02598	Plate
ASTM/ASME	A or SA-36	1	1	1.1	—	K02599	Plate
ASTM/ASME	A or SA-36	1	1	11.1	—	K02600	Shape
ASTM/ASME	A or SA-53	1	1	1.1	E, A	K02504	Resistance Welded Pipe
ASTM/ASME	A or SA-53	1	1	1.1	S, A	K02504	Smls. Pipe
ASTM/ASME	A or SA-53	1	1	11.1	E, B	K03005	Resistance Welded Pipe
ASTM/ASME	A or SA-53	1	1	11.1	F	K03005	Furnace Welded Pipe
ASTM/ASME	A or SA-53	1	1	11.1	S, B	K03005	Smls. Pipe
ASTM/ASME	A or SA-105	1	2	11.1	—	K03504	Flange, Fitting
ASTM/ASME	A or SA-106	1	1	1.1	A	K02501	Smls. Pipe
ASTM/ASME	A or SA-106	1	1	11.1	B	K03006	Smls. Pipe
ASTM/ASME	A or SA-106	1	2	11.1	C	K03501	Smls. Pipe
ASTM	A108	1	1	1.1	1015	G10150	Bar
ASTM	A108	1	1	1.1	1018	G10180	Bar
ASTM	A108	1	1	1.1	1020	G10200	Bar
ASTM	A108	3	3	4.1	8620	G86200	Bar
ASTM	A131	1	1	1.1	A	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.2	AH32	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.2	AH36	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	1	1.1	B	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	1	1.1	CS	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	1	1.1	D	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.2	DH32	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.2	DH36	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	1	1.1	DS	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.1	E	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.2	EH32	—	Plate, Shape, Bar, Rivet
ASTM	A131	1	2	1.2	EH36	—	Plate, Shape, Bar, Rivet
ASTM/ASME	A or SA-134	1	1	1.1	SA283 A	K01400	Welded Pipe
ASTM/ASME	A or SA-134	1	1	1.1	SA285 A	K01700	Welded Pipe
ASTM/ASME	A or SA-134	1	1	1.1	SA283 B	K01702	Welded Pipe
ASTM/ASME	A or SA-134	1	1	1.1	SA285 B	K02200	Welded Pipe
ASTM/ASME	A or SA-134	1	1	1.1	SA283 C	K02401	Welded Pipe
ASTM/ASME	A or SA-134	1	1	1.1	SA36	K02599	Welded Pipe
ASTM/ASME	A or SA-134	1	1	11.1	SA283 D	K02702	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-134	1	1	11.1	SA285 C	K02801	Welded Pipe
ASTM/ASME	A or SA-135	1	1	1.1	A	K02509	E.R.W. Pipe
ASTM/ASME	A or SA-135	1	1	11.1	B	K03018	E.R.W. Pipe
ASTM	A139	1	1	1.1	A	K02508	Welded Pipe
ASTM	A139	1	1	11.1	B	K03003	Welded Pipe
ASTM	A139	1	1	11.1	C	K03004	Welded Pipe
ASTM	A139	1	1	11.1	D	K03010	Welded Pipe
ASTM	A139	1	1	11.1	E	K03012	Welded Pipe
ASTM	A148	4	3	—	90-60	D50600	Casting
ASTM	A161	1	1	—	Low Carbon	K01504	Tube
ASTM	A161	3	1	1.1	T1	K11522	Tube
ASTM	A167	8	1	8.1	302B	S30215	Plate, Sheet, Strip
ASTM	A167	8	2	8.2	308	S30800	Plate, Sheet, Strip
ASTM	A167	8	2	8.2	309	S30900	Plate, Sheet, Strip
ASTM	A167	8	2	8.2	310	S31000	Plate, Sheet, Strip
ASTM/ASME	A or SA-178	1	1	1.1	A	K01200	E.R.W. Tube
ASTM/ASME	A or SA-178	1	2	11.1	D	K02709	E.R.W. Tube
ASTM/ASME	A or SA-178	1	1	11.1	C	K03503	E.R.W. Tube
ASTM/ASME	A or SA-179	1	1	1.1	—	K01200	Smls. Tube
ASTM/ASME	A or SA-181	1	1	11.1	Cl. 60	K03502	Pipe Flange, Fitting
ASTM/ASME	A or SA-181	1	2	11.1	Cl. 70	K03502	Pipe Flange, Fitting
ASTM/ASME	A or SA-182	4	1	5.1	F12, Cl. 1	K11562	Forging
ASTM/ASME	A or SA-182	4	1	5.1	F12, Cl. 2	K11564	Forging
ASTM/ASME	A or SA-182	4	1	5.1	F11, Cl. 2	K11572	Forging
ASTM/ASME	A or SA-182	4	1	5.1	F11, Cl. 3	K11572	Forging
ASTM/ASME	A or SA-182	4	1	5.1	F11, Cl. 1	K11597	Forging
ASTM/ASME	A or SA-182	3	2	4.2	F2	K12122	Forging
ASTM/ASME	A or SA-182	3	2	1.1	F1	K12822	Forging
ASTM/ASME	A or SA-182	5A	1	5.2	F22, Cl. 1	K21590	Forging
ASTM/ASME	A or SA-182	5A	1	5.2	F22, Cl. 3	K21590	Forging
ASTM/ASME	A or SA-182	9A	1	9.1	FR	K22035	Forging
ASTM/ASME	A or SA-182	5C	1	6.2	F3VCb	K31390	Forging
ASTM/ASME	A or SA-182	5A	1	5.2	F21	K31545	Forging
ASTM/ASME	A or SA-182	5C	1	6.2	F3V	K31830	Forging
ASTM/ASME	A or SA-182	5C	1	6.2	F22V	K31835	Forging
ASTM/ASME	A or SA-182	5B	1	5.3	F5	K41545	Forging
ASTM/ASME	A or SA-182	5B	1	5.3	F5a	K42544	Forging
ASTM/ASME	A or SA-182	15E	1	6.4	F91	K90901	Forging
ASTM/ASME	A or SA-182	5B	1	5.4	F9	K90941	Forging
ASTM/ASME	A or SA-182	15E	1	6.4	F92	K92460	Forging
ASTM/ASME	A or SA-182	8	3	8.3	FXM-19	S20910	Forging
ASTM/ASME	A or SA-182	8	3	8.3	FXM-11	S21904	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F304	S30400	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F304L	S30403	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F304H	S30409	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F304N	S30451	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F304LN	S30453	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F46	S30600	Forging
ASTM/ASME	A or SA-182	8	2	8.2	F45	S30815	Forging
ASTM/ASME	A or SA-182	8	2	8.2	F310	S31000	Forging
ASTM/ASME	A or SA-182	8	2	8.2	F310H	S31009	Forging
ASTM/ASME	A or SA-182	8	2	8.2	F310MoLN	S31050	Forging
ASTM/ASME	A or SA-182	10H	1	10.2	F50	S31200	Forging
ASTM/ASME	A or SA-182	8	4	8.2	F44	S31254	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F316	S31600	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F316L	S31603	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F316H	S31609	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-182	8	1	8.1	F316N	S31651	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F316LN	S31653	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F317	S31700	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F317L	S31703	Forging
ASTM/ASME	A or SA-182	10H	1	10.1	F51	S31803	Forging
ASTM/ASME	A or SA-182	8	4	8.2	—	S32053	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F321	S32100	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F321H	S32109	Forging
ASTM/ASME	A or SA-182	10H	1	10.3	—	S32202	Forging
ASTM/ASME	A or SA-182	10H	1	10.1	F60	S32205	Forging
ASTM/ASME	A or SA-182	10H	1	10.2	—	S32506	Forging
ASTM/ASME	A or SA-182	10H	1	10.2	F61	S32550	Forging
ASTM/ASME	A or SA-182	10H	1	10.2	F53	S32750	Forging
ASTM/ASME	A or SA-182	10H	1	10.2	F55	S32760	Forging
ASTM/ASME	A or SA-182	8	2	8.1	F10	S33100	Forging
ASTM/ASME	A or SA-182	8	4	8.3	F49	S34565	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F347	S34700	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F347H	S34709	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F348	S34800	Forging
ASTM/ASME	A or SA-182	8	1	8.1	F348H	S34809	Forging
ASTM/ASME	A or SA-182	10H	1	10.2	F54	S39274	Forging
ASTM/ASME	A or SA-182	6	1	7.2	F6a, Cl. 1	S41000	Forging
ASTM/ASME	A or SA-182	6	3	7.2	F6a, Cl. 2	S41000	Forging
ASTM/ASME	A or SA-182	6	3	7.2	F6a, Cl. 3	S41000	Forging
ASTM/ASME	A or SA-182	6	3	7.2	F6a, Cl. 4	S41000	Forging
ASTM/ASME	A or SA-182	6	3	7.2	F6b	S41026	Forging
ASTM/ASME	A or SA-182	6	4	7.2	F6NM	S41500	Forging
ASTM/ASME	A or SA-182	6	2	7.2	F429	S42900	Forging
ASTM/ASME	A or SA-182	7	2	7.1	F430	S43000	Forging
ASTM/ASME	A or SA-182	10I	1	7.1	FXM-27Cb	S44627	Forging
ASTM/ASME	A or SA-192	1	1	1.1	—	K01201	Smls. Tube
ASTM	A199	4	1	5.1	T11	K11597	Smls. Tube
ASTM	A199	5A	1	5.2	T22	K21590	Smls. Tube
ASTM	A199	5A	1	—	T4	K31509	Smls. Tube
ASTM	A199	5A	1	—	T21	K31545	Smls. Tube
ASTM	A199	5B	1	5.3	T5	K41545	Smls. Tube
ASTM	A199	5B	1	5.4	T9	K81590	Smls. Tube
ASTM	A199	15E	1	6.4	T91	K90901	Smls. Tube
ASTM	A200	5A	1	5.2	T22	K21590	Tube
ASTM	A200	5A	1	—	T4	K31509	Tube
ASTM	A200	5A	1	—	T21	K31545	Tube
ASTM/ASME	A or SA-202	4	1	4.2	A	K11742	Plate
ASTM/ASME	A or SA-202	4	1	4.2	B	K12542	Plate
ASTM/ASME	A or SA-203	9B	1	9.2	F	—	Plate
ASTM/ASME	A or SA-203	9A	1	9.1	A	K21703	Plate
ASTM/ASME	A or SA-203	9A	1	9.1	B	K22103	Plate
ASTM/ASME	A or SA-203	9B	1	9.2	D	K31718	Plate
ASTM/ASME	A or SA-203	9B	1	9.2	E	K32018	Plate
ASTM/ASME	A or SA-204	3	1	1.1	A	K11820	Plate
ASTM/ASME	A or SA-204	3	2	1.1	B	K12020	Plate
ASTM/ASME	A or SA-204	3	2	1.2	C	K12320	Plate
ASTM/ASME	A or SA-209	3	1	1.1	T1b	K11422	Smls. Tube
ASTM/ASME	A or SA-209	3	1	1.1	T1	K11522	Smls. Tube
ASTM/ASME	A or SA-209	3	1	1.1	T1a	K12023	Smls. Tube
ASTM/ASME	A or SA-210	1	1	11.1	A-1	K02707	Smls. Tube
ASTM/ASME	A or SA-210	1	2	11.1	C	K03501	Smls. Tube
ASTM	A211	1	1	1.1	A570-30	K02502	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A211	1	1	1.1	A570-33	K02502	Welded Pipe
ASTM	A211	1	1	1.1	A570-40	K02502	Welded Pipe
ASTM/ASME	A or SA-213	3	1	4.2	T2	K11547	Smls. Tube
ASTM/ASME	A or SA-213	4	1	5.1	T12	K11562	Smls. Tube
ASTM/ASME	A or SA-213	4	1	5.1	T11	K11597	Smls. Tube
ASTM/ASME	A or SA-213	10B	1	4.1	T17	K12047	Smls. Tube
ASTM/ASME	A or SA-213	5A	1	5.2	T22	K21590	Smls. Tube
ASTM/ASME	A or SA-213	5A	1	5.2	T21	K31545	Smls. Tube
ASTM/ASME	A or SA-213	5B	1	5.3	T5c	K41245	Smls. Tube
ASTM/ASME	A or SA-213	5B	1	5.3	T5	K41545	Smls. Tube
ASTM/ASME	A or SA-213	5B	1	5.3	T5b	K51545	Smls. Tube
ASTM/ASME	A or SA-213	15E	1	6.4	T91	K90901	Smls. Tube
ASTM/ASME	A or SA-213	5B	1	5.4	T9	K90941	Smls. Tube
ASTM/ASME	A or SA-213	15E	1	6.4	T92	K92460	Smls. Tube
ASTM/ASME	A or SA-213	8	3	8.3	TP201	S20100	Smls. Tube
ASTM/ASME	A or SA-213	8	3	8.3	TP202	S20200	Smls. Tube
ASTM/ASME	A or SA-213	8	3	8.3	XM-19	S20910	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP304	S30400	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP304L	S30403	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP304H	S30409	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	—	S30432	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP304N	S30451	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP304LN	S30453	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	S30815	S30815	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP309S	S30908	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP309H	S30909	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP309Cb	S30940	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP309HCb	S30941	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	Type 310	S31000	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	—	S31002	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP310S	S31008	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP310H	S31009	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP310Cb	S31040	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP310HCb	S31041	Smls. Tube
ASTM/ASME	A or SA-213	8	3	8.2	TP310HCbN	S31042	Smls. Tube
ASTM/ASME	A or SA-213	8	2	8.2	TP310MoLN	S31050	Smls. Tube
ASTM/ASME	A or SA-213	8	4	8.2	—	S31254	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP316	S31600	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP316L	S31603	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP316H	S31609	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP316Ti	S31635	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP316N	S31651	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP316LN	S31653	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP317	S31700	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP317L	S31703	Smls. Tube
ASTM/ASME	A or SA-213	8	4	8.1	TP317LM	S31725	Smls. Tube
ASTM/ASME	A or SA-213	8	4	8.1	TP317LMN	S31726	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP321	S32100	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP321H	S32109	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	S32615	S32615	Smls. Tube
ASTM/ASME	A or SA-213	8	4	8.3	S34565	S34565	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP347	S34700	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP347H	S34709	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP347HFG	S34710	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP347LN	S34751	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP348	S34800	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	TP348H	S34809	Smls. Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-213	8	1	8.1	XM-15	S38100	Smls. Tube
ASTM/ASME	A or SA-213	8	1	8.1	—	S38815	Smls. Tube
ASTM	A213	8	3	8.2	—	S31043	Smls. Tube
ASTM/ASME	A or SA-214	1	1	1.1	—	K01807	E.R.W. Tube
ASTM/ASME	A or SA-216	1	1	1.1	WCA	J02502	Casting
ASTM/ASME	A or SA-216	1	2	1.1	WCC	J02503	Casting
ASTM/ASME	A or SA-216	1	2	1.1	WCB	J03002	Casting
ASTM/ASME	A or SA-217	4	1	5.1	WC6	J12072	Casting
ASTM/ASME	A or SA-217	4	1	9.1	WC4	J12082	Casting
ASTM/ASME	A or SA-217	3	1	1.1	WC1	J12524	Casting
ASTM/ASME	A or SA-217	5A	1	5.2	WC9	J21890	Casting
ASTM/ASME	A or SA-217	4	1	4.2	WC5	J22000	Casting
ASTM/ASME	A or SA-217	5B	1	5.3	C5	J42045	Casting
ASTM/ASME	A or SA-217	5B	1	5.4	C12	J82090	Casting
ASTM/ASME	A or SA-217	15E	1	6.4	C12A	J84090	Casting
ASTM/ASME	A or SA-217	6	3	7.2	CA15	J91150	Casting
ASTM/ASME	A or SA-225	10A	1	2.1	D	K12004	Plate
ASTM/ASME	A or SA-225	10A	1	4.1	C	K12524	Plate
ASTM	A226	1	1	1.1	—	K01201	E.R.W. Tube
ASTM	A234	15E	1	6.4	WP92	K92460	Piping Fitting
ASTM/ASME	A or SA-234	4	1	5.1	WP11, Cl. 1	—	Piping Fitting
ASTM/ASME	A or SA-234	4	1	5.1	WP11, Cl. 2	—	Piping Fitting
ASTM/ASME	A or SA-234	4	1	5.1	WP11, Cl. 3	—	Piping Fitting
ASTM/ASME	A or SA-234	1	1	11.1	WPB	K03006	Piping Fitting
ASTM/ASME	A or SA-234	1	2	11.1	WPC	K03501	Piping Fitting
ASTM/ASME	A or SA-234	4	1	5.1	WP12, Cl. 1	K12062	Piping Fitting
ASTM/ASME	A or SA-234	4	1	5.1	WP12, Cl. 2	K12062	Piping Fitting
ASTM/ASME	A or SA-234	3	1	11.2	WP1	K12821	Piping Fitting
ASTM/ASME	A or SA-234	5A	1	5.2	WP22, Cl. 1	K21590	Piping Fitting
ASTM/ASME	A or SA-234	5A	1	5.2	WP22, Cl. 3	K21590	Piping Fitting
ASTM/ASME	A or SA-234	9A	1	9.1	WPR	K22035	Piping Fitting
ASTM/ASME	A or SA-234	5B	1	5.3	WP5, Cl. 1	K41545	Piping Fitting
ASTM/ASME	A or SA-234	5B	1	5.3	WP5, Cl. 3	K41545	Piping Fitting
ASTM/ASME	A or SA-234	15E	1	6.4	WP91	K90901	Piping Fitting
ASTM/ASME	A or SA-234	5B	1	5.4	WP9, Cl. 1	K90941	Piping Fitting
ASTM/ASME	A or SA-234	5B	1	5.4	WP9, Cl. 3	K90941	Piping Fitting
ASTM/ASME	A or SA-240	8	3	8.3	201-1	S20100	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	201-2	S20100	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	201LN	S20153	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	202	S20200	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	—	S20400	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	XM-19	S20910	Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	XM-19	S20910	Plate
ASTM/ASME	A or SA-240	8	3	8.3	XM-17	S21600	Plate
ASTM/ASME	A or SA-240	8	3	8.3	XM-17	S21600	Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	XM-18	S21603	Plate
ASTM/ASME	A or SA-240	8	3	8.3	XM-18	S21603	Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.1	S21800	S21800	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.3	XM-29	S24000	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	301	S30100	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	302	S30200	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	304	S30400	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	304L	S30403	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	304H	S30409	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	304N	S30451	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	XM-21	S30452	Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	XM-21	S30452	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-240	8	1	8.1	304LN	S30453	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	305	S30500	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	S30600	S30600	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	S30601	S30601	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	S30815	S30815	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	309S	S30908	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	309H	S30909	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	309Cb	S30940	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	309HCb	S30941	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	310S	S31008	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	310H	S31009	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	310Cb	S31040	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	310HCb	S31041	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	310MoLN	S31050	Sheet, Strip
ASTM/ASME	A or SA-240	8	2	8.2	310MoLN	S31050	Plate
ASTM/ASME	A or SA-240	10H	1	10.2	S31200	S31200	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	4	8.2	S31254	S31254	Plate
ASTM/ASME	A or SA-240	8	4	8.2	S31254	S31254	Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	S31260	S31260	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316	S31600	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316L	S31603	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316H	S31609	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316Ti	S31635	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316Cb	S31640	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316N	S31651	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	316LN	S31653	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	3	8.2	—	S31655	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	317	S31700	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	317L	S31703	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	4	8.1	S31725	S31725	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	4	8.1	S31726	S31726	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	S31753	S31753	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.1	S31803	S31803	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S32003	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	4	8.2	—	S32053	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	321	S32100	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S32101	Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S32101	Plate
ASTM/ASME	A or SA-240	8	1	8.1	321H	S32109	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S32202	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.1	2205	S32205	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.1	—	S32304	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	—	S32506	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	S32550	S32550	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	S32615	S32615	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	4	8.2	—	S32654	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	S32750	S32750	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	S32760	S32760	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	329	S32900	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	S32906	S32906	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.2	S32906	S32906	Plate
ASTM/ASME	A or SA-240	10H	1	10.2	S32950	S32950	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	4	8.3	S34565	S34565	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	347	S34700	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	347H	S34709	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	348	S34800	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	348H	S34809	Plate, Sheet, Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-240	8	1	8.1	XM-15	S38100	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	8	1	8.1	—	S38815	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	1	7.1	405	S40500	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	1	7.1	409	S40910	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	1	7.1	409	S40920	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	1	7.1	409	S40930	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	6	1	7.2	410	S41000	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	1	7.2	410S	S41008	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	6	4	7.2	S41500	S41500	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	6	2	7.2	429	S42900	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	2	7.1	430	S43000	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	2	7.1	439	S43035	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	2	7.1	S43932	S43932	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	2	7.1	S43940	S43940	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	2	7.1	—	S44100	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	7	2	7.1	S44400	S44400	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10I	1	7.1	XM-33	S44626	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10I	1	7.1	XM-27	S44627	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10I	1	7.1	S44635	S44635	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10K	1	7.1	S44660	S44660	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10J	1	7.1	S44700	S44700	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10K	1	7.1	S44800	S44800	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S82012	Plate
ASTM/ASME	A or SA-240	10H	1	10.3	—	S82012	Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S82031	Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.3	—	S82031	Plate
ASTM/ASME	A or SA-240	10H	1	10.1	—	S82441	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	10H	1	10.1	—	S82441	Plate
ASTM	A242	1	2	1.2	Type 1	K11510	Plate, Bar, Shape
ASTM/ASME	A or SA-249	8	3	8.3	TP 201	S20100	Welded Tube
ASTM/ASME	A or SA-249	8	3	8.3	TP 202	S20200	Welded Tube
ASTM/ASME	A or SA-249	8	3	8.3	TP XM-19	S20910	Welded Tube
ASTM/ASME	A or SA-249	8	3	8.3	TP XM-29	S24000	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP304	S30400	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP304L	S30403	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP304H	S30409	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP304N	S30451	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP304LN	S30453	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	S30815	S30815	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP309	S30900	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP309S	S30908	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP309H	S30909	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP309Cb	S30940	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP309HCb	S30941	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP310S	S31008	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP310H	S31009	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP310Cb	S31040	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP310HCb	S31041	Welded Tube
ASTM/ASME	A or SA-249	8	2	8.2	TP310MoLN	S31050	Welded Tube
ASTM/ASME	A or SA-249	8	4	8.2	S31254	S31254	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP316	S31600	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP316L	S31603	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP316H	S31609	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP316N	S31651	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP316LN	S31653	Welded Tube
ASTM/ASME	A or SA-249	8	3	8.2	—	S31655	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP317	S31700	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-249	8	1	8.1	TP317L	S31703	Welded Tube
ASTM/ASME	A or SA-249	8	4	8.1	S31725	S31725	Welded Tube
ASTM/ASME	A or SA-249	8	4	8.1	S31726	S31726	Welded Tube
ASTM/ASME	A or SA-249	8	4	8.2	—	S32053	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP321	S32100	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP321H	S32109	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP347	S34700	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP347H	S34709	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP348	S34800	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP348H	S34809	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	TP XM-15	S38100	Welded Tube
ASTM/ASME	A or SA-249	8	1	8.1	—	S38815	Welded Tube
ASTM/ASME	A or SA-250	3	1	1.1	T1b	K11422	E.R.W. Tube
ASTM/ASME	A or SA-250	3	1	1.1	T1	K11522	E.R.W. Tube
ASTM/ASME	A or SA-250	3	1	4.2	T2	K11547	E.R.W. Tube
ASTM/ASME	A or SA-250	4	1	5.1	T12	K11562	E.R.W. Tube
ASTM/ASME	A or SA-250	4	1	5.1	T11	K11597	E.R.W. Tube
ASTM/ASME	A or SA-250	3	1	1.1	T1a	K12023	E.R.W. Tube
ASTM/ASME	A or SA-250	5A	1	5.2	T22	K21590	E.R.W. Tube
ASTM	A252	1	1	—	1	—	Pipe Pile
ASTM	A252	1	1	—	2	—	Pipe Pile
ASTM	A252	1	1	—	3	—	Pipe Pile
ASTM/ASME	A or SA-266	1	2	11.1	4	K03017	Forging
ASTM/ASME	A or SA-266	1	1	11.1	1	K03506	Forging
ASTM/ASME	A or SA-266	1	2	11.1	2	K03506	Forging
ASTM/ASME	A or SA-266	1	2	11.2	3	K05001	Forging
ASTM/ASME	A or SA-268	7	1	7.1	TP405	S40500	Smls. & Welded Tube
ASTM/ASME	A or SA-268	7	1	7.1	S40800	S40800	Smls. & Welded Tube
ASTM/ASME	A or SA-268	7	1	7.1	TP409	S40900	Smls. & Welded Tube
ASTM/ASME	A or SA-268	6	1	7.2	TP410	S41000	Smls. & Welded Tube
ASTM/ASME	A or SA-268	6	4	7.2	S41500	S41500	Smls. & Welded Tube
ASTM/ASME	A or SA-268	6	2	7.2	TP429	S42900	Smls. & Welded Tube
ASTM/ASME	A or SA-268	7	2	7.1	TP430	S43000	Smls. & Welded Tube
ASTM/ASME	A or SA-268	7	2	7.1	TP439	S43035	Smls. & Welded Tube
ASTM/ASME	A or SA-268	7	2	7.1	TP430Ti	S43036	Smls. & Welded Tube
ASTM/ASME	A or SA-268	7	2	7.1	18Cr-2Mo	S44400	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10I	1	7.1	TP446-1	S44600	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10I	1	7.1	TP446-2	S44600	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10I	1	7.1	TPXM-33	S44626	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10I	1	7.1	TPXM-27	S44627	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10I	1	7.1	25-4-4	S44635	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10K	1	7.1	26-3-3	S44660	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10J	1	7.1	29-4	S44700	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10J	1	7.1	S44735	S44735	Smls. & Welded Tube
ASTM/ASME	A or SA-268	10K	1	7.1	29-4-2	S44800	Smls. & Welded Tube
ASTM	A269	8	3	8.3	TPXM-19	S20910	Smls. & Welded Tube
ASTM	A269	8	3	8.3	TPXM-10	S21900	Smls. & Welded Tube
ASTM	A269	8	3	8.3	TPXM-11	S21904	Smls. & Welded Tube
ASTM	A269	8	3	8.3	TPXM-29	S24000	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP304	S30400	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP304L	S30403	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP304LN	S30453	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP316	S31600	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP316L	S31603	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP316LN	S31653	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP317	S31700	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP321	S32100	Smls. & Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A269	8	1	8.1	TP347	S34700	Smls. & Welded Tube
ASTM	A269	8	1	8.1	TP348	S34800	Smls. & Welded Tube
ASTM	A269	8	3	8.3	TPXM-15	S38100	Smls. & Welded Tube
ASTM	A270	8	1	8.1	TP304	S30400	Smls. & Welded Tube
ASTM	A271	8	1	8.1	TP304	S30400	Smls. Tube
ASTM	A271	8	1	8.1	TP304H	S30409	Smls. Tube
ASTM	A271	8	1	8.1	TP316	S31600	Smls. Tube
ASTM	A271	8	1	8.1	TP316H	S31609	Smls. Tube
ASTM	A271	8	1	8.1	TP321	S32100	Smls. Tube
ASTM	A271	8	1	8.1	TP321H	S32109	Smls. Tube
ASTM	A271	8	1	8.1	TP347	S34700	Smls. Tube
ASTM	A271	8	1	8.1	TP347H	S34709	Smls. Tube
ASTM/ASME	A or SA-276	8	1	8.1	304	S30400	Bar
ASTM/ASME	A or SA-276	8	1	8.1	304L	S30403	Bar
ASTM/ASME	A or SA-276	8	2	8.2	314	S31400	Bar, Shape
ASTM/ASME	A or SA-276	8	1	8.1	316	S31600	Bar
ASTM/ASME	A or SA-276	8	1	8.1	316L	S31603	Bar
ASTM/ASME	A or SA-276	10H	1	10.1	S32205	S32205	Bar
ASTM/ASME	A or SA-276	10H	1	10.1	—	S32550	Bar, Shape
ASTM/ASME	A or SA-276	6	1	7.2	410	S41000	Bar
ASTM	A276	10H	1	10.3	—	S32101	Bar
ASTM/ASME	A or SA-283	1	1	1.1	A	K01400	Plate
ASTM/ASME	A or SA-283	1	1	1.1	B	K01702	Plate
ASTM/ASME	A or SA-283	1	1	1.1	C	K02401	Plate
ASTM/ASME	A or SA-283	1	1	1.1	D	K02702	Plate
ASTM/ASME	A or SA-285	1	1	1.1	A	K01700	Plate
ASTM/ASME	A or SA-285	1	1	1.1	B	K02200	Plate
ASTM/ASME	A or SA-285	1	1	11.1	C	K02801	Plate
ASTM	A297	8	2	8.2	HF	J92603	Casting
ASTM	A297	8	2	8.2	HE	J93403	Casting
ASTM	A297	8	2	8.2	HH	J93503	Casting
ASTM	A297	8	2	8.2	HI	J94003	Casting
ASTM	A297	8	2	8.2	HK	J94224	Casting
ASTM/ASME	A or SA-299	1	2	11.1	A	K02803	Plate
ASTM/ASME	A or SA-299	1	3	11.1	B	K02803	Plate
ASTM/ASME	A or SA-302	3	2	1.1	A	K12021	Plate
ASTM/ASME	A or SA-302	3	3	1.2	B	K12022	Plate
ASTM/ASME	A or SA-302	3	3	—	C	K12039	Plate
ASTM/ASME	A or SA-302	3	3	—	D	K12054	Plate
ASTM/ASME	A or SA-312	8	3	8.3	TP201LN	S20153	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	3	8.3	TPXM-19	S20910	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	3	8.3	TPXM-11	S21904	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	3	8.3	TPXM-29	S24000	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP304	S30400	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP304L	S30403	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP304H	S30409	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP304N	S30451	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP304LN	S30453	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	S30600	S30600	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	S30815	S30815	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP309S	S30908	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP309H	S30909	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP309Cb	S30940	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP309HCb	S30941	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	—	S31002	Smls. Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP310S	S31008	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP310H	S31009	Smls. & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-312	8	2	8.2	TP310Cb	S31040	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP310HCb	S31041	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	2	8.2	TP310MoLN	S31050	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	4	8.2	S31254	S31254	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP316	S31600	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP316L	S31603	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP316H	S31609	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP316Ti	S31635	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP316N	S31651	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP316LN	S31653	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP317	S31700	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP317L	S31703	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	4	8.1	S31725	S31725	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	4	8.1	S31726	S31726	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	4	8.2	—	S32053	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP321	S32100	Smls. Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP321	S32100	Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP321H	S32109	Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP321H	S32109	Smls. Pipe
ASTM/ASME	A or SA-312	8	1	8.1	S32615	S32615	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	4	8.3	S34565	S34565	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP347	S34700	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP347H	S34709	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP347LN	S34751	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP348	S34800	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TP348H	S34809	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	8	1	8.1	TPXM-15	S38100	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	1	3	11.1	10	—	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	1	1	11.1	6	K03006	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	1	1	11.1	1	K03008	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	4	2	4.1	4	K11267	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	9A	1	9.1	7	K21903	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	9A	1	9.1	9	K22035	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	9B	1	9.2	3	K31918	Smls. & Welded Pipe
ASTM/ASME	A or SA-333	11A	1	9.3	8	K81340	Smls. & Welded Pipe
ASTM/ASME	A or SA-334	1	1	11.1	6	K03006	Welded Tube
ASTM/ASME	A or SA-334	1	1	11.1	1	K03008	Welded Tube
ASTM/ASME	A or SA-334	9A	1	9.1	7	K21903	Welded Tube
ASTM/ASME	A or SA-334	9A	1	9.1	9	K22035	Welded Tube
ASTM/ASME	A or SA-334	9B	1	9.2	3	K31918	Welded Tube
ASTM/ASME	A or SA-334	11A	1	9.3	8	K81340	Welded Tube
ASTM/ASME	A or SA-335	3	1	1.1	P1	K11522	Smls. Pipe
ASTM/ASME	A or SA-335	3	1	4.2	P2	K11547	Smls. Pipe
ASTM/ASME	A or SA-335	4	1	5.1	P12	K11562	Smls. Pipe
ASTM/ASME	A or SA-335	3	1	—	P15	K11578	Smls. Pipe
ASTM/ASME	A or SA-335	4	1	5.1	P11	K11597	Smls. Pipe
ASTM/ASME	A or SA-335	5A	1	5.2	P22	K21590	Smls. Pipe
ASTM/ASME	A or SA-335	5A	1	5.2	P21	K31545	Smls. Pipe
ASTM/ASME	A or SA-335	5B	1	5.3	P5c	K41245	Smls. Pipe
ASTM/ASME	A or SA-335	5B	1	5.3	P5	K41545	Smls. Pipe
ASTM/ASME	A or SA-335	5B	1	5.3	P5b	K51545	Smls. Pipe
ASTM/ASME	A or SA-335	15E	1	6.4	P91	K90901	Smls. Pipe
ASTM/ASME	A or SA-335	5B	1	5.4	P9	K90941	Smls. Pipe
ASTM/ASME	A or SA-335	15E	1	6.4	P92	K92460	Smls. Pipe
ASTM/ASME	A or SA-336	4	1	5.1	F12	K11564	Forging
ASTM/ASME	A or SA-336	4	1	5.1	F11, Cl. 2	K11572	Forging
ASTM/ASME	A or SA-336	4	1	5.1	F11, Cl. 3	K11572	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-336	4	1	5.1	F11, Cl. 1	K11597	Forging
ASTM/ASME	A or SA-336	3	2	1.1	F1	K12520	Forging
ASTM/ASME	A or SA-336	5A	1	5.2	F22, Cl. 1	K21590	Forging
ASTM/ASME	A or SA-336	5A	1	5.2	F22, Cl. 3	K21590	Forging
ASTM/ASME	A or SA-336	5C	1	6.2	F3VCb	K31390	Forging
ASTM/ASME	A or SA-336	5A	1	5.2	F21, Cl. 1	K31545	Forging
ASTM/ASME	A or SA-336	5A	1	5.2	F21, Cl. 3	K31545	Forging
ASTM/ASME	A or SA-336	5C	1	6.2	F3V	K31830	Forging
ASTM/ASME	A or SA-336	5C	1	6.2	F22V	K31835	Forging
ASTM/ASME	A or SA-336	5B	1	5.3	F5	K41545	Forging
ASTM/ASME	A or SA-336	5B	1	5.3	F5A	K42544	Forging
ASTM/ASME	A or SA-336	15E	1	6.4	F91	K90901	Forging
ASTM/ASME	A or SA-336	5B	1	5.4	F9	K90941	Forging
ASTM/ASME	A or SA-336	15E	1	6.4	F92	K92460	Forging
ASTM/ASME	A or SA-336	8	3	8.3	FXM-19	S20910	Forging
ASTM/ASME	A or SA-336	8	3	8.3	FXM-11	S21904	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F304	S30400	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F304L	S30403	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F304H	S30409	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F304N	S30451	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F304LN	S30453	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F46	S30600	Forging
ASTM/ASME	A or SA-336	8	2	8.2	F310	S31000	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F316	S31600	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F316L	S31603	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F316H	S31609	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F316N	S31651	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F316LN	S31653	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F321	S32100	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F321H	S32109	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F347	S34700	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F347H	S34709	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F348	S34800	Forging
ASTM/ASME	A or SA-336	8	1	8.1	F348H	S34809	Forging
ASTM/ASME	A or SA-336	6	3	7.2	F6	S41000	Forging
ASTM/ASME	A or SA-336	10I	1	7.1	FXM-27Cb	S44627	Forging
ASTM/ASME	A or SA-350	1	1	11.1	LF1	K03009	Forging
ASTM/ASME	A or SA-350	1	2	11.1	LF2	K03011	Forging
ASTM/ASME	A or SA-350	1	1	1.2	LF6, Cl. 1	K12202	Forging
ASTM/ASME	A or SA-350	1	3	4.1	LF6, Cl. 2	K12202	Forging
ASTM/ASME	A or SA-350	1	2	1.3	LF6, Cl. 3	K12202	Forging
ASTM/ASME	A or SA-350	9A	1	9.1	LF5 Cl. 1	K13050	Forging
ASTM/ASME	A or SA-350	9A	1	9.1	LF5 Cl. 2	K13050	Forging
ASTM/ASME	A or SA-350	1	2	3.3	LF787, Cl. 2	K20747	Forging
ASTM/ASME	A or SA-350	1	3	3.3	LF787, Cl. 3	K20747	Forging
ASTM/ASME	A or SA-350	9A	1	9.1	LF9	K22036	Forging
ASTM/ASME	A or SA-350	9B	1	9.2	LF3	K32025	Forging
ASTM/ASME	A or SA-351	8	1	8.1	CF3	J92500	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF3A	J92500	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF10	J92590	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF8	J92600	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF8A	J92600	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF8C	J92710	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF3M	J92800	Casting
ASTM/ASME	A or SA-351	8	2	8.2	CE20N	J92802	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF8M	J92900	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CF10M	J92901	Casting

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-351	8	1	8.1	CF10MC	J92971	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CG3M	J92999	Casting
ASTM/ASME	A or SA-351	8	1	8.1	CG8M	J93000	Casting
ASTM/ASME	A or SA-351	8	4	8.2	CK3MCuN	J93254	Casting
ASTM/ASME	A or SA-351	10H	1	10.2	CE8MN	J93345	Casting
ASTM/ASME	A or SA-351	10H	1	10.2	CD4MCu	J93370	Casting
ASTM/ASME	A or SA-351	10H	1	10.2	CD3MWCuN	J93380	Casting
ASTM/ASME	A or SA-351	8	2	8.2	CH8	J93400	Casting
ASTM/ASME	A or SA-351	8	2	8.2	CH10	J93401	Casting
ASTM/ASME	A or SA-351	8	2	8.2	CH20	J93402	Casting
ASTM/ASME	A or SA-351	8	3	8.3	CG6MMN	J93790	Casting
ASTM/ASME	A or SA-351	8	2	8.2	CK20	J94202	Casting
ASTM/ASME	A or SA-351	8	2	8.2	HK30	J94203	Casting
ASTM/ASME	A or SA-351	8	2	8.2	HK40	J94204	Casting
ASTM/ASME	A or SA-352	1	1	11.1	LCA	J02504	Casting
ASTM/ASME	A or SA-352	1	2	11.1	LCC	J02505	Casting
ASTM/ASME	A or SA-352	1	1	1.1	LCB	J03003	Casting
ASTM/ASME	A or SA-352	3	1	1.1	LC1	J12522	Casting
ASTM/ASME	A or SA-352	9A	1	9.1	LC2	J22500	Casting
ASTM/ASME	A or SA-352	9B	1	9.3	LC3	J31550	Casting
ASTM/ASME	A or SA-352	9C	1	9.3	LC4	J41500	Casting
ASTM/ASME	A or SA-352	11A	5	9.2	LC2-1	J42215	Casting
ASTM/ASME	A or SA-352	6	4	7.2	CA6NM	J91540	Casting
ASTM/ASME	A or SA-353	11A	1	9.3	—	K81340	Plate
ASTM	A356	1	2	11.1	1	J03502	Casting
ASTM	A356	4	1	6.2	8	J11697	Casting
ASTM	A356	4	1	5.1	6	J12073	Casting
ASTM	A356	3	1	1.1	2	J12523	Casting
ASTM	A356	4	1	6.2	9	J21610	Casting
ASTM	A356	5A	1	5.2	10	J22090	Casting
ASTM	A356	15E	1	6.4	12A	J84090	Casting
ASTM/ASME	A or SA-358	8	3	8.3	201LN	S20153	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	3	8.3	XM-19	S20910	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	3	8.3	XM-29	S24000	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	304	S30400	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	304L	S30403	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	304H	S30409	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	304N	S30451	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	304LN	S30453	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	S30815	S30815	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	309	S30900	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	309S	S30908	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	309Cb	S30940	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	310	S31000	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	310S	S31008	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	2	8.2	310Cb	S31040	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	4	8.2	S31254	S31254	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	316	S31600	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	316L	S31603	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	316H	S31609	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	316N	S31651	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	316LN	S31653	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	3	8.2	—	S31655	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	4	8.1	S31725	S31725	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	4	8.1	S31726	S31726	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	4	8.2	—	S32053	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	321	S32100	Fusion Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-358	8	1	8.1	347	S34700	Fusion Welded Pipe
ASTM/ASME	A or SA-358	8	1	8.1	348	S34800	Fusion Welded Pipe
ASTM	A366	1	1	1.1	CS	—	Sheet
ASTM/ASME	A or SA-369	1	1	1.1	FPA	K02501	Forged Pipe
ASTM/ASME	A or SA-369	1	1	1.1	FPB	K03006	Forged Pipe
ASTM/ASME	A or SA-369	3	1	1.1	FP1	K11522	Forged Pipe
ASTM/ASME	A or SA-369	3	1	4.2	FP2	K11547	Forged Pipe
ASTM/ASME	A or SA-369	4	1	5.1	FP12	K11562	Forged Pipe
ASTM/ASME	A or SA-369	4	1	5.1	FP11	K11597	Forged Pipe
ASTM/ASME	A or SA-369	5A	1	5.2	FP22	K21590	Forged Pipe
ASTM/ASME	A or SA-369	5A	1	5.2	FP21	K31545	Forged Pipe
ASTM/ASME	A or SA-369	5B	1	5.3	FP5	K41545	Forged Pipe
ASTM/ASME	A or SA-369	15E	1	6.4	FP91	K90901	Forged Pipe
ASTM/ASME	A or SA-369	5B	1	5.4	FP9	K90941	Forged Pipe
ASTM/ASME	A or SA-369	15E	1	6.4	FP92	K92460	Forged Pipe
ASTM/ASME	A or SA-372	1	1	11.1	A	K03002	Forging
ASTM/ASME	A or SA-372	1	2	11.1	B	K04001	Forging
ASTM/ASME	A or SA-376	8	1	8.1	16-8-2H	S16800	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP304	S30400	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP304H	S30409	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP304N	S30451	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP304LN	S30453	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP316	S31600	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP316H	S31609	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP316N	S31651	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP316LN	S31653	Smls. Pipe
ASTM/ASME	A or SA-376	8	4	8.1	S31725	S31725	Smls. Pipe
ASTM/ASME	A or SA-376	8	4	8.1	S31726	S31726	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP321	S32100	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP321H	S32109	Smls. Pipe
ASTM/ASME	A or SA-376	8	4	8.3	S34565	S34565	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP347	S34700	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP347H	S34709	Smls. Pipe
ASTM/ASME	A or SA-376	8	1	8.1	TP348	S34800	Smls. Pipe
ASTM	A381	1	1	11.1	Y35	—	Welded Pipe
ASTM	A381	1	1	11.1	Y42	—	Welded Pipe
ASTM	A381	1	1	11.1	Y46	—	Welded Pipe
ASTM	A381	1	1	11.1	Y48	—	Welded Pipe
ASTM	A381	1	1	11.1	Y50	—	Welded Pipe
ASTM	A381	1	2	11.1	Y52	—	Welded Pipe
ASTM	A381	1	2	11.1	Y56	—	Welded Pipe
ASTM	A381	1	2	11.1	Y60	—	Welded Pipe
ASTM	A381	1	3	11.1	Y65	—	Welded Pipe
ASTM/ASME	A or SA-387	4	1	5.1	12, Cl. 1	K11757	Plate
ASTM/ASME	A or SA-387	4	1	5.1	12, Cl. 2	K11757	Plate
ASTM/ASME	A or SA-387	4	1	5.1	11, Cl. 1	K11789	Plate
ASTM/ASME	A or SA-387	4	1	5.1	11, Cl. 2	K11789	Plate
ASTM/ASME	A or SA-387	3	1	4.2	2, Cl. 1	K12143	Plate
ASTM/ASME	A or SA-387	3	2	4.2	2, Cl. 2	K12143	Plate
ASTM/ASME	A or SA-387	5A	1	5.2	22, Cl. 1	K21590	Plate
ASTM/ASME	A or SA-387	5A	1	5.2	22, Cl. 2	K21590	Plate
ASTM/ASME	A or SA-387	5A	1	5.2	21, Cl. 1	K31545	Plate
ASTM/ASME	A or SA-387	5A	1	5.2	21, Cl. 2	K31545	Plate
ASTM/ASME	A or SA-387	5B	1	5.3	5, Cl. 1	K41545	Plate
ASTM/ASME	A or SA-387	5B	1	5.3	5, Cl. 2	K41545	Plate
ASTM/ASME	A or SA-387	15E	1	6.4	91, Cl. 2	K90901	Plate
ASTM/ASME	A or SA-387	5B	1	5.4	9, Cl. 1	K90941	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
			Steel and Steel Alloys				
ASTM/ASME	A or SA-387	5B	1	5.4	9, Cl. 2	K90941	Plate
ASTM	A389	4	1	6.2	C23	J12080	Casting
ASTM	A389	4	1	6.2	C24	J12092	Casting
ASTM/ASME	A or SA-403	8	3	8.3	WPXM-19	S20910	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP304	S30400	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP304L	S30403	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP304H	S30409	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP304N	S30451	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP304LN	S30453	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	2	8.2	WP309	S30900	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	2	8.2	WP310	S31000	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	2	8.2	WP310S	S31008	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	4	8.2	—	S31254	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP316	S31600	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP316L	S31603	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP316H	S31609	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP316N	S31651	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP316LN	S31653	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP317	S31700	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP317L	S31703	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	4	8.1	WP S31726	S31726	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	4	8.2	—	S32053	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP321	S32100	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP321H	S32109	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	4	8.3	S34565	S34565	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP347	S34700	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP347H	S34709	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP348	S34800	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP348H	S34809	Wrought Piping Fitting
ASTM/ASME	A or SA-403	8	1	8.1	WP S38815	S38815	Wrought Piping Fitting
ASTM	A405	4	1	6.2	P24	K11591	Smls. Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP304	S30400	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP304L	S30403	Welded Pipe
ASTM/ASME	A or SA-409	8	2	8.2	S30815	S30815	Welded Pipe
ASTM/ASME	A or SA-409	8	2	8.2	TP309S	S30908	Welded Pipe
ASTM/ASME	A or SA-409	8	2	8.2	TP309Cb	S30940	Welded Pipe
ASTM/ASME	A or SA-409	8	2	8.2	TP310S	S31008	Welded Pipe
ASTM/ASME	A or SA-409	8	2	8.2	TP310Cb	S31040	Welded Pipe
ASTM/ASME	A or SA-409	8	4	8.2	S31254	S31254	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP316	S31600	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP316L	S31603	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP317	S31700	Welded Pipe
ASTM/ASME	A or SA-409	8	4	8.1	S31725	S31725	Welded Pipe
ASTM/ASME	A or SA-409	8	4	8.1	S31726	S31726	Welded Pipe
ASTM/ASME	A or SA-409	8	4	8.2	—	S32053	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP321	S32100	Welded Pipe
ASTM/ASME	A or SA-409	8	4	8.3	S34565	S34565	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP347	S34700	Welded Pipe
ASTM/ASME	A or SA-409	8	1	8.1	TP348	S34800	Welded Pipe
ASTM/ASME	A or SA-414	1	1	1.1	A	K01501	Sheet
ASTM/ASME	A or SA-414	1	1	1.1	B	K02201	Sheet
ASTM/ASME	A or SA-414	1	1	1.1	C	K02503	Sheet
ASTM/ASME	A or SA-414	1	1	1.1	D	K02505	Sheet
ASTM/ASME	A or SA-414	1	1	11.1	E	K02704	Sheet
ASTM/ASME	A or SA-414	1	2	11.1	F	K03102	Sheet
ASTM/ASME	A or SA-414	1	2	11.1	G	K03103	Sheet
ASTM/ASME	A or SA-420	1	1	11.1	WPL6	K03006	Piping Fitting

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-420	9A	1	9.1	WPL9	K22035	Piping Fitting
ASTM/ASME	A or SA-420	9B	1	9.2	WPL3	K31918	Piping Fitting
ASTM/ASME	A or SA-420	11A	1	9.3	WPL8	K81340	Piping Fitting
ASTM/ASME	A or SA-423	4	2	5.1	1	K11535	Smls. & Welded Tube
ASTM/ASME	A or SA-423	4	2	5.1	2	K11540	Smls. & Welded Tube
ASTM/ASME	A or SA-426	3	1	1.1	CP15	J11522	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	3	1	4.2	CP2	J11547	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	4	1	5.1	CP12	J11562	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	4	1	5.1	CP11	J12072	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	3	1	1.1	CP1	J12521	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	5A	1	5.2	CP22	J21890	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	5A	1	5.2	CP21	J31545	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	5B	1	5.3	CP5	J42045	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	5B	1	5.3	CP5b	J51545	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	5B	1	5.4	CP9	J82090	Centrifugal Cast Pipe
ASTM/ASME	A or SA-426	6	3	7.2	CPCA15	J91150	Centrifugal Cast Pipe
ASTM	A430	8	1	8.1	FP16-8-2H	S16800	Forged Pipe
ASTM	A430	8	1	8.1	FP304	S30400	Forged Pipe
ASTM	A430	8	1	8.1	FP304H	S30409	Forged Pipe
ASTM	A430	8	1	8.1	FP304N	S30451	Forged Pipe
ASTM	A430	8	1	8.1	FP316	S31600	Forged Pipe
ASTM	A430	8	1	8.1	FP316H	S31609	Forged Pipe
ASTM	A430	8	1	8.1	FP316N	S31651	Forged Pipe
ASTM	A430	8	1	8.1	FP321	S32100	Forged Pipe
ASTM	A430	8	1	8.1	FP321H	S32109	Forged Pipe
ASTM	A430	8	1	8.1	FP347	S34700	Forged Pipe
ASTM	A430	8	1	8.1	FP347H	S34709	Forged Pipe
ASTM	A441	1	2	—	Group 1	—	Shape
ASTM	A441	1	2	—	Group 2	—	Shape
ASTM	A441	1	2	—	Group 3	—	Shape
ASTM	A441	1	2	—	Group 4	—	Shape
ASTM	A441	1	2	—	Group 5	—	Shape
ASTM	A441	1	2	—	—	K12211	Plate, Bar
ASTM/ASME	A or SA-451	8	1	8.1	CPF3	J92500	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF3A	J92500	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF8	J92600	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF8A	J92600	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF8C	J92710	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF3M	J92800	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	2	8.2	CPE20N	J92802	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF8M	J92900	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	1	8.1	CPF10MC	J92971	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	2	8.2	CPH8	J93400	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	2	8.2	CPH10	J93402	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	2	8.2	CPH20	J93402	Centrifugal Cast Pipe
ASTM/ASME	A or SA-451	8	2	8.2	CPK20	J94202	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP304H	S30409	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP316H	S31609	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP347H	S34709	Centrifugal Cast Pipe
ASTM/ASME	A or SA-455	1	2	11.2	—	K03300	Plate
ASTM	A473	8	3	8.3	201	S20100	Forging
ASTM	A473	8	3	8.3	202	S20200	Forging
ASTM	A473	8	3	8.3	XM-10	S21900	Forging
ASTM	A473	8	3	8.3	XM-11	S21904	Forging
ASTM	A473	8	1	8.1	302	S30200	Forging
ASTM	A473	8	1	8.1	302B	S30215	Forging
ASTM	A473	8	1	8.1	304	S30400	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A473	8	1	8.1	304L	S30403	Forging
ASTM	A473	8	1	8.1	305	S30500	Forging
ASTM	A473	8	2	8.2	308	S30800	Forging
ASTM	A473	8	2	8.2	S30815	S30815	Forging
ASTM	A473	8	2	8.2	309	S30900	Forging
ASTM	A473	8	2	8.2	309S	S30908	Forging
ASTM	A473	8	2	8.2	310	S31000	Forging
ASTM	A473	8	2	8.2	310S	S31008	Forging
ASTM	A473	8	2	8.2	314	S31400	Forging
ASTM	A473	8	1	8.1	316	S31600	Forging
ASTM	A473	8	1	8.1	316L	S31603	Forging
ASTM	A473	8	1	8.1	317	S31700	Forging
ASTM	A473	8	1	8.1	321	S32100	Forging
ASTM	A473	8	1	8.1	347	S34700	Forging
ASTM	A473	8	1	8.1	348	S34800	Forging
ASTM	A473	6	1	7.1	403	S40300	Forging
ASTM	A473	7	1	7.1	405	S40500	Forging
ASTM	A473	6	1	7.2	410	S41000	Forging
ASTM	A473	6	4	7.2	414	S41400	Forging
ASTM	A473	6	2	7.2	420	S42000	Forging
ASTM	A473	6	2	7.2	429	S42900	Forging
ASTM	A473	7	2	7.1	430	S43000	Forging
ASTM/ASME	A or SA-479	8	3	8.3	XM-19	S20910	Bar, Shape
ASTM/ASME	A or SA-479	8	3	8.3	XM-17	S21600	Bar, Shape
ASTM/ASME	A or SA-479	8	3	8.3	XM-18	S21603	Bar, Shape
ASTM/ASME	A or SA-479	8	3	8.1	S21800	S21800	Bar, Shape
ASTM/ASME	A or SA-479	8	3	8.3	XM-11	S21904	Bar, Shape
ASTM/ASME	A or SA-479	8	3	8.3	XM-29	S24000	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	302	S30200	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	304	S30400	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	304L	S30403	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	304H	S30409	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	304N	S30451	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	304LN	S30453	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	S30600	S30600	Bar, Shape
ASTM/ASME	A or SA-479	8	2	8.2	S30815	S30815	Bar, Shape
ASTM/ASME	A or SA-479	8	2	8.2	309S	S30908	Bar, Shape
ASTM/ASME	A or SA-479	8	2	8.2	309Cb	S30940	Bar, Shape
ASTM/ASME	A or SA-479	8	2	8.2	310S	S31008	Bar, Shape
ASTM/ASME	A or SA-479	8	2	8.2	310Cb	S31040	Bar, Shape
ASTM/ASME	A or SA-479	8	4	8.2	S31254	S31254	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316	S31600	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316L	S31603	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316H	S31609	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316Ti	S31635	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316Cb	S31640	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316N	S31651	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	316LN	S31653	Bar, Shape
ASTM/ASME	A or SA-479	8	4	8.1	S31725	S31725	Bar, Shape
ASTM/ASME	A or SA-479	8	4	8.1	S31726	S31726	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.1	—	S31803	Bar, Shape
ASTM/ASME	A or SA-479	8	4	8.2	—	S32053	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	321	S32100	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.3	—	S32101	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	321H	S32109	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.3	—	S32202	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.1	—	S32205	Bar, Shape

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-479	10H	1	10.2	—	S32506	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.2	S32550	S32550	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	S32615	S32615	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.2	S32750	S32750	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.2	S32906	S32906	Bar, Shape
ASTM/ASME	A or SA-479	8	4	8.3	—	S34565	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	347	S34700	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	347H	S34709	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	348	S34800	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	348H	S34809	Bar, Shape
ASTM/ASME	A or SA-479	8	1	8.1	—	S38815	Bar, Shape
ASTM/ASME	A or SA-479	6	1	7.1	403	S40300	Bar, Shape
ASTM/ASME	A or SA-479	7	1	7.1	405	S40500	Bar, Shape
ASTM/ASME	A or SA-479	6	1	7.2	410	S41000	Bar, Shape
ASTM/ASME	A or SA-479	6	1	7.2	XM-30	S41040	Bar, Shape
ASTM/ASME	A or SA-479	6	4	7.2	414	S41400	Bar, Shape
ASTM/ASME	A or SA-479	6	4	7.2	S41500	S41500	Bar, Shape
ASTM/ASME	A or SA-479	7	2	7.1	430	S43000	Bar, Shape
ASTM/ASME	A or SA-479	7	2	7.1	439	S43035	Bar, Shape
ASTM/ASME	A or SA-479	7	2	7.1	S44400	S44400	Bar, Shape
ASTM/ASME	A or SA-479	10I	1	7.1	XM-27	S44627	Bar, Shape
ASTM/ASME	A or SA-479	10J	1	7.1	S44700	S44700	Bar, Shape
ASTM/ASME	A or SA-479	10K	1	7.1	S44800	S44800	Bar, Shape
ASTM/ASME	A or SA-479	10H	1	10.1	—	S82441	Bar
ASTM/ASME	A or SA-487	10A	1	2.1	1, Cl. A	J13002	Casting
ASTM/ASME	A or SA-487	10A	1	2.1	1, Cl. B	J13002	Casting
ASTM/ASME	A or SA-487	3	3	2.1	2, Cl. A	J13005	Casting
ASTM/ASME	A or SA-487	3	3	2.1	2, Cl. B	J13005	Casting
ASTM/ASME	A or SA-487	3	3	3.1	4, Cl. A	J13047	Casting
ASTM/ASME	A or SA-487	11A	3	3.1	4, Cl. B	J13047	Casting
ASTM/ASME	A or SA-487	3	3	3.1	4, Cl. C	J13047	Casting
ASTM/ASME	A or SA-487	11A	3	3.1	4, Cl. E	J13047	Casting
ASTM/ASME	A or SA-487	5C	1	5.2	8, Cl. A	J22091	Casting
ASTM/ASME	A or SA-487	5C	4	5.2	8, Cl. B	J22091	Casting
ASTM/ASME	A or SA-487	5C	4	5.2	8, Cl. C	J22091	Casting
ASTM/ASME	A or SA-487	1	2	1.1	16, Cl. A	J31200	Casting
ASTM/ASME	A or SA-487	6	3	7.2	CA15 Cl. C	J91150	Casting
ASTM/ASME	A or SA-487	6	3	7.2	CA15M Cl. A	J91151	Casting
ASTM/ASME	A or SA-487	6	3	7.2	CA15 Cl. B	J91171	Casting
ASTM/ASME	A or SA-487	6	3	7.2	CA15 Cl. D	J91171	Casting
ASTM/ASME	A or SA-487	6	4	7.2	CA6NM Cl. A	J91540	Casting
ASTM/ASME	A or SA-487	6	4	7.2	CA6NM Cl. B	J91540	Casting
ASTM	A500	1	1	1.2	C	K02705	Smls. & Welded Tube
ASTM	A500	1	1	11.1	A	K03000	Smls. & Welded Tube
ASTM	A500	1	1	11.1	B	K03000	Smls. & Welded Tube
ASTM	A500	1	1	11.1	D	K03000	Smls. & Welded Tube
ASTM	A501	1	1	11.1	A	K03000	Smls. & Welded Tube
ASTM	A501	1	1	1.2	B	K03000	Smls. & Welded Tube
ASTM/ASME	A or SA-508	3	3	3.1	3, Cl. 1	K12042	Forging
ASTM/ASME	A or SA-508	3	3	3.1	3, Cl. 2	K12042	Forging
ASTM/ASME	A or SA-508	3	3	3.1	2, Cl. 1	K12766	Forging
ASTM/ASME	A or SA-508	3	3	3.1	2, Cl. 2	K12766	Forging
ASTM/ASME	A or SA-508	1	2	11.1	1	K13502	Forging
ASTM/ASME	A or SA-508	1	2	11.1	1A	K13502	Forging
ASTM/ASME	A or SA-508	5C	1	5.2	22, Cl. 3	K21590	Forging
ASTM/ASME	A or SA-508	11A	5	3.1	4N, Cl. 1	K22375	Forging
ASTM/ASME	A or SA-508	11B	10	3.1	4N, Cl. 2	K22375	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-508	3	3	3.1	4N, Cl. 3	K22375	Forging
ASTM/ASME	A or SA-508	5C	1	6.2	3VCb	K31390	Forging
ASTM/ASME	A or SA-508	5C	1	6.2	3V	K31830	Forging
ASTM/ASME	A or SA-508	11A	5	3.1	5, Cl. 1	K42365	Forging
ASTM/ASME	A or SA-508	11B	10	3.1	5, Cl. 2	K42365	Forging
ASTM	A511	8	1	8.1	MT 302	S30200	Smls. Tube
ASTM	A511	8	1	8.1	MT 304	S30400	Smls. Tube
ASTM	A511	8	1	8.1	MT 304L	S30403	Smls. Tube
ASTM	A511	8	2	8.2	MT 309S	S30908	Smls. Tube
ASTM	A511	8	2	8.2	MT 310S	S31008	Smls. Tube
ASTM	A511	8	1	8.1	MT 316	S31600	Smls. Tube
ASTM	A511	8	1	8.1	MT 316L	S31603	Smls. Tube
ASTM	A511	8	1	8.1	MT 317	S31700	Smls. Tube
ASTM	A511	8	1	8.1	MT 321	S32100	Smls. Tube
ASTM	A511	8	1	8.1	MT 347	S34700	Smls. Tube
ASTM	A512	1	1	1.1	MTX 1015	—	Tube
ASTM	A512	1	1	1.1	MTX 1020	—	Tube
ASTM	A512	1	1	1.1	1008	G10080	Tube
ASTM	A512	1	1	1.1	1010	G10100	Tube
ASTM	A512	1	1	1.1	MT 1010	G10100	Tube
ASTM	A512	1	1	1.1	1012	G10120	Tube
ASTM	A512	1	1	1.1	1015	G10150	Tube
ASTM	A512	1	1	1.1	MT 1015	G10150	Tube
ASTM	A512	1	1	—	1016	G10160	Tube
ASTM	A512	1	1	1.1	1018	G10180	Tube
ASTM	A512	1	1	—	1019	G10190	Tube
ASTM	A512	1	1	1.1	1020	G10200	Tube
ASTM	A512	1	1	1.1	MT 1020	G10200	Tube
ASTM	A512	1	1	—	1021	G10210	Tube
ASTM	A512	1	2	11.1	1025	G10250	Tube
ASTM	A512	1	1	11.1	1026	G10260	Tube
ASTM	A512	1	2	11.1	1030	G10300	Tube
ASTM	A513	1	1	1.1	1015 CW	G10150	Tube
ASTM	A513	1	2	1.1	1020 CW	G10200	Tube
ASTM	A513	1	2	1.2	1025 CW	G10250	Tube
ASTM	A513	1	3	11.1	1026 CW	G10260	Tube
ASTM/ASME	A or SA-513	1	1	—	MTX 1015	—	Tube
ASTM/ASME	A or SA-513	1	1	—	MTX 1020	—	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1008	G10080	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1010	G10100	Tube
ASTM/ASME	A or SA-513	1	1	1.1	MT 1010	G10100	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1015	G10150	Tube
ASTM/ASME	A or SA-513	1	1	1.1	MT 1015	G10150	Tube
ASTM/ASME	A or SA-513	1	1	—	1017	G10170	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1018	G10180	Tube
ASTM/ASME	A or SA-513	1	1	—	1019	G10190	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1020	G10200	Tube
ASTM/ASME	A or SA-513	1	1	1.1	MT 1020	G10200	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1021	G10210	Tube
ASTM/ASME	A or SA-513	1	1	1.1	1022	G10220	Tube
ASTM/ASME	A or SA-513	1	1	—	1023	G10230	Tube
ASTM/ASME	A or SA-513	1	1	—	1024	G10240	Tube
ASTM/ASME	A or SA-513	1	2	11.1	1025	G10250	Tube
ASTM/ASME	A or SA-513	1	1	11.1	1026	G10260	Tube
ASTM/ASME	A or SA-513	1	2	11.1	1030	G10300	Tube
ASTM	A514	11B	9	3.1	Q	—	Plate
ASTM	A514	11B	12	3.1	R	—	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A514	11B	6	3.1	S	—	Plate
ASTM	A514	11B	6	3.1	T	—	Plate
ASTM	A514	11B	6	3.1	C	K11511	Plate
ASTM	A514	11B	6	3.1	K	K11523	Plate
ASTM	A514	11B	3	3.1	F	K11576	Plate
ASTM	A514	11B	6	3.1	J	K11625	Plate
ASTM	A514	11B	4	3.1	B	K11630	Plate
ASTM	A514	11B	3	3.1	H	K11646	Plate
ASTM	A514	11B	10	3.1	M	K11683	Plate
ASTM	A514	11B	1	3.1	A	K11856	Plate
ASTM	A514	11B	2	3.1	E	K21604	Plate
ASTM	A514	11B	8	3.1	P	K21650	Plate
ASTM	A515	1	1	1.1	55	K02001	Plate
ASTM/ASME	A or SA-515	1	1	11.1	60	—	Plate
ASTM/ASME	A or SA-515	1	1	1.1	60	K02401	Plate
ASTM/ASME	A or SA-515	1	1	11.1	65	K02800	Plate
ASTM/ASME	A or SA-515	1	2	11.1	70	K03101	Plate
ASTM/ASME	A or SA-516	1	1	1.1	55	K01800	Plate
ASTM/ASME	A or SA-516	1	1	1.1	60	K02100	Plate
ASTM/ASME	A or SA-516	1	1	1.1	65	K02403	Plate
ASTM/ASME	A or SA-516	1	2	11.1	70	K02700	Plate
ASTM	A517	11B	6	3.1	T	—	Plate
ASTM	A517	11B	14	3.1	C	K11511	Plate
ASTM	A517	11B	6	3.1	K	K11523	Plate
ASTM	A517	11B	6	3.1	J	K11625	Plate
ASTM	A517	11B	10	3.1	M	K11683	Plate
ASTM/ASME	A or SA-517	11B	9	3.1	Q	—	Plate
ASTM/ASME	A or SA-517	11B	6	3.1	S	—	Plate
ASTM/ASME	A or SA-517	11B	3	3.1	F	K11576	Plate
ASTM/ASME	A or SA-517	11B	4	3.1	B	K11630	Plate
ASTM/ASME	A or SA-517	11B	3	3.1	H	K11646	Plate
ASTM/ASME	A or SA-517	11B	1	3.1	A	K11856	Plate
ASTM/ASME	A or SA-517	11B	2	3.1	E	K21604	Plate
ASTM/ASME	A or SA-517	11B	8	3.1	P	K21650	Plate
ASTM	A519	1	1	—	MTX 1015	—	Tube
ASTM	A519	1	1	—	MTX 1020	—	Tube
ASTM	A519	1	1	1.1	1008	G10080	Tube
ASTM	A519	1	1	1.1	MT 1010	G10100	Tube
ASTM	A519	1	1	1.1	1012	G10120	Tube
ASTM	A519	1	1	1.1	1015	G10150	Tube
ASTM	A519	1	1	1.1	MT 1015	G10150	Tube
ASTM	A519	1	1	—	1016	G10160	Tube
ASTM	A519	1	1	—	1017	G10170	Tube
ASTM	A519	1	1	1.1	1018	G10180	Tube
ASTM	A519	1	2	1.1	1018 CW	G10180	Tube
ASTM	A519	1	1	1.1	1018 HR	G10180	Tube
ASTM	A519	1	1	—	1019	G10190	Tube
ASTM	A519	1	1	1.1	1020	G10200	Tube
ASTM	A519	1	2	1.1	1020 CW	G10200	Tube
ASTM	A519	1	1	1.1	1020 HR	G10200	Tube
ASTM	A519	1	1	1.1	MT 1020	G10200	Tube
ASTM	A519	1	1	—	1021	G10210	Tube
ASTM	A519	1	1	1.1	1022	G10220	Tube
ASTM	A519	1	2	1.1	1022 CW	G10220	Tube
ASTM	A519	1	1	1.1	1022 HR	G10220	Tube
ASTM	A519	1	2	11.1	1025	G10250	Tube
ASTM	A519	1	2	1.2	1025 CW	G10250	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A519	1	1	1.1	1025 HR	G10250	Tube
ASTM	A519	1	1	—	1026	G10260	Tube
ASTM	A519	1	2	11.1	1026 CW	G10260	Tube
ASTM	A519	1	1	11.1	1026 HR	G10260	Tube
ASTM	A519	1	2	—	1030	G10300	Tube
ASTM	A519	11B	9	—	4130	G41300	Tube
ASTM	A519	11B	9	—	8630	G86300	Tube
ASTM	A521	1	1	—	CC	—	Die Forging
ASTM	A521	1	1	—	CC1	—	Die Forging
ASTM	A521	1	2	—	CE	—	Die Forging
ASTM/ASME	A or SA-522	11A	1	9.3	II	K71340	Forging
ASTM/ASME	A or SA-522	11A	1	9.3	I	K81340	Forging
ASTM	A523	1	1	1.1	A	K02504	Pipe
ASTM	A523	1	1	11.1	B	K03005	Pipe
ASTM/ASME	A or SA-524	1	1	1.1	I	K02104	Smls. Pipe
ASTM/ASME	A or SA-524	1	1	1.1	II	K02104	Smls. Pipe
ASTM	A526	1	1	—	II	—	Galvanized Sheet
ASTM	A527	1	1	—	II	—	Galvanized Sheet
ASTM	A529	1	2	11.1	50	—	Plate, Bar, Shape
ASTM	A529	1	2	11.1	55	—	Plate, Bar, Shape
ASTM	A529	1	1	11.1	42	K02703	Plate, Bar, Shape
ASTM/ASME	A or SA-533	3	3	3.1	A, Cl. 1	K12521	Plate
ASTM/ASME	A or SA-533	3	3	3.1	A, Cl. 2	K12521	Plate
ASTM/ASME	A or SA-533	11A	4	3.1	A, Cl. 3	K12521	Plate
ASTM/ASME	A or SA-533	3	3	3.1	D, Cl. 1	K12529	Plate
ASTM/ASME	A or SA-533	3	3	3.1	D, Cl. 2	K12529	Plate
ASTM/ASME	A or SA-533	11A	4	3.1	D, Cl. 3	K12529	Plate
ASTM/ASME	A or SA-533	3	3	3.1	B, Cl. 1	K12539	Plate
ASTM/ASME	A or SA-533	3	3	3.1	B, Cl. 2	K12539	Plate
ASTM/ASME	A or SA-533	11A	4	3.2	B, Cl. 3	K12539	Plate
ASTM/ASME	A or SA-533	3	3	3.1	C, Cl. 1	K12554	Plate
ASTM/ASME	A or SA-533	3	3	3.1	C, Cl. 2	K12554	Plate
ASTM/ASME	A or SA-533	11A	4	3.2	C, Cl. 3	K12554	Plate
ASTM/ASME	A or SA-533	3	3	3.1	E, Cl. 1	K12554	Plate
ASTM/ASME	A or SA-533	3	3	3.1	E, Cl. 2	K12554	Plate
ASTM/ASME	A or SA-537	1	2	1.2	Cl. 1	K12437	Plate
ASTM/ASME	A or SA-537	1	3	1.2	Cl. 2	K12437	Plate
ASTM/ASME	A or SA-537	1	3	1.2	Cl. 3	K12437	Plate
ASTM	A539	1	1	—	—	K01506	Coiled Tube
ASTM/ASME	A or SA-541	1	2	11.1	1A	K03020	Forging
ASTM/ASME	A or SA-541	1	2	11.1	1	K03506	Forging
ASTM/ASME	A or SA-541	4	1	5.2	11, Cl. 4	K11572	Forging
ASTM/ASME	A or SA-541	3	3	4.1	3, Cl. 1	K12045	Forging
ASTM/ASME	A or SA-541	3	3	4.1	3, Cl. 2	K12045	Forging
ASTM/ASME	A or SA-541	3	3	4.2	2, Cl. 1	K12765	Forging
ASTM/ASME	A or SA-541	3	3	4.2	2, Cl. 2	K12765	Forging
ASTM/ASME	A or SA-541	5C	1	5.2	22, Cl. 3	K21390	Forging
ASTM/ASME	A or SA-541	5C	4	5.2	22, Cl. 4	K21390	Forging
ASTM/ASME	A or SA-541	5C	5	5.2	22, Cl. 5	K21390	Forging
ASTM/ASME	A or SA-541	5C	1	6.2	3VCb	K31390	Forging
ASTM/ASME	A or SA-541	5C	1	6.2	3V	K31830	Forging
ASTM/ASME	A or SA-541	5C	1	5.2	22V	K31835	Forging
ASTM/ASME	A or SA-542	5C	4	5.2	A, Cl. 1	K21590	Plate
ASTM/ASME	A or SA-542	5C	5	5.2	A, Cl. 2	K21590	Plate
ASTM/ASME	A or SA-542	5C	3	5.2	A, Cl. 3	K21590	Plate
ASTM/ASME	A or SA-542	5C	1	5.2	A, Cl. 4	K21590	Plate
ASTM/ASME	A or SA-542	5C	1	5.2	A, Cl. 4a	K21590	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-542	5C	4	5.2	B, Cl. 1	K21590	Plate
ASTM/ASME	A or SA-542	5C	5	5.2	B, Cl. 2	K21590	Plate
ASTM/ASME	A or SA-542	5C	3	5.2	B, Cl. 3	K21590	Plate
ASTM/ASME	A or SA-542	5C	1	5.2	B, Cl. 4	K21590	Plate
ASTM/ASME	A or SA-542	5C	1	5.2	B, Cl. 4a	K21590	Plate
ASTM/ASME	A or SA-542	5C	1	6.2	E, Cl. 4a	K31390	Plate
ASTM/ASME	A or SA-542	5C	4	6.2	C, Cl. 1	K31830	Plate
ASTM/ASME	A or SA-542	5C	5	6.2	C, Cl. 2	K31830	Plate
ASTM/ASME	A or SA-542	5C	3	6.2	C, Cl. 3	K31830	Plate
ASTM/ASME	A or SA-542	5C	1	6.2	C, Cl. 4	K31830	Plate
ASTM/ASME	A or SA-542	5C	1	6.2	C, Cl. 4a	K31830	Plate
ASTM/ASME	A or SA-542	5C	1	6.3	D, Cl. 4a	K31835	Plate
ASTM/ASME	A or SA-543	11A	5	3.1	C, Cl. 1	—	Plate
ASTM/ASME	A or SA-543	11B	10	3.1	C, Cl. 2	—	Plate
ASTM/ASME	A or SA-543	3	3	3.1	C, Cl. 3	—	Plate
ASTM/ASME	A or SA-543	11A	5	3.1	B, Cl. 1	K42339	Plate
ASTM/ASME	A or SA-543	11B	10	3.1	B, Cl. 2	K42339	Plate
ASTM/ASME	A or SA-543	3	3	3.1	B, Cl. 3	K42339	Plate
ASTM/ASME	A or SA-553	11A	1	9.2	III	—	Plate
ASTM/ASME	A or SA-553	11A	1	9.3	II	K71340	Plate
ASTM/ASME	A or SA-553	11A	1	9.3	I	K81340	Plate
ASTM	A554	8	1	8.1	MT 302	S30200	Welded Tube
ASTM	A554	8	1	8.1	MT 304	S30400	Welded Tube
ASTM	A554	8	1	8.1	MT 304L	S30403	Welded Tube
ASTM	A554	8	2	8.2	MT 309S	S30908	Welded Tube
ASTM	A554	8	2	8.2	MT 309S-Cb	S30940	Welded Tube
ASTM	A554	8	2	8.2	MT 310S	S31008	Welded Tube
ASTM	A554	8	1	8.1	MT 316	S31600	Welded Tube
ASTM	A554	8	1	8.1	MT 316L	S31603	Welded Tube
ASTM	A554	8	1	8.1	MT 317	S31700	Welded Tube
ASTM	A554	8	1	8.1	MT 321	S32100	Welded Tube
ASTM	A554	8	1	8.1	MT 347	S34700	Welded Tube
ASTM/ASME	A or SA-556	1	1	1.1	A2	K01807	Smls. Tube
ASTM/ASME	A or SA-556	1	1	11.1	B2	K02707	Smls. Tube
ASTM/ASME	A or SA-556	1	2	11.1	C2	K03006	Smls. Tube
ASTM/ASME	A or SA-557	1	1	1.1	A2	K01807	E.R.W. Tube
ASTM/ASME	A or SA-557	1	1	11.1	B2	K03007	E.R.W. Tube
ASTM/ASME	A or SA-557	1	2	11.1	C2	K03505	E.R.W. Tube
ASTM/ASME	A or SA-562	1	1	1.1	—	K11224	Plate
ASTM	A569	1	1	1.1	30	K02502	Sheet, Strip
ASTM	A569	1	1	1.1	33	K02502	Sheet, Strip
ASTM	A569	1	1	1.1	36	K02502	Sheet, Strip
ASTM	A569	1	1	1.1	40	K02502	Sheet, Strip
ASTM	A569	1	1	1.2	45	K02502	Sheet, Strip
ASTM	A569	1	1	1.2	50	K02502	Sheet, Strip
ASTM	A570	1	1	1.1	30	K02502	Sheet, Strip
ASTM	A570	1	1	1.1	33	K02502	Sheet, Strip
ASTM	A570	1	1	1.1	36	K02502	Sheet, Strip
ASTM	A570	1	1	1.1	40	K02502	Sheet, Strip
ASTM	A570	1	1	1.2	45	K02502	Sheet, Strip
ASTM	A570	1	1	1.2	50	K02502	Sheet, Strip
ASTM	A570	1	1	1.3	55	K02502	Sheet, Strip
ASTM/ASME	A or SA-572	1	1	1.2	42	—	Plate, Shape
ASTM/ASME	A or SA-572	1	1	1.2	50	—	Plate, Shape
ASTM/ASME	A or SA-572	1	2	1.3	55	—	Plate, Shape
ASTM/ASME	A or SA-572	1	2	11.1	60	—	Plate, Shape
ASTM/ASME	A or SA-572	1	3	1.3	65	—	Plate, Shape

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A573	1	1	11.1	58	—	Plate
ASTM	A573	1	1	11.1	65	—	Plate
ASTM	A573	1	2	11.1	70	—	Plate
ASTM	A575	1	1	1.1	M 1008	—	Bar
ASTM	A575	1	1	1.1	M 1010	—	Bar
ASTM	A575	1	1	1.1	M 1012	—	Bar
ASTM	A575	1	1	1.1	M 1015	—	Bar
ASTM	A575	1	1	1.1	M 1017	—	Bar
ASTM	A575	1	1	11.1	M 1020	—	Bar
ASTM	A575	1	1	11.1	M 1023	—	Bar
ASTM	A575	1	1	11.1	M 1025	—	Bar
ASTM	A576	1	1	1.1	G10080	—	Bar
ASTM	A576	1	1	1.1	G10100	—	Bar
ASTM	A576	1	1	1.1	G10120	—	Bar
ASTM	A576	1	1	1.1	G10150	—	Bar
ASTM	A576	1	1	1.1	G10160	—	Bar
ASTM	A576	1	1	1.1	G10170	—	Bar
ASTM	A576	1	1	1.1	G10180	—	Bar
ASTM	A576	1	1	1.1	G10190	—	Bar
ASTM	A576	1	1	1.1	G10200	—	Bar
ASTM	A576	1	1	11.1	G10210	—	Bar
ASTM	A576	1	1	11.1	G10220	—	Bar
ASTM	A576	1	1	11.1	G10230	—	Bar
ASTM	A576	1	1	11.1	G10250	—	Bar
ASTM/ASME	A or SA-587	1	1	1.1	A2	K01807	E.R.W. Tube
ASTM/ASME	A or SA-587	1	1	—	B2	K03007	E.R.W. Tube
ASTM/ASME	A or SA-587	1	1	1.1	—	K11500	E.R.W. Pipe
ASTM	A588	3	1	1.4	K	—	Shape
ASTM	A588	3	1	1.4	K	—	Plate, Bar
ASTM	A588	3	1	1.4	A	K11430	Plate, Bar
ASTM	A588	3	1	1.4	A	K11430	Shape
ASTM	A588	3	1	1.4	C	K11538	Plate, Bar
ASTM	A588	3	1	1.4	C	K11538	Shape
ASTM	A588	3	1	1.4	B	K12043	Shape
ASTM	A588	3	1	1.4	B	K12043	Plate, Bar
ASTM/ASME	A or SA-592	11B	3	3.1	F	K11576	Forging
ASTM/ASME	A or SA-592	11B	2	3.1	E	K11695	Forging
ASTM/ASME	A or SA-592	11B	1	3.1	A	K11856	Forging
ASTM	A595	1	2	11.1	A	K02004	Welded Tube
ASTM	A595	1	2	11.1	B	K02005	Welded Tube
ASTM	A595	3	1	11.1	C	K11526	Welded Tube
ASTM	A606	1	2	1.4	2, CR, AR	—	Sheet, Strip
ASTM	A606	1	2	1.4	2, HR, A	—	Sheet, Strip
ASTM	A606	1	2	1.4	2, HR, AR	—	Sheet, Strip
ASTM	A606	1	2	1.4	2, HR, N	—	Sheet, Strip
ASTM	A606	1	2	1.4	4, CR, AR	—	Sheet, Strip
ASTM	A606	1	2	1.4	4, HR, A	—	Sheet, Strip
ASTM	A606	1	2	1.4	4, HR, AR	—	Sheet, Strip
ASTM	A606	1	2	1.4	4, HR, N	—	Sheet, Strip
ASTM	A607	1	1	—	45	—	Sheet, Strip
ASTM	A607	1	1	—	50	—	Sheet, Strip
ASTM	A607	1	2	—	55	—	Sheet, Strip
ASTM	A607	1	3	—	60	—	Sheet, Strip
ASTM	A607	1	3	—	65	—	Sheet, Strip
ASTM	A607	1	3	—	70	—	Sheet, Strip
ASTM	A611	1	1	1.1	D	G10120	Sheet, Strip
ASTM	A611	1	1	—	A	G10170	Sheet, Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A611	1	1	—	B	G10170	Sheet, Strip
ASTM	A611	1	1	—	C	G10170	Sheet, Strip
ASTM	A611	1	3	—	E	G10170	Sheet, Strip
ASTM/ASME	A or SA-612	10C	1	1.3	—	K02900	Plate
ASTM	A615	1A	4	—	40	—	Rebar
ASTM	A615	1A	4	—	60	—	Rebar
ASTM	A618	1	2	1.2	Ia	—	Tube
ASTM	A618	1	2	1.2	Ib	K02601	Tube
ASTM	A618	1	2	1.2	II	K12609	Tube
ASTM	A618	1	1	1.2	III	K12700	Tube
ASTM	A620	1	1	1.1	A	K00040	Sheet
ASTM	A620	1	1	1.1	B	K00040	Sheet
ASTM	A633	1	1	1.1	A	K01802	Plate
ASTM	A633	1	1	1.1	C	K12000	Plate
ASTM	A633	1	2	1.1	C	K12000	Plate
ASTM	A633	1	1	1.1	D	K12037	Plate
ASTM	A633	1	2	1.1	D	K12037	Plate
ASTM	A633	1	3	4.1	E	K12202	Plate
ASTM	A633	1	3	4.1	E	K12202	Plate
ASTM/ASME	A or SA-645	11A	2	9.2	A	K41583	Plate
ASTM	A653	1	1	—	33	—	Galvanized Sheet
ASTM	A653	1	1	—	37	—	Galvanized Sheet
ASTM	A653	1	1	—	40	—	Galvanized Sheet
ASTM	A653	1	1	—	80	—	Galvanized Sheet
ASTM/ASME	A or SA-656	1	1	1.2	T3, 50	—	Plate
ASTM/ASME	A or SA-656	1	2	1.3	T3, 60	—	Plate
ASTM/ASME	A or SA-656	1	3	2.2	T3, 70	—	Plate
ASTM/ASME	A or SA-656	1	4	2.2	T3, 80	—	Plate
ASTM/ASME	A or SA-656	1	1	1.2	T7, 50	—	Plate
ASTM/ASME	A or SA-656	1	2	1.3	T7, 60	—	Plate
ASTM/ASME	A or SA-656	1	3	2.2	T7, 70	—	Plate
ASTM/ASME	A or SA-656	1	4	2.2	T7, 80	—	Plate
ASTM/ASME	A or SA-656	1	1	1.2	50	K11804	Plate
ASTM/ASME	A or SA-656	1	1	1.3	60	K11804	Plate
ASTM/ASME	A or SA-656	1	2	1.3	70	K11804	Plate
ASTM/ASME	A or SA-656	1	3	1.3	80	K11804	Plate
ASTM	A659	1	1	1.1	1015	G10150	Sheet, Strip
ASTM	A659	1	1	—	1016	G10160	Sheet, Strip
ASTM	A659	1	1	—	1017	G10170	Sheet, Strip
ASTM	A659	1	1	1.1	1018	G10180	Sheet, Strip
ASTM	A659	1	1	1.1	1020	G10200	Sheet, Strip
ASTM	A659	1	1	—	1021	G10210	Sheet, Strip
ASTM	A659	1	1	—	1023	G10230	Sheet, Strip
ASTM/ASME	A or SA-660	1	1	11.1	WCA	J02504	Centrifugal Cast Pipe
ASTM/ASME	A or SA-660	1	2	11.1	WCC	J02505	Centrifugal Cast Pipe
ASTM/ASME	A or SA-660	1	2	1.1	WCB	J03003	Centrifugal Cast Pipe
ASTM/ASME	A or SA-662	1	1	1.1	A	K01701	Plate
ASTM/ASME	A or SA-662	1	2	1.1	C	K02007	Plate
ASTM/ASME	A or SA-662	1	1	1.1	B	K02203	Plate
ASTM	A663	1	1	—	—	—	Bar
ASTM	A663	1	1	—	45	—	Bar, Shape
ASTM	A663	1	1	—	50	—	Bar, Shape
ASTM	A663	1	1	—	55	—	Bar, Shape
ASTM	A663	1	1	—	60	—	Bar, Shape
ASTM	A663	1	1	—	65	—	Bar, Shape
ASTM	A663	1	2	—	70	—	Bar, Shape
ASTM	A663	1	2	—	75	—	Bar, Shape

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A663	1	3	—	80	—	Bar, Shape
ASTM/ASME	A or SA-666	8	3	8.3	201-1	S20100	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	3	8.3	201-2	S20100	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	3	8.3	XM-11	S21904	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	302	S30200	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	304	S30400	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	304L	S30403	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	304N	S30451	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	304LN	S30453	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	316	S31600	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	316L	S31603	Plate, Sheet, Strip
ASTM/ASME	A or SA-666	8	1	8.1	316N	S31651	Plate, Sheet, Strip
ASTM	A668	1	3	11.1	F	—	Forging
ASTM	A668	1	1	1.1	B	G10200	Forging
ASTM	A668	1	2	11.1	C	G10250	Forging
ASTM	A668	1	2	11.1	D	G10300	Forging
ASTM/ASME	A or SA-671	1	1	1.1	CC60	K02100	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	1	11.1	CE55	K02202	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	1	1.1	CB60	K02401	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	1	11.1	CE60	K02402	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	1	1.1	CC65	K02403	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	2	11.1	CC70	K02700	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	1	11.1	CB65	K02800	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	1	11.1	CA55	K02801	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	2	11.1	CK75	K02803	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	2	11.1	CB70	K03101	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	2	1.2	CD70	K12437	Fusion Welded Pipe
ASTM/ASME	A or SA-671	1	3	1.2	CD80	K12437	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	3	3.1	J80	—	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	3	3.1	J90	—	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	A45	K01700	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	C55	K01800	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	B55	K02001	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	C60	K02100	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	A50	K02200	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	11.1	E55	K02202	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	B60	K02401	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	11.1	E60	K02402	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	1.1	C65	K02403	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	2	11.1	C70	K02700	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	11.1	B65	K02800	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	1	11.1	A55	K02801	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	2	11.1	N75	K02803	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	2	11.1	B70	K03101	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	1	1.1	L65	K11820	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	2	1.2	L70	K12020	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	2	1.1	H75	K12021	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	3	1.2	H80	K12022	Fusion Welded Pipe
ASTM/ASME	A or SA-672	3	2	1.2	L75	K12320	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	2	1.2	D70	K12437	Fusion Welded Pipe
ASTM/ASME	A or SA-672	1	3	1.2	D80	K12437	Fusion Welded Pipe
ASTM/ASME	A or SA-672	11A	4	3.2	J100	K12521	Fusion Welded Pipe
ASTM/ASME	A or SA-675	1	1	11.1	45	—	Bar
ASTM/ASME	A or SA-675	1	1	11.1	50	—	Bar
ASTM/ASME	A or SA-675	1	1	11.1	55	—	Bar
ASTM/ASME	A or SA-675	1	1	11.1	60	—	Bar
ASTM/ASME	A or SA-675	1	1	11.1	65	—	Bar

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-675	1	2	11.1	70	—	Bar
ASTM/ASME	A or SA-675	1	3	—	80	—	Bar
ASTM/ASME	A or SA-675	1	4	—	90	—	Bar
ASTM	A678	1	2	1.2	A	K01600	Plate
ASTM	A678	1	3	1.3	B	K02002	Plate
ASTM	A678	1	3	1.3	C	K02204	Plate
ASTM	A678	1	4	1.3	C	K02204	Plate
ASTM	A678	1	4	1.3	D	K12202	Plate
ASTM/ASME	A or SA-680	8	1	—	80	S46953	Smls. & Welded Fitting
ASTM/ASME	A or SA-688	8	3	8.3	XM-29	S24000	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP304	S30400	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP304L	S30403	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP304N	S30451	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP304LN	S30453	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP316	S31600	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP316L	S31603	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP316N	S31651	Welded Tube
ASTM/ASME	A or SA-688	8	1	8.1	TP316LN	S31653	Welded Tube
ASTM	A690	1	2	1.4	—	K12249	Marine Piling Plate, Bar
ASTM/ASME	A or SA-691	1	2	11.1	CMS-75	K02803	Fusion Welded Pipe
ASTM/ASME	A or SA-691	4	1	5.1	1CR, Cl. 1	K11757	Fusion Welded Pipe
ASTM/ASME	A or SA-691	4	1	5.1	1CR, Cl. 2	K11757	Fusion Welded Pipe
ASTM/ASME	A or SA-691	4	1	5.1	1.25CR, Cl. 1	K11789	Fusion Welded Pipe
ASTM/ASME	A or SA-691	4	1	5.1	1.25CR, Cl. 2	K11789	Fusion Welded Pipe
ASTM/ASME	A or SA-691	3	1	1.1	CM-65	K11820	Fusion Welded Pipe
ASTM/ASME	A or SA-691	3	2	1.2	CM-70	K12020	Fusion Welded Pipe
ASTM/ASME	A or SA-691	3	1	4.2	0.5CR, Cl. 1	K12143	Fusion Welded Pipe
ASTM/ASME	A or SA-691	3	2	4.2	0.5CR, Cl. 2	K12143	Fusion Welded Pipe
ASTM/ASME	A or SA-691	3	2	1.2	CM-75	K12320	Fusion Welded Pipe
ASTM/ASME	A or SA-691	1	2	1.2	CMSH-70	K12437	Fusion Welded Pipe
ASTM/ASME	A or SA-691	1	3	1.2	CMSH-80	K12437	Fusion Welded Pipe
ASTM/ASME	A or SA-691	5A	1	5.2	2.25CR, Cl. 1	K21590	Fusion Welded Pipe
ASTM/ASME	A or SA-691	5A	1	5.2	2.25CR, Cl. 2	K21590	Fusion Welded Pipe
ASTM/ASME	A or SA-691	5A	1	5.2	3CR, Cl. 1	K31545	Fusion Welded Pipe
ASTM/ASME	A or SA-691	5A	1	5.2	3CR, Cl. 2	K31545	Fusion Welded Pipe
ASTM/ASME	A or SA-691	5B	1	5.3	5CR, Cl. 1	K41545	Fusion Welded Pipe
ASTM/ASME	A or SA-691	5B	1	5.3	5CR, Cl. 2	K41545	Fusion Welded Pipe
ASTM/ASME	A or SA-691	15E	1	6.4	91	K90901	Fusion Welded Pipe
ASTM	A694	1	1	11.1	F42	K03014	Forging
ASTM	A694	1	1	11.1	F46	K03014	Forging
ASTM	A694	1	1	11.1	F48	K03014	Forging
ASTM	A694	1	1	11.1	F50	K03014	Forging
ASTM	A694	1	1	11.1	F52	K03014	Forging
ASTM	A694	1	2	11.1	F56	K03014	Forging
ASTM	A694	1	2	11.1	F60	K03014	Forging
ASTM	A694	1	2	11.1	F65	K03014	Forging
ASTM	A694	1	3	11.1	F70	K03014	Forging
ASTM/ASME	A or SA-695	1	1	11.1	B, 35	K03504	Bar
ASTM/ASME	A or SA-695	1	2	11.1	B, 40	K03504	Bar
ASTM/ASME	A or SA-696	1	1	11.1	B	K03200	Bar
ASTM/ASME	A or SA-696	1	2	11.1	C	K03200	Bar
ASTM	A706	1A	4	1.3	60	—	Rebar
ASTM	A707	1	1	1.2	L1, Cl. 1	K02302	Forging
ASTM	A707	1	1	1.2	L1, Cl. 2	K02302	Forging
ASTM	A707	3	1	—	L6, Cl. 1	K02902	Forging
ASTM	A707	3	1	—	L6, Cl. 2	K02902	Forging
ASTM	A707	3	2	—	L6, Cl. 3	K02902	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A707	3	4	—	L6, Cl. 4	K02902	Forging
ASTM	A707	1	1	11.1	L2, Cl. 1	K03301	Forging
ASTM	A707	1	1	11.1	L2, Cl. 2	K03301	Forging
ASTM	A707	1	2	11.1	L2, Cl. 3	K03301	Forging
ASTM	A707	1	1	—	L4, Cl. 1	K12089	Forging
ASTM	A707	1	1	—	L4, Cl. 2	K12089	Forging
ASTM	A707	1	2	—	L4, Cl. 3	K12089	Forging
ASTM	A707	1	1	1.2	L3, Cl. 1	K12510	Forging
ASTM	A707	1	1	1.2	L3, Cl. 2	K12510	Forging
ASTM	A707	1	2	1.3	L3, Cl. 3	K12510	Forging
ASTM	A707	1	1	—	L5, Cl. 1	K20934	Forging
ASTM	A707	1	1	—	L5, Cl. 2	K20934	Forging
ASTM	A707	1	2	—	L5, Cl. 3	K20934	Forging
ASTM	A707	1	4	—	L5, Cl. 4	K20934	Forging
ASTM	A707	9B	1	—	L7, Cl. 1	K32218	Forging
ASTM	A707	9B	1	—	L7, Cl. 2	K32218	Forging
ASTM	A707	9B	1	—	L8, Cl. 1	K42247	Forging
ASTM	A707	9B	1	—	L8, Cl. 2	K42247	Forging
ASTM	A707	9B	1	—	L8, Cl. 3	K42247	Forging
ASTM	A707	9B	1	—	L8, Cl. 4	K42247	Forging
ASTM	A709	1	1	11.1	36	—	Plate, Bar, Shape
ASTM	A709	1	1	1.2	50	—	Plate, Bar, Shape
ASTM	A709	1	1	1.2	50S	—	Plate, Bar, Shape
ASTM	A709	1	2	1.4	50W, A	—	Plate, Bar, Shape
ASTM	A709	1	2	1.4	50W, B	—	Plate, Bar, Shape
ASTM	A709	1	2	1.4	HPS 50W	—	Plate, Bar, Shape
ASTM	A709	11B	11	1.4	HPS 70W	—	Plate, Bar, Shape
ASTM	A710	12C	1	3.3	A Cl. 1	K20747	Plate
ASTM	A710	12A	1	3.3	A Cl. 2	K20747	Plate
ASTM	A710	12A	1	3.3	A Cl. 2	K20747	Plate
ASTM	A710	12A	1	3.3	A Cl. 2	K20747	Plate
ASTM	A710	12B	1	3.3	A Cl. 3	K20747	Plate
ASTM	A710	12B	1	3.3	A Cl. 3	K20747	Plate
ASTM	A714	9A	1	9.1	V	K22035	Smls. & Welded Pipe
ASTM	A714	9A	1	9.1	V, E	K22035	Smls. & Welded Pipe
ASTM/ASME	A or SA-724	1	4	3.1	A	K11831	Plate
ASTM/ASME	A or SA-724	1	4	3.1	B	K12031	Plate
ASTM/ASME	A or SA-724	1	4	1.1	C	K12037	Plate
ASTM/ASME	A or SA-727	1	1	11.1	—	K02506	Forging
ASTM/ASME	A or SA-731	6	4	7.2	S41500	S41500	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	7	2	7.1	TP439	S43035	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	7	2	7.1	18Cr-2Mo	S44400	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	10I	1	7.1	TPXM-33	S44626	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	10I	1	7.1	TPXM-27	S44627	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	10K	1	7.1	S44660	S44660	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	10J	1	7.1	S44700	S44700	Smls. & Welded Pipe
ASTM/ASME	A or SA-731	10K	1	7.1	S44800	S44800	Smls. & Welded Pipe
ASTM	A734	11A	2	3.1	A	K21205	Plate
ASTM/ASME	A or SA-737	1	2	11.1	B	K12001	Plate
ASTM/ASME	A or SA-737	1	3	4.1	C	K12202	Plate
ASTM/ASME	A or SA-738	1	3	11.1	C	K02008	Plate
ASTM/ASME	A or SA-738	1	3	11.1	B	K12007	Plate
ASTM/ASME	A or SA-738	1	2	11.1	A	K12447	Plate
ASTM/ASME	A or SA-739	4	1	5.1	B11	K11797	Bar
ASTM/ASME	A or SA-739	5A	1	5.2	B22	K21390	Bar
ASTM	A743	6	3	7.2	CA15	J91150	Casting
ASTM	A743	6	3	7.2	CA15M	J91151	Casting

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A743	6	4	7.2	CA40	J91153	Casting
ASTM	A743	6	4	7.2	CA6NM	J91540	Casting
ASTM	A743	6	4	7.2	CB6	J91804	Casting
ASTM	A743	8	1	8.1	CF3	J92500	Casting
ASTM	A743	8	1	8.1	CF8	J92600	Casting
ASTM	A743	8	2	8.2	CF20	J92602	Casting
ASTM	A743	7	1	7.1	CC50	J92615	Casting
ASTM	A743	8	1	8.2	CF16F	J92701	Casting
ASTM	A743	8	1	8.1	CF8C	J92710	Casting
ASTM	A743	8	1	8.1	CF3M	J92800	Casting
ASTM	A743	8	1	8.2	CF3MN	J92804	Casting
ASTM	A743	8	1	8.1	CF8M	J92900	Casting
ASTM	A743	8	1	8.1	CF10SMnN	J92972	Casting
ASTM	A743	8	1	8.1	CG3M	J92999	Casting
ASTM	A743	8	1	8.1	CG8M	J93000	Casting
ASTM	A743	8	2	8.2	CG12	J93001	Casting
ASTM	A743	8	4	8.2	CK3MCuN	J93254	Casting
ASTM	A743	8	2	8.2	CH10	J93401	Casting
ASTM	A743	8	2	8.2	CH20	J93402	Casting
ASTM	A743	8	2	8.2	CE30	J93423	Casting
ASTM	A743	8	2	8.2	CN3M	J94652	Casting
ASTM/ASME	A or SA-765	1	3	1.1	IV	K02009	Forging
ASTM/ASME	A or SA-765	1	1	11.1	I	K03046	Forging
ASTM/ASME	A or SA-765	1	2	11.1	II	K03047	Forging
ASTM/ASME	A or SA-765	9B	1	9.2	III	K32026	Forging
ASTM	A774	8	1	8.1	304L	S30403	Wrought Piping Fitting
ASTM	A774	8	1	8.1	316L	S31603	Wrought Piping Fitting
ASTM	A774	8	1	8.1	F317L	S31703	Wrought Piping Fitting
ASTM	A774	8	1	8.1	321	S32100	Wrought Piping Fitting
ASTM	A774	8	1	8.1	347	S34700	Wrought Piping Fitting
ASTM	A778	8	1	8.1	304L	S30403	Welded Unannealed Tube
ASTM	A778	8	1	8.1	316L	S31603	Welded Unannealed Tube
ASTM	A778	8	1	8.1	F317L	S31703	Welded Unannealed Tube
ASTM	A778	8	1	8.1	321	S32100	Welded Unannealed Tube
ASTM	A778	8	1	8.1	347	S34700	Welded Unannealed Tube
ASTM	A782	11B	4	—	1	—	Plate
ASTM/ASME	A or SA-789	10H	1	10.2	S31200	S31200	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S31260	S31260	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.1	S31500	S31500	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.1	S31803	S31803	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.3	—	S32003	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.3	—	S32101	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.3	—	S32202	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.1	—	S32205	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.1	S32304	S32304	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	—	S32506	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S32550	S32550	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	—	S32707	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S32750	S32750	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S32760	S32760	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S32900	S32900	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S32906	S32906	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S32950	S32950	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.2	S39274	S39274	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.3	—	S82011	Smls. & Welded Tube
ASTM/ASME	A or SA-789	10H	1	10.1	—	S82441	Smls. & Welded Tube
ASTM/ASME	A or SA-790	10H	1	10.2	S31200	S31200	Smls. & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-790	10H	1	10.2	S31260	S31260	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.1	S31500	S31500	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.1	S31803	S31803	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.3	—	S32003	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.3	—	S32101	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.3	—	S32202	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.1	2205	S32205	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.1	S32304	S32304	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	—	S32506	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S32550	S32550	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	—	S32707	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S32750	S32750	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S32760	S32760	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S32900	S32900	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S32906	S32906	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S32950	S32950	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.2	S39274	S39274	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.3	—	S82011	Smls. & Welded Pipe
ASTM/ASME	A or SA-790	10H	1	10.1	—	S82441	Smls. & Welded Pipe
ASTM	A795	1	1	—	E, A	—	Resistance Welded Pipe
ASTM	A795	1	1	—	E, B	—	Resistance Welded Pipe
ASTM	A795	1	1	—	F	—	Furnace Welded Pipe
ASTM	A795	1	1	—	S, A	—	Smls. Pipe
ASTM	A795	1	1	—	S, B	—	Smls. Pipe
ASTM/ASME	A or SA-803	7	2	7.1	TP439	S43035	Welded Tube
ASTM/ASME	A or SA-803	10K	1	7.1	26-3-3	S44660	Welded Tube
ASTM	A808	1	1	1.4	—	K11852	Plate
ASTM/ASME	A or SA-813	8	3	8.3	TPXM-19	S20910	Welded Pipe
ASTM/ASME	A or SA-813	8	3	8.3	TPXM-11	S21904	Welded Pipe
ASTM/ASME	A or SA-813	8	3	8.3	TPXM-29	S24000	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP304	S30400	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP304L	S30403	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP304H	S30409	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP304N	S30451	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP304LN	S30453	Welded Pipe
ASTM/ASME	A or SA-813	8	2	8.2	S30815	S30815	Welded Pipe
ASTM/ASME	A or SA-813	8	2	8.2	TP309S	S30908	Welded Pipe
ASTM/ASME	A or SA-813	8	2	8.2	TP309Cb	S30940	Welded Pipe
ASTM/ASME	A or SA-813	8	2	8.2	TP310S	S31008	Welded Pipe
ASTM/ASME	A or SA-813	8	2	8.2	TP310Cb	S31040	Welded Pipe
ASTM/ASME	A or SA-813	8	4	8.2	S31254	S31254	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP316	S31600	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP316L	S31603	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP316H	S31609	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP316N	S31651	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP316LN	S31653	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP317	S31700	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP317L	S31703	Welded Pipe
ASTM/ASME	A or SA-813	8	4	8.2	—	S32053	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP321	S32100	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP321H	S32109	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP347	S34700	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP347H	S34709	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP348	S34800	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TP348H	S34809	Welded Pipe
ASTM/ASME	A or SA-813	8	1	8.1	TPXM-15	S38100	Welded Pipe
ASTM/ASME	A or SA-814	8	3	8.3	TPXM-19	S20910	Cold-Worked Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-814	8	3	8.3	TPXM-11	S21904	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	3	8.3	TPXM-29	S24000	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP304	S30400	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP304L	S30403	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP304H	S30409	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP304N	S30451	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP304LN	S30453	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	2	8.2	S30815	S30815	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	2	8.2	TP309S	S30908	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	2	8.2	TP309Cb	S30940	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	2	8.2	TP310S	S31008	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	2	8.2	TP310Cb	S31040	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	4	8.2	S31254	S31254	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP316	S31600	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP316L	S31603	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP316H	S31609	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP316N	S31651	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP316LN	S31653	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP317	S31700	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP317L	S31703	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	4	8.2	—	S32053	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP321	S32100	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP321H	S32109	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP347	S34700	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP347H	S34709	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP348	S34800	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TP348H	S34809	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-814	8	1	8.1	TPXM-15	S38100	Cold-Worked Welded Pipe
ASTM/ASME	A or SA-815	10H	1	10.1	—	S31803	Fitting
ASTM/ASME	A or SA-815	10H	1	10.3	—	S32101	Fitting
ASTM/ASME	A or SA-815	10H	1	10.3	—	S32202	Fitting
ASTM/ASME	A or SA-815	10H	1	10.1	—	S32205	Fitting
ASTM/ASME	A or SA-815	10H	1	10.2	S32550	S32550	Fitting
ASTM/ASME	A or SA-815	10H	1	10.2	—	S32750	Fitting
ASTM/ASME	A or SA-815	10H	1	10.2	—	S32760	Fitting
ASTM/ASME	A or SA-815	6	4	7.2	—	S41500	Fitting
ASTM	A830	1	1	1.1	1006	G10060	Plate
ASTM	A830	1	1	1.1	1008	G10080	Plate
ASTM	A830	1	1	1.1	1009	G10090	Plate
ASTM	A830	1	1	1.1	1010	G10100	Plate
ASTM	A830	1	1	1.1	1012	G10120	Plate
ASTM	A830	1	1	1.1	1015	G10150	Plate
ASTM	A830	1	1	1.1	1016	G10160	Plate
ASTM	A830	1	1	1.1	1017	G10170	Plate
ASTM	A830	1	1	1.1	1018	G10180	Plate
ASTM	A830	1	1	1.1	1019	G10190	Plate
ASTM	A830	1	1	1.1	1020	G10200	Plate
ASTM	A830	1	1	1.1	1021	G10210	Plate
ASTM	A830	1	1	1.1	1022	G10220	Plate
ASTM	A830	1	1	11.1	1023	G10230	Plate
ASTM	A830	1	2	11.1	1025	G10250	Plate
ASTM/ASME	A or SA-832	5C	1	6.2	23V	—	Plate
ASTM/ASME	A or SA-832	5C	1	6.2	21V	K31830	Plate
ASTM/ASME	A or SA-832	5C	1	6.2	22V	K31835	Plate
ASTM/ASME	A or SA-836	1	1	1.1	—	—	Forging
ASTM/ASME	A or SA-841	1	2	1.2	A, Cl. 1	—	Plate
ASTM/ASME	A or SA-841	1	3	1.3	B, Cl. 2	—	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-841	3	3	2.2	F, Cl. 6	—	Plate
ASTM/ASME	A or SA-841	3	3	2.2	F, Cl. 7	—	Plate
ASTM	A844	11A	1	9.3	—	K81340	Plate
ASTM	A852	11B	11	4.2	—	K12043	Plate
ASTM	A857	1	1	1.1	25	—	Sheet, Strip
ASTM	A857	1	1	1.1	30	—	Sheet, Strip
ASTM	A857	1	1	1.1	33	—	Sheet, Strip
ASTM	A857	1	1	1.1	36	—	Sheet, Strip
ASTM	A859	11C	1	3.3	A, Cl. 1	K20747	Forging
ASTM	A859	11C	1	3.3	A, Cl. 2	K20747	Forging
ASTM	A860	1	1	1.2	WPHY 42	—	Smls. & Welded Fitting
ASTM	A860	1	1	1.2	WPHY 46	—	Smls. & Welded Fitting
ASTM	A860	1	1	1.2	WPHY 52	—	Smls. & Welded Fitting
ASTM	A860	1	2	1.3	WPHY 60	—	Smls. & Welded Fitting
ASTM	A860	1	2	1.3	WPHY 65	—	Smls. & Welded Fitting
ASTM	A860	1	3	1.3	WPHY 70	—	Smls. & Welded Fitting
ASTM	A871	3	2	4.2	60	—	Plate
ASTM	A871	3	3	4.2	65	—	Plate
ASTM	A890	10H	1	10.1	4A	J92205	Casting
ASTM	A890	10H	1	10.2	2A	J93345	Casting
ASTM	A890	10H	1	10.2	1A	J93370	Casting
ASTM	A890	10H	1	10.2	3A	J93371	Casting
ASTM	A890	10H	1	10.2	1B	J93372	Casting
ASTM	A890	10H	1	10.2	1C	J93373	Casting
ASTM	A890	10H	1	10.2	7A	J93379	Casting
ASTM	A890	10H	1	10.2	6A	J93380	Casting
ASTM	A890	10H	1	10.2	5A	J93404	Casting
ASTM	A913	1	2	1.2	50	—	Shape
ASTM	A913	1	3	3.1	60	—	Shape
ASTM	A913	1	3	3.1	65	—	Shape
ASTM	A913	1	4	3.1	70	—	Shape
ASTM	A928	10H	1	10.1	S31803	S31803	Welded Pipe
ASTM	A928	10H	1	10.3	S32003	S32003	Welded Pipe
ASTM	A928	10H	1	10.1	2205	S32205	Welded pipe
ASTM	A928	10H	1	10.1	2304	S32304	Welded Pipe
ASTM	A928	10H	1	10.2	255	S32550	Welded pipe
ASTM	A928	10H	1	10.2	2507	S32750	Welded Pipe
ASTM	A928	10H	1	10.2	—	S32760	Welded pipe
ASTM	A935	1	1	1.2	45 Cl. 1	—	Sheet, Strip
ASTM	A935	1	1	1.2	45 Cl. 2	—	Sheet, Strip
ASTM	A935	1	1	1.2	50 Cl. 1	—	Sheet, Strip
ASTM	A935	1	1	1.2	50 Cl. 2	—	Sheet, Strip
ASTM	A935	1	2	1.3	55 Cl. 1	—	Sheet, Strip
ASTM	A935	1	1	1.3	55 Cl. 2	—	Sheet, Strip
ASTM	A935	1	2	11.1	60 Cl. 1	—	Sheet, Strip
ASTM	A935	1	2	1.3	60 Cl. 2	—	Sheet, Strip
ASTM	A935	1	3	11.1	65 Cl. 1	—	Sheet, Strip
ASTM	A935	1	2	1.3	65 Cl. 2	—	Sheet, Strip
ASTM	A935	1	3	11.1	70 Cl. 1	—	Sheet, Strip
ASTM	A935	1	3	1.3	70 Cl. 2	—	Sheet, Strip
ASTM/ASME	A or SA-965	8	3	8.3	FXM-19	S20910	Forging
ASTM/ASME	A or SA-965	8	3	8.3	FXM-11	S21904	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F304	S30400	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F304L	S30403	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F304H	S30409	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F304N	S30451	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F304LN	S30453	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A or SA-965	8	1	8.1	F46	S30600	Forging
ASTM/ASME	A or SA-965	8	2	8.2	F310	S31000	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F316	S31600	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F316L	S31603	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F316H	S31609	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F316N	S31651	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F316LN	S31653	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F321	S32100	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F321H	S32109	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F347	S34700	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F347H	S34709	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F348	S34800	Forging
ASTM/ASME	A or SA-965	8	1	8.1	F348H	S34809	Forging
ASTM	A984	1	1	1.1	35	—	Pipe
ASTM	A984	1	2	1.2	50	—	Pipe
ASTM	A984	1	2	1.3	60	—	Pipe
ASTM	A984	1	3	—	70	—	Pipe
ASTM	A984	1	4	—	80	—	Pipe
ASTM	A992	1	1	1.2	—	—	Shape
ASTM/ASME	A or SA-995	10H	1	10.1	4A	J92205	Casting
ASTM/ASME	A or SA-995	10H	1	10.2	2A	J93345	Casting
ASTM/ASME	A or SA-995	10H	1	10.2	3A	J93371	Casting
ASTM/ASME	A or SA-995	10H	1	10.2	1B	J93372	Casting
ASTM/ASME	A or SA-995	10H	1	10.2	7A	J93379	Casting
ASTM/ASME	A or SA-995	10H	1	10.2	6A	J93380	Casting
ASTM/ASME	A or SA-995	10H	1	10.2	5A	J93404	Casting
ASTM	A1008	1	1	1.1	CS C	—	Sheet
ASTM	A1008	1	1	1.1	DS A	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 45 Cl. 1	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 45 Cl. 2	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 50 Cl. 1	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 50 Cl. 2	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS 55 Cl. 1	—	Sheet
ASTM	A1008	1	1	1.3	HSLAS 55 Cl. 2	—	Sheet
ASTM	A1008	1	2	11.1	HSLAS 60 Cl. 1	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet
ASTM	A1008	1	3	11.1	HSLAS 65 Cl. 1	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS 65 Cl. 2	—	Sheet
ASTM	A1008	1	3	11.1	HSLAS 70 Cl. 1	—	Sheet
ASTM	A1008	1	3	1.3	HSLAS 70 Cl. 2	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS-F 50	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS-F 60	—	Sheet
ASTM	A1008	1	3	1.3	HSLAS-F 70	—	Sheet
ASTM	A1008	1	4	1.3	HSLAS-F 80	—	Sheet
ASTM	A1008	1	1	1.1	SS 25	—	Sheet
ASTM	A1008	1	1	1.1	SS 30	—	Sheet
ASTM	A1008	1	1	1.1	SS 33 2	—	Sheet
ASTM	A1008	1	1	1.1	SS 33 1	—	Sheet
ASTM	A1008	1	1	1.1	SS 40 1	—	Sheet
ASTM	A1008	1	1	1.1	SS 40 2	—	Sheet
ASTM	A1008	1	3	1.3	SS 80	—	Sheet
ASTM/ASME	A or SA-1008	1	1	1.1	CS A	—	Sheet
ASTM/ASME	A or SA-1008	1	1	1.1	CS B	—	Sheet
ASTM/ASME	A or SA-1008	1	1	1.1	DS B	—	Sheet
ASTM/ASME	A or SA-1010	7	1	7.2	40	S41003	Plate, Sheet, Strip
ASTM/ASME	A or SA-1010	7	1	7.2	50	S41003	Plate, Sheet, Strip
ASTM	A1011	1	1	1.1	CS A	—	Sheet, Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A1011	1	1	1.1	CS C	—	Sheet, Strip
ASTM	A1011	1	1	1.1	CS D	—	Sheet, Strip
ASTM	A1011	1	1	1.1	DS A	—	Sheet, Strip
ASTM	A1011	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet, Strip
ASTM	A1011	1	3	11.1	HSLAS 65 Cl. 1	—	Sheet, Strip
ASTM	A1011	1	2	1.3	HSLAS 65 Cl. 2	—	Sheet, Strip
ASTM	A1011	1	3	11.1	HSLAS 70 Cl. 1	—	Sheet, Strip
ASTM	A1011	1	3	1.3	HSLAS 70 Cl. 2	—	Sheet, Strip
ASTM	A1011	1	1	1.2	HSLAS-F 50	—	Sheet, Strip
ASTM	A1011	1	2	1.3	HSLAS-F 60	—	Sheet, Strip
ASTM	A1011	1	3	1.3	HSLAS-F 70	—	Sheet, Strip
ASTM	A1011	1	4	1.3	HSLAS-F 80	—	Sheet, Strip
ASTM	A1011	1	1	1.1	SS 30	—	Sheet, Strip
ASTM	A1011	1	1	1.2	SS 45 2	—	Sheet, Strip
ASTM	A1011	1	3	1.3	SS 70	—	Sheet, Strip
ASTM	A1011	1	4	1.3	SS 80	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.1	CS B	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.1	DS B	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	HSLAS 45 Cl. 1	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	HSLAS 45 Cl. 2	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	HSLAS 50 Cl. 1	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	HSLAS 50 Cl. 2	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	2	1.3	HSLAS 55 Cl. 1	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.3	HSLAS 55 Cl. 2	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	2	1.3	HSLAS 60 Cl. 1	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.1	SS 33	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.1	SS 36 1	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.1	SS 36 2	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	SS 40	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	SS 45	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	SS 45 1	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	1	1.2	SS 50	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	2	1.3	SS 55	—	Sheet, Strip
ASTM/ASME	A or SA-1011	1	2	1.3	SS 60	—	Sheet, Strip
ASTM/ASME	A or SA-1017	15E	1	6.4	92	K92460	Plate
ASTM	A1018	1	1	1.2	HSLAS 45 Cl. 1	—	Sheet, Strip
ASTM	A1018	1	1	1.2	HSLAS 45 Cl. 2	—	Sheet, Strip
ASTM	A1018	1	1	1.2	HSLAS 50 Cl. 1	—	Sheet, Strip
ASTM	A1018	1	1	1.2	HSLAS 50 Cl. 2	—	Sheet, Strip
ASTM	A1018	1	2	1.3	HSLAS 55 Cl. 1	—	Sheet, Strip
ASTM	A1018	1	1	1.3	HSLAS 55 Cl. 2	—	Sheet, Strip
ASTM	A1018	1	2	11.1	HSLAS 60 Cl. 1	—	Sheet, Strip
ASTM	A1018	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet, Strip
ASTM	A1018	1	2	11.1	HSLAS 65 Cl. 1	—	Sheet, Strip
ASTM	A1018	1	2	1.3	HSLAS 65 Cl. 2	—	Sheet, Strip
ASTM	A1018	1	3	11.1	HSLAS 70 Cl. 1	—	Sheet, Strip
ASTM	A1018	1	3	1.3	HSLAS 70 Cl. 2	—	Sheet, Strip
ASTM	A1018	1	1	1.2	HSLAS-F 50	—	Sheet, Strip
ASTM	A1018	1	3	1.3	HSLAS-F 60	—	Sheet, Strip
ASTM	A1018	1	3	1.3	HSLAS-F 70	—	Sheet, Strip
ASTM	A1018	1	4	1.3	HSLAS-F 80	—	Sheet, Strip
ASTM	A1018	1	1	1.1	SS 30	—	Sheet, Strip
ASTM	A1018	1	1	1.1	SS 33	—	Sheet, Strip
ASTM	A1018	1	1	1.1	SS 36 1	—	Sheet, Strip
ASTM	A1018	1	1	1.1	SS 36 2	—	Sheet, Strip
ASTM	A1018	1	1	1.1	SS 40	—	Sheet, Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A1066	3	1	1.2	50	—	Plate
ASTM	A1066	3	2	2.1	60	—	Plate
ASTM	A1066	3	3	2.1	65	—	Plate
ASTM	A1066	3	3	2.2	70	—	Plate
ASTM	A1066	3	3	2.2	80	—	Plate
ASTM	A1085	1	1	11.1	—	—	Structural Section
ASTM	A1091	15E	1	6.4	C91	J84090	Casting
AWS/ASME	A or SFA-5.9	8	1	8.1	ER16-8-2	S16880	Weld Metal
AWS/ASME	A or SFA-5.9	8	3	8.3	ER209	S20980	Weld Metal
AWS/ASME	A or SFA-5.9	8	3	8.3	ER219	S21980	Weld Metal
AWS/ASME	A or SFA-5.9	8	3	8.3	ER240	S24080	Weld Metal
AWS/ASME	A or SFA-5.9	8	3	8.3	ER307	S30780	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308	S30880	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308H	S30880	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308Si	S30881	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308Mo	S30882	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308L	S30883	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308LMo	S30886	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER308LSi	S30888	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER309	S30980	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER309Si	S30981	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER309Mo	S30982	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER309L	S30983	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER309LMo	S30986	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER309LSi	S30988	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER310	S31080	Weld Metal
AWS/ASME	A or SFA-5.9	8	2	8.2	ER312	S31380	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.1	ER316	S31680	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.1	ER316H	S31680	Weld Metal
AWS/ASME	A or SFA-5.9	8	3	8.2	ER316LMn	S31682	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER316L	S31683	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.1	ER316LSi	S31688	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.1	ER316Si	S31688	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER317	S31780	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER317L	S31783	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.1	ER318	S31980	Weld Metal
AWS/ASME	A or SFA-5.9	10H	1	10.2	ER2594	S32750	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER347	S34780	Weld Metal
AWS/ASME	A or SFA-5.9	8	1	8.2	ER347Si	S34788	Weld Metal
AWS/ASME	A or SFA-5.9	10H	1	10.1	ER2209	S39209	Weld Metal
AWS/ASME	A or SFA-5.9	10H	1	10.2	ER2553	S39553	Weld Metal
AWS/ASME	A or SFA-5.9	7	1	7.1	ER409	S40900	Weld Metal
AWS/ASME	A or SFA-5.9	7	1	7.1	ER409Nb	S40940	Weld Metal
AWS/ASME	A or SFA-5.9	6	1	7.2	ER410	S41080	Weld Metal
AWS/ASME	A or SFA-5.9	6	4	7.2	ER410NiMo	S41086	Weld Metal
AWS/ASME	A or SFA-5.9	7	2	7.1	ER430	S43080	Weld Metal
AWS/ASME	A or SFA-5.9	10H	1	10.2	ER2307	S82371	Weld Metal
AWS/ASME	A or SFA-5.18	1	2	1.3	ER70S-8	—	Weld Metal
AWS/ASME	A or SFA-5.18	1	2	1.3	ER70S-2	K10726	Weld Metal
AWS/ASME	A or SFA-5.18	1	2	1.3	ER70S-3	K11022	Weld Metal
AWS/ASME	A or SFA-5.18	1	2	1.3	ER70S-7	K11125	Weld Metal
AWS/ASME	A or SFA-5.18	1	2	1.3	ER70S-4	K11132	Weld Metal
AWS/ASME	A or SFA-5.18	1	2	1.3	ER70S-6	K11140	Weld Metal
AWS/ASME	A or SFA-5.28	9C	1	9.2	ER70S-Ni4	—	Weld Metal
AWS/ASME	A or SFA-5.28	4	1	5.1	ER80S-B2Mn	—	Weld Metal
AWS/ASME	A or SFA-5.28	4	1	5.1	ER80S-B2Si	—	Weld Metal
AWS/ASME	A or SFA-5.28	5A	1	5.2	ER90S-B3Mn	—	Weld Metal

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AWS/ASME	A or SFA-5.28	5A	1	5.2	ER90S-B3MnSi	—	Weld Metal
AWS/ASME	A or SFA-5.28	5A	1	5.2	ER90S-B3Si	—	Weld Metal
AWS/ASME	A or SFA-5.28	11B	3	—	ER100S-M7	—	Weld Metal
AWS/ASME	A or SFA-5.28	11B	3	—	ER110S-M6	—	Weld Metal
AWS/ASME	A or SFA-5.28	11B	3	—	ER120S-M8	—	Weld Metal
AWS/ASME	A or SFA-5.28	11B	3	—	ER100S-1	K10882	Weld Metal
AWS/ASME	A or SFA-5.28	3	2	—	ER80S-D2	K10945	Weld Metal
AWS/ASME	A or SFA-5.28	3	2	—	ER90S-D2	K10945	Weld Metal
AWS/ASME	A or SFA-5.28	3	2	1.3	ER70S-A1	K11235	Weld Metal
AWS/ASME	A or SFA-5.28	1	3	9.1	ER80S-Ni1	K11260	Weld Metal
AWS/ASME	A or SFA-5.28	4	1	5.1	ER70S-B2L	K20500	Weld Metal
AWS/ASME	A or SFA-5.28	4	1	5.1	ER80S-B2	K20900	Weld Metal
AWS/ASME	A or SFA-5.28	11B	3	—	ER110S-1	K21015	Weld Metal
AWS/ASME	A or SFA-5.28	11B	3	—	ER120S-1	K21030	Weld Metal
AWS/ASME	A or SFA-5.28	9A	1	9.1	ER80S-Ni2	K21240	Weld Metal
AWS/ASME	A or SFA-5.28	5A	1	5.2	ER80S-B3L	K30560	Weld Metal
AWS/ASME	A or SFA-5.28	5A	1	5.2	ER90S-B3	K30960	Weld Metal
AWS/ASME	A or SFA-5.28	9B	1	9.2	ER80S-Ni3	K31240	Weld Metal
CSA	CSA G30.18	1A	4	—	300R	—	Rebar
CSA	CSA G30.18	1A	4	—	400R	—	Rebar
CSA	CSA G30.18	1A	4	11.1	400W	—	Rebar
CSA	CSA G30.18	1A	4	—	500R	—	Rebar
CSA	CSA G30.18	1A	4	11.1	500W	—	Rebar
CSA	CSA G40.21	1	1	1.1	260W	—	Plate, Bar, Shape
CSA	CSA G40.21	1	1	1.1	260WT	—	Plate, Bar, Shape
CSA	CSA G40.21	1	1	1.2	300W	—	Plate, Bar, Shape
CSA	CSA G40.21	1	1	1.2	300WT	—	Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.4	350A	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.4	350AT	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.4	350R	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	1	1.2	350W	—	Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.2	350WT	—	Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.3	380W	—	Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.3	380WT	—	Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.4	400A	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.4	400AT	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.3	400W	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	2	1.3	400WT	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	3	1.4	480A	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	3	1.4	480AT	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	3	11.1	480W	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	3	11.1	480WT	—	HSLA Plate, Bar, Shape
CSA	CSA G40.21	1	4	1.4	550A	—	Plate, Bar, Shape
CSA	CSA G40.21	1	4	1.4	550AT	—	Plate, Bar, Shape
CSA	CSA G40.21	1	4	1.3	550W	—	Plate, Bar, Shape
CSA	CSA G40.21	1	4	1.3	550WT	—	Plate, Bar, Shape
CSA/ASME	CSA or SA/CSA-G40.21	1	1	1.1	38W	—	Plate, Bar, Shape
CSA/ASME	CSA or SA/CSA-G40.21	1	1	1.2	44W	—	Plate, Bar, Shape
CSA/ASME	CSA or SA/CSA-G40.21	1	1	1.2	50W	—	Plate, Bar, Shape
CSA	CSA Z245.1	1	1	11.1	172	—	Pipe
CSA	CSA Z245.1	1	1	11.1	207	—	Pipe
CSA	CSA Z245.1	1	1	11.1	241	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	1	11.1	290	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	2	11.1	317	—	Pipe
CSA	CSA Z245.1	1	1	11.1	359	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	2	11.1	386	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	2	11.1	414	—	Smls. & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
CSA	CSA Z245.1	1	2	11.1	448	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	3	11.1	483	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	4	11.1	550	—	Smls. & Welded Pipe
CSA	CSA Z245.1	1	4	11.1	620	—	Smls. & Welded Pipe
CSA	CSA Z245.11	1	1	11.1	207	—	Fitting
CSA	CSA Z245.11	1	1	11.1	241	—	Fitting
CSA	CSA Z245.11	1	1	11.1	290	—	Fitting
CSA	CSA Z245.11	1	2	11.1	317	—	Fitting
CSA	CSA Z245.11	1	2	11.1	359	—	Fitting
CSA	CSA Z245.11	1	2	11.1	386	—	Fitting
CSA	CSA Z245.11	1	3	11.1	414	—	Fitting
CSA	CSA Z245.11	1	3	11.1	448	—	Fitting
CSA	CSA Z245.11	1	3	11.1	483	—	Fitting
CSA	CSA Z245.11	1	4	11.1	550	—	Fitting
CSA	CSA Z245.11	1	4	11.1	620	—	Fitting
CSA	CSA Z245.12	1	1	11.1	248	—	Flange
CSA	CSA Z245.12	1	1	11.1	290	—	Flange
CSA	CSA Z245.12	1	2	11.1	317	—	Flange
CSA	CSA Z245.12	1	2	11.1	359	—	Flange
CSA	CSA Z245.12	1	2	11.1	386	—	Flange
CSA	CSA Z245.12	1	3	11.1	414	—	Flange
CSA	CSA Z245.12	1	3	11.1	448	—	Flange
CSA	CSA Z245.12	1	3	11.1	483	—	Flange
CSA	CSA Z245.12	1	4	11.1	550	—	Flange
CSA	CSA Z245.12	1	4	11.1	620	—	Flange
IRAM/IAS	IRAM/IAS U 500-42	1	1	1.1	F-24	—	Plate
IRAM/IAS	IRAM/IAS U 500-42	1	1	1.1	F-24	—	Plate, Sheet, Strip
IRAM/IAS	IRAM/IAS U 500-42	1	1	1.1	F-26	—	Plate
IRAM/IAS	IRAM/IAS U 500-42	1	1	1.1	F-26	—	Plate, Sheet, Strip
MSS	MSS SP-75	1	1	11.1	WPHY-42	—	Smls. & Welded Fitting
MSS	MSS SP-75	1	1	11.1	WPHY-46	—	Smls. & Welded Fitting
MSS	MSS SP-75	1	1	11.1	WPHY-52	—	Smls. & Welded Fitting
MSS	MSS SP-75	1	2	11.1	WPHY-56	—	Smls. & Welded Fitting
MSS	MSS SP-75	1	2	11.1	WPHY-60	—	Smls. & Welded Fitting
MSS	MSS SP-75	1	2	11.1	WPHY-65	—	Smls. & Welded Fitting
MSS	MSS SP-75	1	3	11.1	WPHY-70	—	Smls. & Welded Fitting

Table C.1
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	A or SA-494	43	—	43	CX2MW	N26022	Casting
AMS	AMS 4914	53	—	54	—	R58153	Sheet
AMS	AMS 4915	54	—	52	—	R54810	Sheet, Strip
AMS	AMS 4915	54	—	52	—	R54810	Plate
AMS	AMS 4919	54	—	52	—	R54620	Sheet
AMS	AMS 4973	54	—	52	—	R54810	Forging
AMS	AMS 4975	54	—	52	—	R54620	Bar
AMS	AMS 4976	54	—	52	—	R54620	Forging
AMS	AMS 5711	44	—	43	—	N06635	Sheet
ASTM/ASME	A or SA-182	45	—	8.2	—	N08367	Forging
ASTM/ASME	A or SA-182	45	—	8.2	F904L	N08904	Forging
ASTM/ASME	A or SA-182	45	—	8.2	F58	S31266	Forging
ASTM/ASME	A or SA-240	45	—	8.2	—	N08367	Plate
ASTM/ASME	A or SA-240	45	—	8.2	—	N08367	Sheet, Strip
ASTM/ASME	A or SA-240	45	—	8.2	904L	N08904	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	45	—	8.2	—	S31266	Plate, Sheet, Strip
ASTM/ASME	A or SA-240	45	—	8.2	S31277	S31277	Plate, Sheet, Strip
ASTM/ASME	A or SA-249	45	—	8.2	—	N08367	Welded Tube
ASTM/ASME	A or SA-249	45	—	8.2	—	N08904	Welded Tube
ASTM/ASME	A or SA-312	45	—	8.2	N08367	N08367	Smls. & Welded Pipe
ASTM/ASME	A or SA-312	45	—	8.2	—	N08904	Smls. & Welded Pipe
ASTM/ASME	A or SA-351	45	—	8.2	CN3MN	J94651	Casting
ASTM/ASME	A or SA-351	45	—	8.2	CN7M	N08007	Casting
ASTM/ASME	A or SA-351	45	—	45	CT15C	N08151	Casting
ASTM/ASME	A or SA-351	45	—	45	HT30	N08603	Casting
ASTM/ASME	A or SA-358	45	—	8.2	N08367	N08367	Fusion Welded Pipe
ASTM/ASME	A or SA-358	45	—	8.2	—	S31266	Fusion Welded Pipe
ASTM	A403	45	—	8.2	—	N08367	Wrought Piping Fitting
ASTM/ASME	A or SA-403	45	—	8.2	—	N08904	Wrought Piping Fitting
ASTM/ASME	A or SA-479	45	—	8.2	—	N08367	Bar, Shape
ASTM/ASME	A or SA-479	45	—	8.2	904L	N08904	Bar, Shape
ASTM/ASME	A or SA-494	42	—	42	M35-2	N04020	Casting
ASTM/ASME	A or SA-494	43	—	43	CY40	N06040	Casting
ASTM/ASME	A or SA-494	45	—	45	CU5MCuC	N08826	Casting
ASTM/ASME	A or SA-494	42	—	42	M30C	N24130	Casting
ASTM/ASME	A or SA-494	42	—	42	M35-1	N24135	Casting
ASTM/ASME	A or SA-494	43	—	43	CW2M	N26455	Casting
ASTM/ASME	A or SA-494	43	—	43	CW6MC	N26625	Casting
ASTM/ASME	A or SA-494	44	—	44	N7M	N30007	Casting
ASTM/ASME	A or SA-494	44	—	44	CW6M	N30107	Casting
ASTM/ASME	A or SA-813	45	—	8.2	N08367	N08367	Welded Pipe
ASTM/ASME	A or SA-814	45	—	8.2	N08367	N08367	Cold-Worked Welded Pipe
ASTM	B21	32	—	32.2	—	C46400	Rod, Bar
ASTM	B21	32	—	32.2	—	C46400	Shape
ASTM/ASME	B or SB-26	26	—	25	208.0	A02080	Casting
ASTM/ASME	B or SB-26	26	—	—	222.0, O	A02220	Casting
ASTM/ASME	B or SB-26	26	—	—	222.0, T61	A02220	Casting
ASTM/ASME	B or SB-26	26	—	25	319.0, F	A03190	Casting
ASTM/ASME	B or SB-26	26	—	25	319.0, T5	A03190	Casting
ASTM/ASME	B or SB-26	26	—	25	319.0, T6	A03190	Casting
ASTM/ASME	B or SB-26	26	—	25	328.0, F	A03280	Casting
ASTM/ASME	B or SB-26	26	—	25	328.0, T6	A03280	Casting
ASTM/ASME	B or SB-26	26	—	24.2	356.0, F	A03560	Casting
ASTM/ASME	B or SB-26	26	—	24.2	356.0, T6	A03560	Casting
ASTM/ASME	B or SB-26	26	—	24.2	356.0, T7	A03560	Casting
ASTM/ASME	B or SB-26	26	—	24.2	356.0, T51	A03560	Casting
ASTM/ASME	B or SB-26	26	—	24.2	356.0, T71	A03560	Casting
ASTM/ASME	B or SB-26	26	—	24.1	443.0	A04430	Casting

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-26	26	—	23.1	512.0	A05120	Casting
ASTM/ASME	B or SB-26	26	—	23.1	514.0	A05140	Casting
ASTM/ASME	B or SB-26	26	—	—	535.0	A05350	Casting
ASTM/ASME	B or SB-26	26	—	23.2	705.0, T5	A07050	Casting
ASTM/ASME	B or SB-26	26	—	23.2	710.0, T5	A07100	Casting
ASTM/ASME	B or SB-26	26	—	24.2	A356.0, T6	A13560	Casting
ASTM/ASME	B or SB-26	26	—	24.2	A356.0, T61	A13560	Casting
ASTM/ASME	B or SB-26	26	—	24.1	B443.0	A24430	Casting
ASTM/ASME	B or SB-42	31	—	31	—	C10200	Smls. Pipe
ASTM/ASME	B or SB-42	31	—	31	—	C10300	Smls. Pipe
ASTM/ASME	B or SB-42	31	—	31	—	C10800	Smls. Pipe
ASTM/ASME	B or SB-42	31	—	31	—	C12000	Smls. Pipe
ASTM/ASME	B or SB-42	31	—	31	—	C12200	Smls. Pipe
ASTM/ASME	B or SB-43	32	—	32.1	—	C23000	Smls. Pipe
ASTM	B68	31	—	31	—	C10200	Tube
ASTM	B68	31	—	31	—	C10300	Tube
ASTM	B68	31	—	31	—	C10800	Tube
ASTM	B68	31	—	31	—	C12000	Tube
ASTM	B68	31	—	31	—	C12200	Tube
ASTM/ASME	B or SB-75	31	—	31	—	C10100	Smls. Tube
ASTM/ASME	B or SB-75	31	—	31	—	C10200	Smls. Tube
ASTM/ASME	B or SB-75	31	—	31	—	C10300	Smls. Tube
ASTM/ASME	B or SB-75	31	—	31	—	C10800	Smls. Tube
ASTM/ASME	B or SB-75	31	—	31	—	C12000	Smls. Tube
ASTM/ASME	B or SB-75	31	—	31	—	C12200	Smls. Tube
ASTM/ASME	B or SB-75	31	—	31	—	C14200	Smls. Tube
ASTM	B80	83	—	—	AZ91C, F	M11914	Casting
ASTM	B80	83	—	—	AZ92A, F	M11920	Casting
ASTM	B80	83	—	—	K1A	M18010	Casting
ASTM	B88	31	—	31	—	C10200	Tube
ASTM	B88	31	—	31	—	C12000	Tube
ASTM	B88	31	—	31	—	C12200	Tube
ASTM	B90	81	—	—	AZ31B	M11311	Plate, Sheet
ASTM	B90	81	—	—	AZ31C	M11312	Plate, Sheet
ASTM	B90	81	—	—	AZ31C	M11312	Sheet
ASTM	B90	81	—	—	HK31A	M13310	Plate, Sheet
ASTM	B90	81	—	—	HK31A	M13310	Plate
ASTM	B90	81	—	—	ZE10A	M16100	Plate
ASTM	B90	81	—	—	ZE10A	M16100	Sheet
ASTM	B91	81	—	—	AZ31B	M11311	Forging
ASTM	B91	81	—	—	AZ61A	M11610	Forging
ASTM/ASME	B or SB-96	33	—	37	—	C65100	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-96	33	—	37	—	C65400	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-96	33	—	37	—	C65500	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-98	33	—	37	—	C65100	Rod, Bar, Shape
ASTM/ASME	B or SB-98	33	—	37	—	C65500	Rod, Bar, Shape
ASTM/ASME	B or SB-98	33	—	37	—	C66100	Rod, Bar, Shape
ASTM	B107	81	—	—	AZ31B	M11311	Tube
ASTM	B107	81	—	—	AZ31B	M11311	Bar, Rod, Profile, Wire
ASTM	B107	81	—	—	AZ31B	M11311	Hollow Profile
ASTM	B107	81	—	—	AZ31C	M11312	Bar, Rod, Profile, Wire
ASTM	B107	81	—	—	AZ31C	M11312	Hollow Profile
ASTM	B107	81	—	—	AZ31C	M11312	Tube
ASTM	B107	81	—	—	AZ61A	M11610	Bar, Rod, Profile, Wire
ASTM	B107	81	—	—	AZ61A	M11610	Hollow Profile
ASTM	B107	81	—	—	AZ61A	M11610	Tube
ASTM	B107	81	—	—	M1A	M15100	Bar, Rod, Profile, Wire
ASTM	B107	81	—	—	M1A	M15100	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM	B107	81	—	—	M1A	M15100	Hollow Profile
ASTM/ASME	B or SB-108	26	—	25	308.0	A03080	Casting
ASTM/ASME	B or SB-108	26	—	25	319.0	A03190	Casting
ASTM/ASME	B or SB-108	26	—	25	333.0, F	A03330	Casting
ASTM/ASME	B or SB-108	26	—	25	333.0, T5	A03330	Casting
ASTM/ASME	B or SB-108	26	—	25	333.0, T6	A03330	Casting
ASTM/ASME	B or SB-108	26	—	25	333.0, T7	A03330	Casting
ASTM/ASME	B or SB-108	26	—	24.2	356.0, F	A03560	Casting
ASTM/ASME	B or SB-108	26	—	24.2	356.0, T6	A03560	Casting
ASTM/ASME	B or SB-108	26	—	24.2	356.0, T71	A03560	Casting
ASTM/ASME	B or SB-108	26	—	24.1	443.0	A04430	Casting
ASTM/ASME	B or SB-108	26	—	23.2	513.0	A05130	Casting
ASTM/ASME	B or SB-108	26	—	—	535.0	A05350	Casting
ASTM/ASME	B or SB-108	26	—	24.2	A356.0	A13560	Casting
ASTM/ASME	B or SB-108	26	—	24.1	A444.0	A14440	Casting
ASTM/ASME	B or SB-108	26	—	24.1	B443.0	A24430	Casting
ASTM/ASME	B or SB-111	31	—	31	—	C10100	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C10200	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C10300	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C10800	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C12000	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C12200	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C14200	Smls. Tube
ASTM/ASME	B or SB-111	31	—	31	—	C19200	Smls. Tube
ASTM/ASME	B or SB-111	32	—	32.1	—	C23000	Smls. Tube
ASTM/ASME	B or SB-111	32	—	32.1	—	C28000	Smls. Tube
ASTM/ASME	B or SB-111	32	—	32.2	—	C44300	Smls. Tube
ASTM/ASME	B or SB-111	32	—	32.2	—	C44400	Smls. Tube
ASTM/ASME	B or SB-111	32	—	32.2	—	C44500	Smls. Tube
ASTM/ASME	B or SB-111	35	—	35	—	C60800	Smls. Tube
ASTM/ASME	B or SB-111	35	—	35	—	C61300	Smls. Tube
ASTM/ASME	B or SB-111	35	—	35	—	C61400	Smls. Tube
ASTM/ASME	B or SB-111	32	—	32.2	—	C68700	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C70400	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C70600	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C70620	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C71000	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C71500	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C71520	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C71640	Smls. Tube
ASTM/ASME	B or SB-111	34	—	34	—	C72200	Smls. Tube
ASTM/ASME	B or SB-127	42	—	42	—	N04400	Plate, Sheet, Strip
ASTM/ASME	B or SB-135	32	—	32.1	—	C22000	Smls. Tube
ASTM/ASME	B or SB-135	32	—	32.1	—	C23000	Smls. Tube
ASTM/ASME	B or SB-148	35	—	35	—	C95200	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95300	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95400	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95410	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95500	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95600	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95700	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95800	Casting
ASTM/ASME	B or SB-148	35	—	35	—	C95820	Casting
ASTM/ASME	B or SB-150	35	—	35	—	C61300	Bar, Rod (Hex, Oct)
ASTM/ASME	B or SB-150	35	—	35	—	C61300	Rod (Round)
ASTM/ASME	B or SB-150	35	—	35	—	C61400	Bar, Rod
ASTM/ASME	B or SB-150	35	—	35	—	C61900	Shape
ASTM/ASME	B or SB-150	35	—	35	—	C61900	Rod (Round)

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-150	35	—	35	—	C62300	Shape
ASTM/ASME	B or SB-150	35	—	35	—	C62300	Rod (Round)
ASTM/ASME	B or SB-150	35	—	35	—	C62300	Bar, Rod (Hex, Oct)
ASTM/ASME	B or SB-150	35	—	35	—	C62400	Shape
ASTM/ASME	B or SB-150	35	—	35	—	C62400	Rod (Round)
ASTM/ASME	B or SB-150	35	—	35	—	C62400	Bar, Rod (Hex, Oct)
ASTM/ASME	B or SB-150	35	—	35	—	C63000	Bar, Rod
ASTM/ASME	B or SB-150	35	—	35	—	C63000	Shape
ASTM/ASME	B or SB-150	35	—	35	—	C63020	Bar, Rod
ASTM/ASME	B or SB-150	35	—	35	—	C63200	Bar, Rod, Shape
ASTM/ASME	B or SB-150	35	—	35	—	C64200	Shape
ASTM/ASME	B or SB-150	35	—	35	—	C64200	Bar, Rod
ASTM/ASME	B or SB-151	34	—	34	—	C70600	Rod, Bar
ASTM/ASME	B or SB-151	34	—	34	—	C70620	Rod, Bar
ASTM/ASME	B or SB-151	34	—	34	—	C71500	Sq Bar, Rod (Rnd, Hex, Oct)
ASTM/ASME	B or SB-151	34	—	34	—	C71500	Bar (Rect.), Shape
ASTM/ASME	B or SB-152	31	—	31	—	C10100	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C10200	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C10300	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C10400	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C10500	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C10700	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C10800	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C11000	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C12000	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C12200	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C12300	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C14200	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-152	31	—	31	—	C14420	Plate, Sheet, Strip, Bar
ASTM/ASME	B or SB-160	41	—	41	—	N02200	Rod, Bar
ASTM/ASME	B or SB-160	41	—	41	—	N02201	Rod, Bar
ASTM/ASME	B or SB-161	41	—	41	—	N02200	Smls. Pipe, Tube
ASTM/ASME	B or SB-161	41	—	41	—	N02201	Smls. Pipe, Tube
ASTM/ASME	B or SB-162	41	—	41	—	N02200	Plate, Sheet, Strip
ASTM/ASME	B or SB-162	41	—	41	—	N02201	Plate, Sheet, Strip
ASTM/ASME	B or SB-163	41	—	41	—	N02200	Smls. Tube
ASTM/ASME	B or SB-163	41	—	41	—	N02201	Smls. Tube
ASTM/ASME	B or SB-163	42	—	42	—	N04400	Smls. Tube
ASTM/ASME	B or SB-163	43	—	43	—	N06025	Smls. Tube
ASTM/ASME	B or SB-163	46	—	45	—	N06045	Smls. Tube
ASTM/ASME	B or SB-163	43	—	43	—	N06600	Smls. Tube
ASTM/ASME	B or SB-163	43	—	43	—	N06601	Smls. Tube
ASTM/ASME	B or SB-163	43	—	43	—	N06690	Smls. Tube
ASTM/ASME	B or SB-163	45	—	45	—	N08120	Smls. Tube
ASTM/ASME	B or SB-163	45	—	45	—	N08800	Smls. Tube
ASTM/ASME	B or SB-163	45	—	45	—	N08801	Smls. Tube
ASTM/ASME	B or SB-163	45	—	45	—	N08810	Smls. Tube
ASTM/ASME	B or SB-163	45	—	45	—	N08811	Smls. Tube
ASTM/ASME	B or SB-163	45	—	45	—	N08825	Smls. Tube
ASTM/ASME	B or SB-164	42	—	42	—	N04400	Rod, Bar, Wire
ASTM/ASME	B or SB-164	42	—	42	—	N04405	Rod, Bar, Wire
ASTM/ASME	B or SB-165	42	—	42	—	N04400	Smls. Pipe, Tube
ASTM/ASME	B or SB-166	43	—	43	—	N06025	Rod, Bar, Wire
ASTM/ASME	B or SB-166	46	—	45	—	N06045	Rod, Bar, Wire
ASTM/ASME	B or SB-166	43	—	43	—	N06600	Rod, Bar, Wire
ASTM/ASME	B or SB-166	43	—	43	—	N06601	Rod, Bar, Wire
ASTM/ASME	B or SB-166	43	—	46	—	N06617	Rod, Bar, Wire
ASTM/ASME	B or SB-166	43	—	43	—	N06690	Rod, Bar, Wire

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-167	43	—	43	—	N06025	Smls. Pipe, Tube
ASTM/ASME	B or SB-167	46	—	45	—	N06045	Smls. Pipe, Tube
ASTM/ASME	B or SB-167	43	—	43	—	N06600	Smls. Pipe, Tube
ASTM/ASME	B or SB-167	43	—	43	—	N06601	Smls. Pipe, Tube
ASTM/ASME	B or SB-167	43	—	46	—	N06617	Smls. Pipe, Tube
ASTM/ASME	B or SB-167	43	—	43	—	N06690	Smls. Pipe, Tube
ASTM/ASME	B or SB-168	43	—	43	—	N06025	Plate, Sheet, Strip
ASTM/ASME	B or SB-168	46	—	45	—	N06045	Plate, Sheet, Strip
ASTM/ASME	B or SB-168	43	—	43	—	N06600	Plate, Sheet, Strip
ASTM/ASME	B or SB-168	43	—	43	—	N06601	Plate, Sheet, Strip
ASTM/ASME	B or SB-168	43	—	46	—	N06617	Plate, Sheet, Strip
ASTM/ASME	B or SB-168	43	—	43	—	N06690	Plate, Sheet, Strip
ASTM/ASME	B or SB-169	35	—	35	—	C61300	Plate, Sheet, Strip,Bar
ASTM/ASME	B or SB-169	35	—	35	—	C61400	Plate, Bar
ASTM/ASME	B or SB-169	35	—	35	—	C61400	Plate, Sheet, Strip,Bar
ASTM	B170	31	—	31	1	C10100	Shape
ASTM	B170	31	—	31	2	C10200	Shape
ASTM/ASME	B or SB-171	32	—	32.2	—	C36500	Plate
ASTM/ASME	B or SB-171	32	—	32.2	—	C36500	Plate, Sheet
ASTM/ASME	B or SB-171	32	—	32.2	—	C44300	Plate, Sheet
ASTM/ASME	B or SB-171	32	—	32.2	—	C44400	Plate, Sheet
ASTM/ASME	B or SB-171	32	—	32.2	—	C44500	Plate, Sheet
ASTM/ASME	B or SB-171	32	—	32.2	—	C46400	Plate, Sheet
ASTM/ASME	B or SB-171	32	—	32.2	—	C46500	Plate, Sheet
ASTM/ASME	B or SB-171	35	—	35	—	C61300	Plate, Sheet
ASTM/ASME	B or SB-171	35	—	35	—	C61400	Plate
ASTM/ASME	B or SB-171	35	—	35	—	C61400	Plate, Sheet
ASTM/ASME	B or SB-171	35	—	35	—	C63000	Plate, Sheet
ASTM/ASME	B or SB-171	35	—	35	—	C63000	Plate
ASTM/ASME	B or SB-171	35	—	35	—	C63200	Plate, Sheet
ASTM/ASME	B or SB-171	34	—	34	—	C70600	Plate, Sheet
ASTM/ASME	B or SB-171	34	—	34	—	C70620	Plate, Sheet
ASTM/ASME	B or SB-171	34	—	34	—	C71500	Plate
ASTM/ASME	B or SB-171	34	—	34	—	C71500	Plate, Sheet
ASTM/ASME	B or SB-171	34	—	34	—	C71520	Plate
ASTM/ASME	B or SB-171	34	—	34	—	C71520	Plate, Sheet
ASTM/ASME	B or SB-171	34	—	34	—	C72200	Plate, Sheet
ASTM/ASME	B or SB-187	31	—	31	—	C10100	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C10200	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C10300	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C10400	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C10700	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C10940	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C11000	Rod, Bar
ASTM/ASME	B or SB-187	31	—	31	—	C14420	Rod, Bar
ASTM	B199	83	—	—	AM100A	M10100	Casting
ASTM	B199	83	—	—	AZ91C, F	M11914	Casting
ASTM	B199	83	—	—	AZ92A, F	M11920	Casting
ASTM/ASME	B or SB-209	21	—	—	Alclad 3003	—	Plate
ASTM/ASME	B or SB-209	21	—	—	Alclad 3003	—	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	—	Alclad 3004	—	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	—	Alclad 3004	—	Plate
ASTM/ASME	B or SB-209	23	—	—	Alclad 6061	—	Plate, Sheet
ASTM/ASME	B or SB-209	24	—	—	Alclad 2014	A82014	Plate, Sheet
ASTM/ASME	B or SB-209	24	—	—	Alclad 2219	A82219	Plate, Sheet
ASTM/ASME	B or SB-209	21	—	—	Alclad 3003	A83003	Plate, Sheet
ASTM/ASME	B or SB-209	23	—	—	Alclad 6061	A86061	Plate, Sheet
ASTM/ASME	B or SB-209	21	—	21	1060	A91060	Plate, Sheet

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-209	21	—	21	1100	A91100	Plate, Sheet
ASTM/ASME	B or SB-209	24	—	26	2014	A92014	Plate, Sheet
ASTM/ASME	B or SB-209	24	—	26	2219	A92219	Plate, Sheet
ASTM/ASME	B or SB-209	21	—	22.1	3003	A93003	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.2	3004	A93004	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.2	3005	A93005	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.2	3105	A93105	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.2	5005	A95005	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.2	5010	A95010	Plate, Sheet
ASTM/ASME	B or SB-209	21	—	22.2	5050	A95050	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.3	5052	A95052	Plate, Sheet
ASTM/ASME	B or SB-209	25	—	22.4	5083	A95083	Plate, Sheet
ASTM/ASME	B or SB-209	25	—	22.4	5083	A95083	Plate
ASTM/ASME	B or SB-209	25	—	22.4	5086	A95086	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.4	5154	A95154	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.3	5252	A95252	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.4	5254	A95254	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.3	5454	A95454	Plate, Sheet
ASTM/ASME	B or SB-209	25	—	22.4	5456	A95456	Plate
ASTM/ASME	B or SB-209	25	—	22.4	5456	A95456	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.2	5457	A95457	Plate, Sheet
ASTM/ASME	B or SB-209	22	—	22.3	5652	A95652	Plate, Sheet
ASTM/ASME	B or SB-209	23	—	23.1	6061	A96061	Plate, Sheet
ASTM	B210	21	—	—	Alclad 3102	—	Smls. Tube
ASTM	B210	21	—	—	Alclad 3303	—	Smls. Tube
ASTM	B210	21	—	—	Alclad 3003	A83003	Smls. Tube
ASTM	B210	21	—	21	1100	A91100	Smls. Tube
ASTM	B210	24	—	26	2014	A92014	Smls. Tube
ASTM	B210	21	—	22.1	3102	A93102	Smls. Tube
ASTM	B210	21	—	—	3303	A93303	Smls. Tube
ASTM	B210	22	—	22.2	5005	A95005	Smls. Tube
ASTM	B210	21	—	22.2	5050	A95050	Smls. Tube
ASTM/ASME	B or SB-210	21	—	—	Alclad 3003	—	Smls. Tube
ASTM/ASME	B or SB-210	21	—	21	1060	A91060	Smls. Tube
ASTM/ASME	B or SB-210	21	—	22.1	3003	A93003	Smls. Tube
ASTM/ASME	B or SB-210	22	—	22.3	5052	A95052	Smls. Tube
ASTM/ASME	B or SB-210	25	—	22.4	5083	A95083	Smls. Tube
ASTM/ASME	B or SB-210	25	—	22.4	5086	A95086	Smls. Tube
ASTM/ASME	B or SB-210	22	—	22.4	5154	A95154	Smls. Tube
ASTM/ASME	B or SB-210	25	—	22.4	5456	A95456	Smls. Tube
ASTM/ASME	B or SB-210	23	—	23.1	6061	A96061	Smls. Tube
ASTM/ASME	B or SB-210	23	—	23.1	6063	A96063	Smls. Tube
ASTM/ASME	B or SB-211	25	—	—	Alclad 5056	—	Bar, Rod, Wire
ASTM/ASME	B or SB-211	21	—	21	1060	A91060	Bar, Rod, Wire
ASTM/ASME	B or SB-211	21	—	21	1100	A91100	Bar, Rod, Wire
ASTM/ASME	B or SB-211	24	—	26	2014	A92014	Bar, Rod, Wire
ASTM/ASME	B or SB-211	24	—	26	2219	A92219	Bar, Rod, Wire
ASTM/ASME	B or SB-211	21	—	22.1	3003	A93003	Bar, Rod, Wire
ASTM/ASME	B or SB-211	22	—	22.3	5052	A95052	Bar, Rod, Wire
ASTM/ASME	B or SB-211	25	—	22.4	5056	A95056	Bar, Rod, Wire
ASTM/ASME	B or SB-211	22	—	22.4	5154	A95154	Bar, Rod, Wire
ASTM/ASME	B or SB-211	23	—	23.1	6061	A96061	Bar, Rod, Wire
ASTM/ASME	B or SB-221	21	—	—	Alclad 3003	A83003	Bar, Rod, Shape
ASTM/ASME	B or SB-221	21	—	21	1060	A91060	Bar, Rod, Shape
ASTM/ASME	B or SB-221	21	—	21	1100	A91100	Bar, Rod, Shape
ASTM/ASME	B or SB-221	24	—	26	2014	A92014	Bar, Rod, Shape
ASTM/ASME	B or SB-221	24	—	26	2219	A92219	Bar, Rod, Shape
ASTM/ASME	B or SB-221	21	—	22.1	3003	A93003	Bar, Rod, Shape

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-221	22	—	22.2	3004	A93004	Bar, Rod, Shape
ASTM/ASME	B or SB-221	21	—	22.1	3102	A93102	Bar, Rod, Shape
ASTM/ASME	B or SB-221	22	—	22.3	5052	A95052	Bar, Rod, Shape
ASTM/ASME	B or SB-221	25	—	22.4	5083	A95083	Bar, Rod, Shape
ASTM/ASME	B or SB-221	25	—	22.4	5086	A95086	Bar, Rod, Shape
ASTM/ASME	B or SB-221	22	—	22.4	5154	A95154	Bar, Rod, Shape
ASTM/ASME	B or SB-221	22	—	22.3	5454	A95454	Bar, Rod, Shape
ASTM/ASME	B or SB-221	25	—	22.4	5456	A95456	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6005	A96005	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6005A	A96005	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6061	A96061	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6063	A96063	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6105	A96105	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6162	A96162	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6351	A96351	Bar, Rod, Shape
ASTM/ASME	B or SB-221	23	—	23.1	6463	A96463	Bar, Rod, Shape
ASTM/ASME	B or SB-221	27	—	23.2	7005	A97005	Bar, Rod, Shape
ASTM	B230	21	—	21	1350	A91350	Wire
ASTM/ASME	B or SB-234	21	—	—	Alclad 3003	—	Smls. Tube
ASTM/ASME	B or SB-234	21	—	—	Alclad 3003	A83003	Smls. Tube
ASTM/ASME	B or SB-234	21	—	21	1060	A91060	Smls. Tube
ASTM/ASME	B or SB-234	21	—	22.1	3003	A93003	Smls. Tube
ASTM/ASME	B or SB-234	22	—	22.3	5052	A95052	Smls. Tube
ASTM/ASME	B or SB-234	22	—	22.3	5454	A95454	Smls. Tube
ASTM/ASME	B or SB-234	23	—	23.1	6061	A96061	Smls. Tube
ASTM	B236	21	—	21	1350	A91350	Bar
ASTM/ASME	B or SB-241	21	—	—	Alclad 3003	—	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	21	—	—	Alclad 3003	A83003	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	21	—	21	1060	A91060	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	21	—	21	1100	A91100	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	24	—	26	2014	A92014	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	24	—	26	2219	A92219	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	21	—	22.1	3003	A93003	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	22	—	22.3	5052	A95052	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	25	—	22.4	5083	A95083	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	25	—	22.4	5086	A95086	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	22	—	22.3	5454	A95454	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	25	—	22.4	5456	A95456	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	23	—	23.1	6061	A96061	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	23	—	23.1	6063	A96063	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	23	—	23.1	6162	A96162	Smls. Pipe, Tube
ASTM/ASME	B or SB-241	23	—	23.1	6351	A96351	Smls. Pipe, Tube
ASTM/ASME	B or SB-247	21	—	21	1100	A91100	Forging
ASTM/ASME	B or SB-247	24	—	26	2014	A92014	Forging
ASTM/ASME	B or SB-247	24	—	26	2219	A92219	Forging
ASTM/ASME	B or SB-247	21	—	22.1	3003	A93003	Forging
ASTM/ASME	B or SB-247	25	—	22.4	5083	A95083	Forging
ASTM/ASME	B or SB-247	23	—	23.1	6061	A96061	Forging
ASTM/ASME	B or SB-247	23	—	23.1	6151	A96151	Forging
ASTM/ASME	B or SB-265	51	—	51.1	1	R50250	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.2	2	R50400	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.2	2H	R50400	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	52	—	51.3	3	R50550	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	51.4	4	R50700	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	52	11	R52250	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.1	17	R52252	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.1	27	R52254	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	52	7	R52400	Plate, Sheet, Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-265	51	—	52	7H	R52400	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.2	16	R52402	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.2	16H	R52402	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.2	26	R52404	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	51.2	26H	R52404	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	52	—	52	12	R53400	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	52	13	R53413	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	52	—	52	14	R53414	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	52	—	52	15	R53415	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	54	33	R53442	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	52	—	54	34	R53445	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	51	—	52	30	R53530	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	52	—	52	31	R53532	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	53	38	R54250	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	52	6	R54520	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	52	32	R55111	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	53	9	R56320	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	53	18	R56322	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	53	28	R56323	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	53	35	R56340	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	53	5	R56400	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	53	25	R56403	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	53	29	R56404	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	54	—	53	24	R56405	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	54	21	R58210	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	54	19	R58640	Plate, Sheet, Strip
ASTM/ASME	B or SB-265	53	—	54	20	R58645	Plate, Sheet, Strip
ASTM/ASME	B or SB-271	35	—	35	—	C95200	Casting
ASTM/ASME	B or SB-271	35	—	35	—	C95300	Casting
ASTM/ASME	B or SB-271	35	—	35	—	C95400	Casting
ASTM/ASME	B or SB-271	35	—	35	—	C95410	Casting
ASTM/ASME	B or SB-271	35	—	35	—	C95500	Casting
ASTM	B280	31	—	31	102	C10200	Smls. Tube
ASTM	B280	31	—	31	120	C12000	Smls. Tube
ASTM	B280	31	—	31	122	C12200	Smls. Tube
ASTM/ASME	B or SB-283	31	—	31	Cu	C11000	Forging
ASTM/ASME	B or SB-283	32	—	32.2	Naval Brass	C46400	Forging
ASTM/ASME	B or SB-283	35	—	35	—	C64200	Forging
ASTM/ASME	B or SB-283	33	—	31	—	C65500	Forging
ASTM/ASME	B or SB-283	32	—	32.2	Mn Bronze	C67500	Forging
ASTM/ASME	B or SB-283	34	—	34	—	C70620	Forging
ASTM/ASME	B or SB-283	34	—	34	—	C71520	Forging
ASTM/ASME	B or SB-283	34	—	34	—	C71520	Forging
ASTM	B302	31	—	31	—	C12000	Pipe
ASTM	B302	31	—	31	—	C12200	Pipe
ASTM/ASME	B or SB-308	23	—	23.1	6061	A96061	Shape
ASTM	B313	22	—	—	Alclad 3004	—	Welded Tube
ASTM	B313	21	—	21	1100	A91100	Welded Tube
ASTM	B313	21	—	22.1	3003	A93003	Welded Tube
ASTM	B313	22	—	22.2	3004	A93004	Welded Tube
ASTM	B313	22	—	22.2	3005	A93005	Welded Tube
ASTM	B313	21	—	22.2	5050	A95050	Welded Tube
ASTM	B313	22	—	22.3	5052	A95052	Welded Tube
ASTM	B313	25	—	22.4	5086	A95086	Welded Tube
ASTM	B313	22	—	22.4	5154	A95154	Welded Tube
ASTM	B313	23	—	23.1	6061	A96061	Welded Tube
ASTM/ASME	B or SB-315	35	—	35	—	C61300	Smls. Pipe, Tube
ASTM/ASME	B or SB-315	35	—	35	—	C61400	Smls. Pipe, Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-315	33	—	37	—	C65100	Smls. Pipe, Tube
ASTM/ASME	B or SB-315	33	—	33	—	C65500	Smls. Pipe, Tube
ASTM	B317	23	—	23.1	6101	A96101	Bar, Rod, Shape, Tube
ASTM	B324	21	—	21	1350	A91350	Wire
ASTM/ASME	B or SB-333	44	—	44	—	N10001	Plate, Sheet, Strip
ASTM/ASME	B or SB-333	44	—	44	—	N10001	Sheet, Strip
ASTM/ASME	B or SB-333	44	—	44	—	N10624	Plate, Sheet, Strip
ASTM/ASME	B or SB-333	44	—	44	—	N10629	Plate, Sheet, Strip
ASTM/ASME	B or SB-333	44	—	44	—	N10665	Plate, Sheet, Strip
ASTM/ASME	B or SB-333	44	—	44	—	N10675	Plate, Sheet, Strip
ASTM/ASME	B or SB-335	44	—	44	—	N10001	Rod
ASTM/ASME	B or SB-335	44	—	44	—	N10624	Rod
ASTM/ASME	B or SB-335	44	—	44	—	N10629	Rod
ASTM/ASME	B or SB-335	44	—	44	—	N10665	Rod
ASTM/ASME	B or SB-335	44	—	44	—	N10675	Rod
ASTM	B337	51	—	51	1	R50250	Smls. & Welded Pipe
ASTM	B337	51	—	51	2	R50400	Smls. & Welded Pipe
ASTM	B337	52	—	52	3	R50550	Smls. & Welded Pipe
ASTM	B337	51	—	51	11	R52250	Smls. & Welded Pipe
ASTM	B337	51	—	51	7	R52400	Smls. & Welded Pipe
ASTM	B337	52	—	52	12	R53400	Smls. & Welded Pipe
ASTM	B337	53	—	53	9	R56320	Smls. & Welded Pipe
ASTM/ASME	B or SB-338	51	—	51.1	1	R50250	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51.2	2	R50400	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51.2	2H	R50400	Smls. & Welded Tube
ASTM/ASME	B or SB-338	52	—	51.3	3	R50550	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51	11	R52250	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51	17	R52252	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51	27	R52254	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	52	7	R52400	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	52	7H	R52400	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51.2	16	R52402	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51.2	16H	R52402	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51.2	26	R52404	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	51.2	26H	R52404	Smls. & Welded Tube
ASTM/ASME	B or SB-338	52	—	52	12	R53400	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	52	13	R53413	Smls. & Welded Tube
ASTM/ASME	B or SB-338	52	—	52	14	R53414	Smls. & Welded Tube
ASTM/ASME	B or SB-338	52	—	52	15	R53415	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	54	33	R53442	Smls. & Welded Tube
ASTM/ASME	B or SB-338	52	—	54	34	R53445	Smls. & Welded Tube
ASTM/ASME	B or SB-338	51	—	52	30	R53530	Smls. & Welded Tube
ASTM/ASME	B or SB-338	52	—	52	31	R53532	Smls. & Welded Tube
ASTM/ASME	B or SB-338	54	—	53	38	R54250	Smls. & Welded Tube
ASTM/ASME	B or SB-338	53	—	53	9	R56320	Smls. & Welded Tube
ASTM/ASME	B or SB-338	53	—	53	18	R56322	Smls. & Welded Tube
ASTM/ASME	B or SB-338	53	—	53	28	R56323	Smls. & Welded Tube
ASTM/ASME	B or SB-338	54	—	53	35	R56340	Smls. & Welded Tube
ASTM	B345	21	—	—	Alclad 3003	A83003	Smls. Pipe, Tube
ASTM	B345	21	—	21	1060	A91060	Smls. Pipe, Tube
ASTM	B345	21	—	22.1	3003	A93003	Smls. Pipe, Tube
ASTM	B345	25	—	22.4	5083	A95083	Smls. Pipe, Tube
ASTM	B345	25	—	22.4	5086	A95086	Smls. Pipe, Tube
ASTM	B345	23	—	23.1	6061	A96061	Smls. Pipe, Tube
ASTM	B345	23	—	23.1	6063	A96063	Smls. Pipe, Tube
ASTM	B345	23	—	23.1	6351	A96351	Smls. Pipe, Tube
ASTM/ASME	B or SB-348	51	—	51.1	1	R50250	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51.2	2	R50400	Bar, Billet

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-348	51	—	51.2	2H	R50400	Bar, Billet
ASTM/ASME	B or SB-348	52	—	51.3	3	R50550	Bar, Billet
ASTM/ASME	B or SB-348	53	—	51.4	4	R50700	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51	11	R52250	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51	17	R52252	Bar, Billet
ASTM/ASME	B or SB-348	51	—	52	7	R52400	Bar, Billet
ASTM/ASME	B or SB-348	51	—	52	7H	R52400	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51.2	16	R52402	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51.2	16H	R52402	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51.2	26	R52404	Bar, Billet
ASTM/ASME	B or SB-348	51	—	51.2	26H	R52404	Bar, Billet
ASTM/ASME	B or SB-348	52	—	52	12	R53400	Bar, Billet
ASTM/ASME	B or SB-348	51	—	52	13	R53413	Bar, Billet
ASTM/ASME	B or SB-348	52	—	52	14	R53414	Bar, Billet
ASTM/ASME	B or SB-348	52	—	52	15	R53415	Bar, Billet
ASTM/ASME	B or SB-348	51	—	54	33	R53442	Bar, Billet
ASTM/ASME	B or SB-348	52	—	54	34	R53445	Bar, Billet
ASTM/ASME	B or SB-348	51	—	52	30	R53530	Bar, Billet
ASTM/ASME	B or SB-348	52	—	52	31	R53532	Bar, Billet
ASTM/ASME	B or SB-348	54	—	53	38	R54250	Bar, Billet
ASTM/ASME	B or SB-348	54	—	52	6	R54520	Bar, Billet
ASTM/ASME	B or SB-348	53	—	52	32	R55111	Bar, Billet
ASTM/ASME	B or SB-348	53	—	53	9	R56320	Bar, Billet
ASTM/ASME	B or SB-348	53	—	53	18	R56322	Bar, Billet
ASTM/ASME	B or SB-348	53	—	53	28	R56323	Bar, Billet
ASTM/ASME	B or SB-348	54	—	53	35	R56340	Bar, Billet
ASTM/ASME	B or SB-348	54	—	53	5	R56400	Bar, Billet
ASTM/ASME	B or SB-348	54	—	53	25	R56403	Bar, Billet
ASTM/ASME	B or SB-348	54	—	53	24	R56405	Bar, Billet
ASTM/ASME	B or SB-348	54	—	53	23	R56407	Bar, Billet
ASTM/ASME	B or SB-348	53	—	54	21	R58210	Bar, Billet
ASTM/ASME	B or SB-348	53	—	54	19	R58640	Bar, Billet
ASTM/ASME	B or SB-348	53	—	54	20	R58645	Bar, Billet
ASTM	B351	61	—	61	R60001	R60001	Bar, Rod, Wire
ASTM	B351	61	—	61	R60802	R60802	Bar, Rod, Wire
ASTM	B351	61	—	61	R60804	R60804	Bar, Rod, Wire
ASTM	B351	62	—	62	R60901	R60901	Bar, Rod, Wire
ASTM	B352	61	—	61	R60802	R60802	Plate, Sheet, Strip
ASTM	B352	61	—	61	R60804	R60804	Plate
ASTM	B352	61	—	61	R60804	R60804	Sheet, Strip
ASTM	B352	62	—	62	R60901	R60901	Plate, Sheet, Strip
ASTM	B353	61	—	61	R60001	R60001	Smls. & Welded Tube
ASTM	B353	61	—	61	R60001	R60001	Plate, Sheet, Strip
ASTM	B353	61	—	61	R60802	R60802	Smls. & Welded Tube
ASTM	B353	61	—	61	R60804	R60804	Smls. & Welded Tube
ASTM	B353	62	—	62	R60901	R60901	Smls. & Welded Tube
ASTM	B353	62	—	62	R60904	R60904	Smls. & Welded Tube
ASTM	B359	31	—	31	—	C10100	Smls. Tube
ASTM	B359	31	—	31	—	C10200	Smls. Tube
ASTM	B359	31	—	31	—	C10300	Smls. Tube
ASTM	B359	31	—	31	—	C10800	Smls. Tube
ASTM	B359	31	—	31	—	C12000	Smls. Tube
ASTM	B359	31	—	31	—	C14200	Smls. Tube
ASTM	B359	31	—	31	—	C19200	Smls. Tube
ASTM	B359	32	—	32.1	—	C23000	Smls. Tube
ASTM	B359	35	—	35	—	C60800	Smls. Tube
ASTM	B359	32	—	32.2	—	C68700	Smls. Tube
ASTM	B359	34	—	34	—	C70400	Smls. Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM	B359	34	—	34	—	C72200	Smls. Tube
ASTM/ASME	B or SB-359	31	—	31	—	C12200	Smls. Tube
ASTM/ASME	B or SB-359	32	—	32.2	—	C44300	Smls. Tube
ASTM/ASME	B or SB-359	32	—	32.2	—	C44400	Smls. Tube
ASTM/ASME	B or SB-359	32	—	32.2	—	C44500	Smls. Tube
ASTM/ASME	B or SB-359	34	—	34	—	C70600	Smls. Tube
ASTM/ASME	B or SB-359	34	—	34	—	C70620	Smls. Tube
ASTM/ASME	B or SB-359	34	—	34	—	C71000	Smls. Tube
ASTM/ASME	B or SB-359	34	—	34	—	C71500	Smls. Tube
ASTM/ASME	B or SB-359	34	—	34	—	C71520	Smls. Tube
ASTM	B361	21	—	—	WP Alclad 3003	A83003	Fitting
ASTM	B361	21	—	21	WP1060	A91060	Fitting
ASTM	B361	21	—	21	WP1100	A91100	Fitting
ASTM	B361	21	—	22.1	WP3003	A93003	Fitting
ASTM	B361	25	—	22.4	5083	A95083	Fitting
ASTM	B361	22	—	22.3	5154	A95154	Fitting
ASTM	B361	23	—	23.1	WP6061	A96061	Fitting
ASTM	B361	23	—	23.1	WP6063	A96063	Fitting
ASTM/ASME	B or SB-363	51	—	51.1	WPT 1	R50250	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51.2	WPT 2	R50400	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	52	—	51.3	WPT 3	R50550	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51	WPT 11	R52250	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51	WPT 17	R52252	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	52	WPT 7	R52400	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	52	WPT 7H	R52400	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51.2	WPT 16	R52402	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51.2	WPT 16H	R52402	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51.2	WPT 26	R52404	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	51.2	WPT 26H	R52404	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	52	—	52	WPT 12	R53400	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	52	WPT 13	R53413	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	52	—	52	WPT 14	R53414	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	52	—	52	WPT 15	R53415	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	51	—	52	WPT 30	R53530	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	54	—	53	WPT 38	R54250	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	53	—	53	WPT 9	R56320	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	53	—	53	WPT 18	R56322	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	53	—	53	WPT 28	R56323	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	54	—	53	WPT 25	R56403	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	54	—	53	WPT 24	R56405	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	54	—	53	WPT 23	R56407	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	53	—	54	WPT 21	R58210	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	53	—	54	WPT 19	R58640	Smls. & Welded Fitting
ASTM/ASME	B or SB-363	53	—	54	WPT 20	R58645	Smls. & Welded Fitting
ASTM/ASME	B or SB-366	41	—	41	—	N02200	Fitting
ASTM/ASME	B or SB-366	41	—	41	—	N02201	Fitting
ASTM/ASME	B or SB-366	42	—	42	—	N04400	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06002	Fitting
ASTM/ASME	B or SB-366	45	—	43	—	N06007	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06022	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06025	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N06030	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06035	Fitting
ASTM/ASME	B or SB-366	46	—	45	—	N06045	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06059	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06200	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06210	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06230	Fitting

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-366	43	—	43	—	N06455	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06600	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06603	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N06625	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N06985	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08020	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08031	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08120	Fitting
ASTM/ASME	B or SB-366	46	—	45	—	N08330	Fitting
ASTM/ASME	B or SB-366	45	—	8.2	—	N08367	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08800	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08810	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08811	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	N08825	Fitting
ASTM/ASME	B or SB-366	45	—	8.2	—	N08904	Fitting
ASTM/ASME	B or SB-366	45	—	8.2	—	N08925	Fitting
ASTM/ASME	B or SB-366	45	—	8.2	—	N08926	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10001	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10003	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10242	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N10276	Fitting
ASTM/ASME	B or SB-366	43	—	43	—	N10362	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10624	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10629	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10665	Fitting
ASTM/ASME	B or SB-366	44	—	44	—	N10675	Fitting
ASTM/ASME	B or SB-366	46	—	46	—	N12160	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	R20033	Fitting
ASTM/ASME	B or SB-366	45	—	45	—	R30556	Fitting
ASTM/ASME	B or SB-367	51	—	51	C-7	—	Casting
ASTM/ASME	B or SB-367	52	—	52	C-8	—	Casting
ASTM/ASME	B or SB-367	51	—	51	C-17	R52252	Casting
ASTM/ASME	B or SB-367	51	—	51	C-16	R52402	Casting
ASTM/ASME	B or SB-367	51	—	51.4	C-2	R52550	Casting
ASTM/ASME	B or SB-367	52	—	51.4	C-3	R52550	Casting
ASTM/ASME	B or SB-367	54	—	52	C-6	R54520	Casting
ASTM/ASME	B or SB-367	54	—	53	C-5	R56400	Casting
ASTM/ASME	B or SB-369	34	—	34	—	C96200	Casting
ASTM/ASME	B or SB-381	51	—	51.1	F-1	R50250	Forging
ASTM/ASME	B or SB-381	51	—	51.2	F-2	R50400	Forging
ASTM/ASME	B or SB-381	51	—	51.2	F-2H	R50400	Forging
ASTM/ASME	B or SB-381	52	—	51.3	F-3	R50550	Forging
ASTM/ASME	B or SB-381	53	—	51.4	F-4	R50700	Forging
ASTM/ASME	B or SB-381	51	—	51	F-11	R52250	Forging
ASTM/ASME	B or SB-381	51	—	51	F-17	R52252	Forging
ASTM/ASME	B or SB-381	51	—	52	F-7	R52400	Forging
ASTM/ASME	B or SB-381	51	—	52	F-7H	R52400	Forging
ASTM/ASME	B or SB-381	51	—	51.2	F-16	R52402	Forging
ASTM/ASME	B or SB-381	51	—	51.2	F-16H	R52402	Forging
ASTM/ASME	B or SB-381	51	—	51.2	F-26	R52404	Forging
ASTM/ASME	B or SB-381	51	—	51.2	F-26H	R52404	Forging
ASTM/ASME	B or SB-381	52	—	52	F-12	R53400	Forging
ASTM/ASME	B or SB-381	51	—	52	F-13	R53413	Forging
ASTM/ASME	B or SB-381	52	—	52	F-14	R53414	Forging
ASTM/ASME	B or SB-381	52	—	52	F-15	R53415	Forging
ASTM/ASME	B or SB-381	51	—	52	F-30	R53530	Forging
ASTM/ASME	B or SB-381	52	—	52	F-31	R53532	Forging
ASTM/ASME	B or SB-381	54	—	53	F-38	R54250	Forging

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-381	54	—	52	F-6	R54520	Forging
ASTM/ASME	B or SB-381	53	—	53	F-9	R56320	Forging
ASTM/ASME	B or SB-381	53	—	53	F-18	R56322	Forging
ASTM/ASME	B or SB-381	53	—	53	F-28	R56323	Forging
ASTM/ASME	B or SB-381	54	—	53	F-5	R56400	Forging
ASTM/ASME	B or SB-381	54	—	53	F-25	R56403	Forging
ASTM/ASME	B or SB-381	54	—	53	F-24	R56405	Forging
ASTM/ASME	B or SB-381	54	—	53	F-23	R56407	Forging
ASTM/ASME	B or SB-381	53	—	54	F-21	R58210	Forging
ASTM/ASME	B or SB-381	53	—	54	F-19	R58640	Forging
ASTM/ASME	B or SB-381	53	—	54	F-20	R58645	Forging
ASTM/ASME	B or SB-395	31	—	31	—	C10200	Smls. Tube
ASTM/ASME	B or SB-395	31	—	31	—	C10300	Smls. Tube
ASTM/ASME	B or SB-395	31	—	31	—	C10800	Smls. Tube
ASTM/ASME	B or SB-395	31	—	31	—	C12000	Smls. Tube
ASTM/ASME	B or SB-395	31	—	31	—	C12200	Smls. Tube
ASTM/ASME	B or SB-395	31	—	31	—	C14200	Smls. Tube
ASTM/ASME	B or SB-395	31	—	31	—	C19200	Smls. Tube
ASTM/ASME	B or SB-395	32	—	32.1	—	C23000	Smls. Tube
ASTM/ASME	B or SB-395	32	—	32.2	—	C44300	Smls. Tube
ASTM/ASME	B or SB-395	32	—	32.2	—	C44400	Smls. Tube
ASTM/ASME	B or SB-395	32	—	32.2	—	C44500	Smls. Tube
ASTM/ASME	B or SB-395	35	—	35	—	C60800	Smls. Tube
ASTM/ASME	B or SB-395	32	—	32.2	—	C68700	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C70400	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C70600	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C70620	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C71000	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C71500	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C71520	Smls. Tube
ASTM/ASME	B or SB-395	34	—	34	—	C72200	Smls. Tube
ASTM	B396	22	—	22.2	5005	A95005	Wire
ASTM	B403	83	—	—	AM100A, F	M10100	Casting
ASTM	B403	83	—	—	AZ91C, F	M11914	Casting
ASTM	B403	83	—	—	AZ92A, F	M11920	Casting
ASTM	B403	83	—	—	K1A	M18010	Casting
ASTM/ASME	B or SB-407	45	—	45	—	N08120	Smls. Pipe, Tube
ASTM/ASME	B or SB-407	45	—	45	—	N08800	Smls. Pipe, Tube
ASTM/ASME	B or SB-407	45	—	45	—	N08801	Smls. Pipe, Tube
ASTM/ASME	B or SB-407	45	—	45	—	N08810	Smls. Pipe, Tube
ASTM/ASME	B or SB-407	45	—	45	—	N08811	Smls. Pipe, Tube
ASTM/ASME	B or SB-408	45	—	45	—	N08120	Rod, Bar
ASTM/ASME	B or SB-408	45	—	45	—	N08800	Rod, Bar
ASTM/ASME	B or SB-408	45	—	45	—	N08810	Rod, Bar
ASTM/ASME	B or SB-408	45	—	45	—	N08811	Rod, Bar
ASTM/ASME	B or SB-409	45	—	45	—	N08120	Plate, Sheet, Strip
ASTM/ASME	B or SB-409	45	—	45	—	N08800	Plate, Sheet, Strip
ASTM/ASME	B or SB-409	45	—	45	—	N08810	Plate, Sheet, Strip
ASTM/ASME	B or SB-409	45	—	45	—	N08811	Plate, Sheet, Strip
ASTM/ASME	B or SB-423	45	—	45	—	N08221	Smls. Pipe, Tube
ASTM/ASME	B or SB-423	45	—	45	—	N08825	Smls. Pipe, Tube
ASTM/ASME	B or SB-424	45	—	45	—	N08221	Plate, Sheet, Strip
ASTM/ASME	B or SB-424	45	—	45	—	N08825	Plate, Sheet, Strip
ASTM/ASME	B or SB-425	45	—	45	—	N08221	Rod, Bar
ASTM/ASME	B or SB-425	45	—	45	—	N08825	Rod, Bar
ASTM	B429	23	—	23.1	6061	A96061	Pipe, Tube
ASTM	B429	23	—	23.1	6063	A96063	Pipe, Tube
ASTM/ASME	B or SB-434	44	—	44	—	N10003	Plate, Sheet, Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-434	44	—	44	—	N10242	Plate, Sheet, Strip
ASTM/ASME	B or SB-435	43	—	43	—	N06002	Plate, Sheet, Strip
ASTM/ASME	B or SB-435	43	—	43	—	N06230	Plate, Sheet, Strip
ASTM/ASME	B or SB-435	46	—	46	—	N12160	Plate, Sheet, Strip
ASTM/ASME	B or SB-435	45	—	45	—	R30556	Plate, Sheet, Strip
ASTM/ASME	B or SB-443	43	—	43	1	N06625	Cold-Rolled Sheet Strip
ASTM/ASME	B or SB-443	43	—	43	1	N06625	Plate, Hot-Rolled Sheet
ASTM/ASME	B or SB-443	43	—	43	2	N06625	Plate, Sheet, Strip
ASTM/ASME	B or SB-444	43	—	43	1	N06625	Smls. Pipe, Tube
ASTM/ASME	B or SB-444	43	—	43	2	N06625	Smls. Pipe, Tube
ASTM/ASME	B or SB-446	43	—	43	1	N06625	Rod, Bar
ASTM/ASME	B or SB-446	43	—	43	2	N06625	Rod, Bar
ASTM/ASME	B or SB-462	43	—	43	—	N06022	Forging
ASTM/ASME	B or SB-462	45	—	45	—	N06030	Forging
ASTM/ASME	B or SB-462	43	—	43	—	N06035	Forging
ASTM/ASME	B or SB-462	46	—	45	—	N06045	Forging
ASTM/ASME	B or SB-462	43	—	43	—	N06059	Forging
ASTM/ASME	B or SB-462	43	—	43	—	N06200	Forging
ASTM/ASME	B or SB-462	43	—	43	—	N06686	Forging
ASTM/ASME	B or SB-462	45	—	45	—	N08020	Forging
ASTM/ASME	B or SB-462	45	—	45	—	N08024	Forging
ASTM/ASME	B or SB-462	45	—	45	—	N08026	Forging
ASTM/ASME	B or SB-462	45	—	45	—	N08031	Forging
ASTM/ASME	B or SB-462	45	—	8.2	—	N08367	Forging
ASTM/ASME	B or SB-462	43	—	43	—	N10276	Forging
ASTM/ASME	B or SB-462	43	—	43	—	N10362	Forging
ASTM/ASME	B or SB-462	44	—	44	—	N10629	Forging
ASTM/ASME	B or SB-462	44	—	44	—	N10665	Forging
ASTM/ASME	B or SB-462	44	—	44	—	N10675	Forging
ASTM/ASME	B or SB-462	45	—	45	—	R20033	Forging
ASTM/ASME	B or SB-463	45	—	45	—	N08020	Plate, Sheet, Strip
ASTM/ASME	B or SB-463	45	—	45	—	N08024	Plate, Sheet, Strip
ASTM/ASME	B or SB-463	45	—	45	—	N08026	Plate, Sheet, Strip
ASTM/ASME	B or SB-464	45	—	45	—	N08020	Welded Pipe
ASTM/ASME	B or SB-464	45	—	45	—	N08024	Welded Pipe
ASTM/ASME	B or SB-464	45	—	45	—	N08026	Welded Pipe
ASTM/ASME	B or SB-466	34	—	34	—	C70400	Smls. Pipe, Tube
ASTM/ASME	B or SB-466	34	—	34	—	C70600	Smls. Pipe, Tube
ASTM/ASME	B or SB-466	34	—	34	—	C70620	Smls. Pipe, Tube
ASTM/ASME	B or SB-466	34	—	34	—	C71000	Smls. Pipe, Tube
ASTM/ASME	B or SB-466	34	—	34	—	C71500	Smls. Pipe, Tube
ASTM/ASME	B or SB-466	34	—	34	—	C71520	Smls. Pipe, Tube
ASTM/ASME	B or SB-466	34	—	34	—	C72200	Smls. Pipe, Tube
ASTM/ASME	B or SB-467	34	—	34	—	C70600	Welded Pipe
ASTM/ASME	B or SB-467	34	—	34	—	C70620	Welded Pipe
ASTM/ASME	B or SB-467	34	—	34	—	C71500	Welded Pipe
ASTM/ASME	B or SB-467	34	—	34	—	C71520	Welded Pipe
ASTM/ASME	B or SB-468	45	—	45	—	N08020	Welded Tube
ASTM/ASME	B or SB-468	45	—	45	—	N08024	Welded Tube
ASTM/ASME	B or SB-468	45	—	45	—	N08026	Welded Tube
ASTM/ASME	B or SB-473	45	—	45	—	N08020	Bar
ASTM/ASME	B or SB-473	45	—	45	—	N08024	Bar
ASTM/ASME	B or SB-473	45	—	45	—	N08026	Bar
ASTM	B483	21	—	21	1060	A91060	Tube
ASTM	B483	21	—	21	1100	A91100	Tube
ASTM	B483	21	—	21	1435	A91435	Tube
ASTM	B483	21	—	22.1	3003	A93003	Tube
ASTM	B483	21	—	22.1	3102	A93102	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM	B483	22	—	22.2	5005	A95005	Tube
ASTM	B483	21	—	22.2	5050	A95050	Tube
ASTM	B483	22	—	22.3	5052	A95052	Tube
ASTM	B483	23	—	23.1	6061	A96061	Tube
ASTM	B483	23	—	23.1	6063	A96063	Tube
ASTM	B491	21	—	21	1050	A91050	Extruded Tube
ASTM	B491	21	—	21	1100	A91100	Extruded Tube
ASTM	B491	21	—	21	1200	A91200	Extruded Tube
ASTM	B491	21	—	21	1235	A91235	Extruded Tube
ASTM	B491	21	—	22.1	3003	A93003	Extruded Tube
ASTM	B491	21	—	22.1	3102	A93102	Extruded Tube
ASTM	B491	23	—	23.1	6063	A96063	Extruded Tube
ASTM/ASME	B or SB-493	61	—	61	R60702	R60702	Forging
ASTM/ASME	B or SB-493	62	—	62	R60704	R60704	Forging
ASTM/ASME	B or SB-493	62	—	62	R60705	R60705	Forging
ASTM/ASME	B or SB-505	35	—	35	—	C95200	Casting
ASTM/ASME	B or SB-511	46	—	45	—	N08330	Bar, Shape
ASTM/ASME	B or SB-511	46	—	45	—	N08332	Bar, Shape
ASTM	B512	46	—	45	—	N08330	Bar, Billet
ASTM/ASME	B or SB-514	45	—	45	—	N08120	Welded Pipe
ASTM/ASME	B or SB-514	45	—	45	—	N08800	Welded Pipe
ASTM/ASME	B or SB-514	45	—	45	—	N08810	Welded Pipe
ASTM/ASME	B or SB-515	45	—	45	—	N08120	Welded Tube
ASTM/ASME	B or SB-515	45	—	45	—	N08800	Welded Tube
ASTM/ASME	B or SB-515	45	—	45	—	N08810	Welded Tube
ASTM/ASME	B or SB-515	45	—	45	—	N08811	Welded Tube
ASTM/ASME	B or SB-516	43	—	43	—	N06025	Welded Tube
ASTM/ASME	B or SB-516	46	—	45	—	N06045	Welded Tube
ASTM/ASME	B or SB-516	43	—	43	—	N06600	Welded Tube
ASTM/ASME	B or SB-516	43	—	43	—	N06603	Welded Tube
ASTM/ASME	B or SB-517	43	—	43	—	N06025	Welded Pipe
ASTM/ASME	B or SB-517	46	—	45	—	N06045	Welded Pipe
ASTM/ASME	B or SB-517	43	—	43	—	N06600	Welded Pipe
ASTM/ASME	B or SB-517	43	—	43	—	N06603	Welded Pipe
ASTM/ASME	B or SB-523	61	—	61	R60702	R60702	Smls. & Welded Tube
ASTM/ASME	B or SB-523	62	—	62	R60704	R60704	Smls. & Welded Tube
ASTM/ASME	B or SB-523	62	—	62	R60705	R60705	Smls. & Welded Tube
ASTM/ASME	B or SB-535	46	—	45	—	N08330	Smls. Pipe, Tube
ASTM/ASME	B or SB-535	46	—	45	—	N08332	Smls. Pipe, Tube
ASTM/ASME	B or SB-536	46	—	45	—	N08330	Plate, Sheet, Strip
ASTM/ASME	B or SB-536	46	—	45	—	N08332	Plate, Sheet, Strip
ASTM	B543	34	—	34	—	C71000	Welded Tube
ASTM	B543	34	—	34	—	C72200	Welded Tube
ASTM/ASME	B or SB-543	31	—	31	—	C10800	Welded Tube
ASTM/ASME	B or SB-543	31	—	31	—	C12200	Welded Tube
ASTM/ASME	B or SB-543	31	—	31	—	C19400	Welded Tube
ASTM/ASME	B or SB-543	32	—	32.1	—	C23000	Welded Tube
ASTM/ASME	B or SB-543	32	—	32.2	—	C44300	Welded Tube
ASTM/ASME	B or SB-543	32	—	32.2	—	C44400	Welded Tube
ASTM/ASME	B or SB-543	32	—	32.2	—	C44500	Welded Tube
ASTM/ASME	B or SB-543	32	—	32.2	—	C68700	Welded Tube
ASTM/ASME	B or SB-543	34	—	34	—	C70400	Welded Tube
ASTM/ASME	B or SB-543	34	—	34	—	C70600	Welded Tube
ASTM/ASME	B or SB-543	34	—	34	—	C70620	Welded Tube
ASTM/ASME	B or SB-543	34	—	34	—	C71500	Welded Tube
ASTM/ASME	B or SB-543	34	—	34	—	C71520	Welded Tube
ASTM/ASME	B or SB-543	34	—	34	—	C71640	Welded Tube
ASTM	B547	22	—	—	Alclad 3004	—	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM	B547	21	—	—	Alclad 3003	A83003	Welded Tube
ASTM	B547	21	—	21	1100	A91100	Welded Tube
ASTM	B547	21	—	22.1	3003	A93003	Welded Tube
ASTM	B547	22	—	22.2	3004	A93004	Welded Tube
ASTM	B547	21	—	22.2	5050	A95050	Welded Tube
ASTM	B547	22	—	22.3	5052	A95052	Welded Tube
ASTM	B547	25	—	22.4	5083	A95083	Welded Tube
ASTM	B547	25	—	22.4	5086	A95086	Welded Tube
ASTM	B547	22	—	22.4	5154	A95154	Welded Tube
ASTM	B547	22	—	22.3	5454	A95454	Welded Tube
ASTM	B547	23	—	23.1	6061	A96061	Welded Tube
ASTM/ASME	B or SB-550	61	—	61	R60702	R60702	Bar, Wire
ASTM/ASME	B or SB-550	62	—	62	R60704	R60704	Bar, Wire
ASTM/ASME	B or SB-550	62	—	62	R60705	R60705	Bar, Wire
ASTM/ASME	B or SB-551	61	—	61	R60702	R60702	Plate, Sheet, Strip
ASTM/ASME	B or SB-551	62	—	62	R60704	R60704	Plate, Sheet, Strip
ASTM/ASME	B or SB-551	62	—	62	R60705	R60705	Plate, Sheet, Strip
ASTM/ASME	B or SB-551	62	—	62	R60706	R60706	Plate, Sheet, Strip
ASTM/ASME	B or SB-564	41	—	41	—	N02200	Forging
ASTM/ASME	B or SB-564	42	—	42	—	N04400	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06022	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06025	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06035	Forging
ASTM/ASME	B or SB-564	46	—	45	—	N06045	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06059	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06110	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06200	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06210	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06230	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06600	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06603	Forging
ASTM/ASME	B or SB-564	43	—	46	—	N06617	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06625	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06686	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N06690	Forging
ASTM/ASME	B or SB-564	45	—	45	—	N08031	Forging
ASTM/ASME	B or SB-564	45	—	45	—	N08120	Forging
ASTM/ASME	B or SB-564	45	—	8.2	—	N08367	Forging
ASTM/ASME	B or SB-564	45	—	45	—	N08800	Forging
ASTM/ASME	B or SB-564	45	—	45	—	N08810	Forging
ASTM/ASME	B or SB-564	45	—	44	—	N08811	Forging
ASTM/ASME	B or SB-564	45	—	45	—	N08825	Forging
ASTM/ASME	B or SB-564	44	—	44	—	N10242	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N10276	Forging
ASTM/ASME	B or SB-564	43	—	43	—	N10362	Forging
ASTM/ASME	B or SB-564	44	—	44	—	N10624	Forging
ASTM/ASME	B or SB-564	44	—	44	—	N10629	Forging
ASTM/ASME	B or SB-564	44	—	44	—	N10665	Forging
ASTM/ASME	B or SB-564	44	—	44	—	N10675	Forging
ASTM/ASME	B or SB-564	46	—	46	—	N12160	Forging
ASTM/ASME	B or SB-564	45	—	45	—	R20033	Forging
ASTM/ASME	B or SB-572	43	—	43	—	N06002	Rod
ASTM/ASME	B or SB-572	43	—	43	—	N06230	Rod
ASTM/ASME	B or SB-572	46	—	46	—	N12160	Rod
ASTM/ASME	B or SB-572	45	—	45	—	R30556	Rod
ASTM/ASME	B or SB-573	44	—	44	—	N10003	Rod
ASTM/ASME	B or SB-573	44	—	44	—	N10242	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N06022	Rod

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-574	43	—	43	—	N06035	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N06059	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N06200	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N06210	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N06455	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N06686	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N10276	Rod
ASTM/ASME	B or SB-574	43	—	43	—	N10362	Rod
ASTM/ASME	B or SB-575	43	—	43	—	N06022	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N06035	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N06059	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N06200	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N06210	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N06455	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N06686	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N10276	Plate, Sheet, Strip
ASTM/ASME	B or SB-575	43	—	43	—	N10362	Plate, Sheet, Strip
ASTM/ASME	B or SB-581	45	—	43	—	N06007	Rod
ASTM/ASME	B or SB-581	45	—	45	—	N06030	Rod
ASTM/ASME	B or SB-581	45	—	45	—	N06975	Rod
ASTM/ASME	B or SB-581	45	—	45	—	N06985	Rod
ASTM/ASME	B or SB-581	45	—	45	—	N08031	Rod
ASTM/ASME	B or SB-582	45	—	43	—	N06007	Plate
ASTM/ASME	B or SB-582	45	—	43	—	N06007	Plate, Sheet, Strip
ASTM/ASME	B or SB-582	45	—	45	—	N06030	Plate, Sheet, Strip
ASTM/ASME	B or SB-582	45	—	45	—	N06975	Plate, Sheet, Strip
ASTM/ASME	B or SB-582	45	—	45	—	N06985	Plate
ASTM/ASME	B or SB-582	45	—	45	—	N06985	Plate, Sheet, Strip
ASTM/ASME	B or SB-599	45	—	8.2	—	N08700	Plate, Sheet, Strip
ASTM	B608	35	—	35	—	C61300	Welded Pipe
ASTM	B608	35	—	35	—	C61400	Welded Pipe
ASTM	B608	34	—	34	—	C70620	Welded Pipe
ASTM	B608	34	—	34	—	C71520	Welded Pipe
ASTM	B609	21	—	21	1350	A91350	Wire
ASTM	B618	26	—	25	208.0	A02080	Casting
ASTM	B618	26	—	25	319.0	A03190	Casting
ASTM	B618	26	—	25	328.0	A03280	Casting
ASTM	B618	26	—	24.2	356.0	A03560	Casting
ASTM	B618	26	—	24.1	443.0	A04430	Casting
ASTM	B618	26	—	23.1	514.0	A05140	Casting
ASTM	B618	26	—	—	535.0	A05350	Casting
ASTM	B618	26	—	24.2	A356.0	A13560	Casting
ASTM	B618	26	—	24.1	B443.0	A24430	Casting
ASTM/ASME	B or SB-619	43	—	43	—	N06002	Welded Pipe
ASTM/ASME	B or SB-619	45	—	43	—	N06007	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06022	Welded Pipe
ASTM/ASME	B or SB-619	45	—	45	—	N06030	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06035	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06059	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06200	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06210	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06230	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06455	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N06686	Welded Pipe
ASTM/ASME	B or SB-619	45	—	45	—	N06975	Welded Pipe
ASTM/ASME	B or SB-619	45	—	45	—	N06985	Welded Pipe
ASTM/ASME	B or SB-619	45	—	45	—	N08031	Welded Pipe
ASTM/ASME	B or SB-619	45	—	8.2	—	N08320	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-619	44	—	44	—	N10001	Welded Pipe
ASTM/ASME	B or SB-619	44	—	44	—	N10242	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N10276	Welded Pipe
ASTM/ASME	B or SB-619	43	—	43	—	N10362	Welded Pipe
ASTM/ASME	B or SB-619	44	—	44	—	N10624	Welded Pipe
ASTM/ASME	B or SB-619	44	—	44	—	N10629	Welded Pipe
ASTM/ASME	B or SB-619	44	—	44	—	N10665	Welded Pipe
ASTM/ASME	B or SB-619	44	—	44	—	N10675	Welded Pipe
ASTM/ASME	B or SB-619	46	—	46	—	N12160	Welded Pipe
ASTM/ASME	B or SB-619	45	—	45	—	R20033	Welded Pipe
ASTM/ASME	B or SB-619	45	—	45	—	R30556	Welded Pipe
ASTM/ASME	B or SB-620	45	—	8.2	—	N08320	Plate, Sheet, Strip
ASTM/ASME	B or SB-621	45	—	8.2	—	N08320	Rod
ASTM/ASME	B or SB-622	43	—	43	—	N06002	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	43	—	N06007	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06022	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	N06030	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06035	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06059	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06060	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06200	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06210	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06230	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06250	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06255	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06455	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N06686	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	N06975	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	N06985	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	N08031	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	N08135	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	8.2	—	N08320	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	N08535	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	44	—	44	—	N10001	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	44	—	44	—	N10242	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N10276	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	43	—	43	—	N10362	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	44	—	44	—	N10624	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	44	—	44	—	N10629	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	44	—	44	—	N10665	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	44	—	44	—	N10675	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	46	—	46	—	N12160	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	R20033	Smls. Pipe, Tube
ASTM/ASME	B or SB-622	45	—	45	—	R30556	Smls. Pipe, Tube
ASTM/ASME	B or SB-625	45	—	45	—	N08031	Plate, Sheet, Strip
ASTM/ASME	B or SB-625	45	—	8.2	—	N08904	Plate, Sheet, Strip
ASTM/ASME	B or SB-625	45	—	8.2	—	N08925	Plate, Sheet, Strip
ASTM/ASME	B or SB-625	45	—	8.2	—	N08926	Plate, Sheet, Strip
ASTM/ASME	B or SB-625	45	—	8.2	—	N08932	Plate, Sheet, Strip
ASTM/ASME	B or SB-625	45	—	45	—	R20033	Plate, Sheet, Strip
ASTM/ASME	B or SB-626	43	—	43	—	N06002	Welded Tube
ASTM/ASME	B or SB-626	45	—	43	—	N06007	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06022	Welded Tube
ASTM/ASME	B or SB-626	45	—	45	—	N06030	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06035	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06059	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06200	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06210	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-626	43	—	43	—	N06230	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06455	Welded Tube
ASTM/ASME	B or SB-626	43	—	46	—	N06617	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N06686	Welded Tube
ASTM/ASME	B or SB-626	45	—	45	—	N06975	Welded Tube
ASTM/ASME	B or SB-626	45	—	45	—	N06985	Welded Tube
ASTM/ASME	B or SB-626	45	—	45	—	N08031	Welded Tube
ASTM/ASME	B or SB-626	45	—	8.2	—	N08320	Welded Tube
ASTM/ASME	B or SB-626	44	—	44	—	N10001	Welded Tube
ASTM/ASME	B or SB-626	44	—	44	—	N10242	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N10276	Welded Tube
ASTM/ASME	B or SB-626	43	—	43	—	N10362	Welded Tube
ASTM/ASME	B or SB-626	44	—	44	—	N10624	Welded Tube
ASTM/ASME	B or SB-626	44	—	44	—	N10629	Welded Tube
ASTM/ASME	B or SB-626	44	—	44	—	N10665	Welded Tube
ASTM/ASME	B or SB-626	44	—	44	—	N10675	Welded Tube
ASTM/ASME	B or SB-626	46	—	46	—	N12160	Welded Tube
ASTM/ASME	B or SB-626	45	—	45	—	R20033	Welded Tube
ASTM/ASME	B or SB-626	45	—	45	—	R30556	Welded Tube
ASTM/ASME	B or SB-649	45	—	45	—	N08031	Bar, Wire
ASTM/ASME	B or SB-649	45	—	8.2	—	N08904	Bar, Wire
ASTM/ASME	B or SB-649	45	—	8.2	—	N08925	Bar, Wire
ASTM/ASME	B or SB-649	45	—	8.2	—	N08926	Bar, Wire
ASTM/ASME	B or SB-649	45	—	45	—	R20033	Bar, Wire
ASTM/ASME	B or SB-653	61	—	61	R60702	R60702	Smls. & Welded Fitting
ASTM/ASME	B or SB-658	61	—	61	R60702	R60702	Smls. & Welded Pipe
ASTM/ASME	B or SB-658	62	—	62	R60704	R60704	Smls. & Welded Pipe
ASTM/ASME	B or SB-658	62	—	62	R60705	R60705	Smls. & Welded Pipe
ASTM/ASME	B or SB-668	45	—	45	—	N08028	Smls. Tube
ASTM/ASME	B or SB-672	45	—	8.2	—	N08700	Bar, Wire
ASTM/ASME	B or SB-673	45	—	8.2	—	N08904	Welded Pipe
ASTM/ASME	B or SB-673	45	—	8.2	—	N08925	Welded Pipe
ASTM/ASME	B or SB-673	45	—	8.2	—	N08926	Welded Pipe
ASTM/ASME	B or SB-674	45	—	45	—	N08354	Welded Tube
ASTM/ASME	B or SB-674	45	—	8.2	—	N08904	Welded Tube
ASTM/ASME	B or SB-674	45	—	8.2	—	N08925	Welded Tube
ASTM/ASME	B or SB-674	45	—	8.2	—	N08926	Welded Tube
ASTM/ASME	B or SB-675	45	—	8.2	—	N08367	Welded Pipe
ASTM/ASME	B or SB-676	45	—	8.2	—	N08367	Welded Tube
ASTM/ASME	B or SB-677	45	—	8.2	—	N08904	Smls. Pipe, Tube
ASTM/ASME	B or SB-677	45	—	8.2	—	N08925	Smls. Pipe, Tube
ASTM/ASME	B or SB-677	45	—	8.2	—	N08926	Smls. Pipe, Tube
ASTM	B686	26	—	24.2	A356.0	A13560	Casting
ASTM/ASME	B or SB-688	45	—	8.2	—	N08366	Plate, Sheet, Strip
ASTM/ASME	B or SB-688	45	—	8.2	—	N08367	Plate
ASTM/ASME	B or SB-688	45	—	8.2	—	N08367	Sheet, Strip
ASTM/ASME	B or SB-690	45	—	8.2	—	N08366	Smls. Pipe, Tube
ASTM/ASME	B or SB-690	45	—	8.2	—	N08367	Smls. Pipe, Tube
ASTM/ASME	B or SB-691	45	—	8.2	—	N08366	Rod, Bar, Wire
ASTM/ASME	B or SB-691	45	—	8.2	—	N08367	Rod, Bar, Wire
ASTM/ASME	B or SB-704	43	—	43	1	N06625	Welded Tube
ASTM/ASME	B or SB-704	43	—	43	2	N06625	Welded Tube
ASTM/ASME	B or SB-704	45	—	45	—	N08825	Welded Tube
ASTM/ASME	B or SB-705	43	—	43	1	N06625	Welded Pipe
ASTM/ASME	B or SB-705	43	—	43	2	N06625	Welded Pipe
ASTM/ASME	B or SB-705	45	—	45	—	N08825	Welded Pipe
ASTM/ASME	B or SB-709	45	—	45	—	N08028	Plate, Sheet, Strip
ASTM/ASME	B or SB-710	46	—	45	—	N08330	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-710	46	—	45	—	N08332	Welded Pipe
ASTM	B718	45	—	43	—	N06333	Plate, Sheet, Strip
ASTM	B719	45	—	43	—	N06333	Bar
ASTM	B720	45	—	—	—	N08310	Smls. Tube
ASTM	B722	45	—	43	—	N06333	Smls. Pipe, Tube
ASTM	B723	45	—	43	—	N06333	Welded Pipe
ASTM	B725	41	—	41	—	N02200	Welded Pipe
ASTM	B725	41	—	41	—	N02201	Welded Pipe
ASTM	B725	42	—	42	—	N04400	Welded Pipe
ASTM	B726	45	—	43	—	N06333	Welded Tube
ASTM/ASME	B or SB-729	45	—	45	—	N08020	Smls. Pipe, Tube
ASTM	B730	41	—	41	—	N02200	Welded Tube
ASTM	B730	41	—	41	—	N02201	Welded Tube
ASTM	B730	42	—	42	—	N04400	Welded Tube
ASTM/ASME	B or SB-752	61	—	61	702C	R60702	Casting
ASTM/ASME	B or SB-752	62	—	62	705C	R60705	Casting
ASTM	B755	43	—	43	—	N06110	Plate, Sheet, Strip
ASTM	B756	43	—	43	—	N06110	Rod, Bar
ASTM	B757	43	—	43	—	N06110	Welded Pipe
ASTM	B758	43	—	43	—	N06110	Welded Tube
ASTM	B759	43	—	43	—	N06110	Smls. Pipe, Tube
ASTM/ASME	B or SB-804	45	—	8.2	—	N08367	Welded Pipe
ASTM	B814	45	—	43	—	N06920	Plate, Sheet, Strip
ASTM/ASME	B or SB-815	49	—	—	—	R31233	Rod
ASTM/ASME	B or SB-818	49	—	—	—	R31233	Plate, Sheet, Strip
ASTM/ASME	B or SB-861	51	—	51.1	1	R50250	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51.2	2	R50400	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51.2	2H	R50400	Smls. Pipe
ASTM/ASME	B or SB-861	52	—	51.3	3	R50550	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51	11	R52250	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51	17	R52252	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	52	7	R52400	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	52	7H	R52400	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51.2	16	R52402	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51.2	16H	R52402	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51.2	26	R52404	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	51.2	26H	R52404	Smls. Pipe
ASTM/ASME	B or SB-861	52	—	52	12	R53400	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	52	13	R53413	Smls. Pipe
ASTM/ASME	B or SB-861	52	—	52	14	R53414	Smls. Pipe
ASTM/ASME	B or SB-861	52	—	52	15	R53415	Smls. Pipe
ASTM/ASME	B or SB-861	51	—	54	33	R53442	Smls. Pipe
ASTM/ASME	B or SB-861	52	—	54	34	R53445	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	38	R54250	Smls. Pipe
ASTM/ASME	B or SB-861	53	—	53	9	R56320	Smls. Pipe
ASTM/ASME	B or SB-861	53	—	53	18	R56322	Smls. Pipe
ASTM/ASME	B or SB-861	53	—	53	28	R56323	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	35	R56340	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	5	R56400	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	25	R56403	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	29	R56404	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	24	R56405	Smls. Pipe
ASTM/ASME	B or SB-861	54	—	53	23	R56407	Smls. Pipe
ASTM/ASME	B or SB-861	53	—	54	21	R58210	Smls. Pipe
ASTM/ASME	B or SB-861	53	—	54	19	R58640	Smls. Pipe
ASTM/ASME	B or SB-861	53	—	54	20	R58645	Smls. Pipe
ASTM/ASME	B or SB-862	51	—	51.1	1	R50250	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51.2	2	R50400	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51.2	2H	R50400	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
ASTM/ASME	B or SB-862	52	—	51.3	3	R50550	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51	11	R52250	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51	17	R52252	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51	27	R52254	Welded Pipe
ASTM/ASME	B or SB-862	51	—	52	7	R52400	Welded Pipe
ASTM/ASME	B or SB-862	51	—	52	7H	R52400	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51.2	16	R52402	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51.2	16H	R52402	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51.2	26	R52404	Welded Pipe
ASTM/ASME	B or SB-862	51	—	51.2	26H	R52404	Welded Pipe
ASTM/ASME	B or SB-862	52	—	52	12	R53400	Welded Pipe
ASTM/ASME	B or SB-862	51	—	52	13	R53413	Welded Pipe
ASTM/ASME	B or SB-862	52	—	52	14	R53414	Welded Pipe
ASTM/ASME	B or SB-862	52	—	52	15	R53415	Welded Pipe
ASTM/ASME	B or SB-862	51	—	54	33	R53442	Welded Pipe
ASTM/ASME	B or SB-862	52	—	54	34	R53445	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	38	R54250	Welded Pipe
ASTM/ASME	B or SB-862	53	—	53	9	R56320	Welded Pipe
ASTM/ASME	B or SB-862	53	—	53	18	R56322	Welded Pipe
ASTM/ASME	B or SB-862	53	—	53	28	R56323	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	35	R56340	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	5	R56400	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	25	R56403	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	29	R56404	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	24	R56405	Welded Pipe
ASTM/ASME	B or SB-862	54	—	53	23	R56407	Welded Pipe
ASTM/ASME	B or SB-862	53	—	54	21	R58210	Welded Pipe
ASTM/ASME	B or SB-862	53	—	54	19	R58640	Welded Pipe
ASTM/ASME	B or SB-862	53	—	54	20	R58645	Welded Pipe
ASTM/ASME	B or SB-928	25	—	22.4	5083	A95083	Plate
ASTM/ASME	B or SB-928	25	—	22.4	5086	A95086	Plate, Sheet
ASTM/ASME	B or SB-928	25	—	22.4	5456	A95456	Plate
ASTM/ASME	B or SB-956	34	—	34	—	C70600	Finned Welded Tube
ASTM/ASME	B or SB-956	34	—	34	—	C70620	Finned Welded Tube
ASTM/ASME	B or SB-956	34	—	34	—	C71500	Finned Welded Tube
ASTM/ASME	B or SB-956	34	—	34	—	C71520	Finned Welded Tube
AWS/ASME	A or SFA-5.9	45	—	45	ER320	N08021	Weld Metal
AWS/ASME	A or SFA-5.9	45	—	45	ER320LR	N08022	Weld Metal
AWS/ASME	A or SFA-5.9	45	—	45	ER383	N08028	Weld Metal
AWS/ASME	A or SFA-5.9	46	—	45	ER330	N08331	Weld Metal
AWS/ASME	A or SFA-5.9	45	—	8.2	ER385	N08904	Weld Metal
AWS/ASME	A or SFA-5.9	45	—	45	ER33-31	R20033	Weld Metal
ISO	ISO 209	23	—	23.1	6082, T4, T6	A96082	Bar, Rod, Shape, Tube
ISO	ISO 209	27	—	23.2	7020, T5	A97020	Bar, Rod, Shape, Tube
NACE	MR 01-75	45	—	43	100	N06950	Pipe
NACE	MR 01-75	45	—	43	110	N06950	Pipe
NACE	MR 01-75	45	—	43	125	N06950	Pipe
NACE	MR 01-75	45	—	43	140	N06950	Pipe

Table C.2
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	11.1	AAR	AAR M201	A	—	—	60/30 [415/205]	Casting	C-Mn-Si
1	1	1.1	ABS	ABS	E	K01801	—	58/34 [400/235]	Plate, Bar, Shape	C-Si
1	1	1.1	ABS	ABS	D	K02101	—	58/34 [400/235]	Plate, Bar, Shape	C-Si
1	1	1.1	ABS	ABS	B	K02102	—	58/34 [400/235]	Plate, Bar, Shape	C
1	1	1.1	ABS	ABS	A	K02300	—	58/34 [400/235]	Plate, Bar, Shape	C
1	1	1.2	ABS	ABS	AH32	K11846	—	64/46 [440/315]	Plate, Bar, Shape	C-Mn-Si
1	1	1.2	ABS	ABS	DH32	K11846	—	64/46 [440/315]	Plate, Bar, Shape	C-Mn-Si
1	1	1.2	ABS	ABS	EH32	K11846	—	64/46 [440/315]	Plate, Bar, Shape	C-Mn-Si
1	1	1.2	ABS	ABS	FH32	K11846	—	64/46 [440/315]	Plate, Bar, Shape	C-Mn-Si
1	1	1.2	API	API 2H	42	—	—	62/42 [425/290]	Plate	C-Mn
1	1	1.2	API	API 2MT1	50	—	—	65/50 [450/345]	Plate	C-Mn
1	1	1.2	API	API 2W	50	—	—	65/50 [450/345]	Plate	C-Mn
1	1	1.2	API	API 2Y	42	—	—	62/42 [425/290]	Plate	C-Mn
1	1	1.2	API	API 2Y	50	—	—	65/50 [450/345]	Plate	C-Mn
1	1	1.1	API	API 5L	A25, Cl. I	—	—	45/25 [310/170]	Smls. & Welded Pipe, Tube	C-Mn
1	1	1.1	API	API 5L	A25, Cl. II	—	—	45/25 [310/170]	Smls. & Welded Pipe, Tube	C-Mn
1	1	1.1	API	API 5L	L175 or A25	—	—	45/25 [310/175]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L175P or A25P	—	—	45/25 [310/175]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L210 or A	—	—	49/30 [340/205]	Smls. & Welded Pipe	C-Mn
1	1	11.1	API	API 5L	L245 or B	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245M or BM	—	—	60/35 [415/240]	Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245MO or BMO	—	—	60/35 [415/240]	Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245MS or BMS	—	—	60/35 [415/240]	Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245N or BN	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245NO or BNO	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245NS or BNS	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245Q or BQ	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245QO or BQO	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245QS or BQS	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	1.1	API	API 5L	L245R or BR	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	11.1	API	API 5L	L290 or X42	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290M or X42M	—	—	60/42 [415/290]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290MO or X42MO	—	—	60/42 [415/290]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290MS or X42MS	—	—	60/42 [415/290]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290N or X42N	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290NOor X42NO	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290NS or X42NS	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290Q or X42Q	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290QO or X42QO	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290QS or X42QS	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L290R or X42R	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn
1	1	11.1	API	API 5L	L320 or X46	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320M or X46M	—	—	63/46 [435/315]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320MO or X46MO	—	—	63/46 [435/315]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320MS or X46MS	—	—	63/46 [435/315]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320N or X46N	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320NO or X46NO	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320NS or X46NS	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320Q or X46Q	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	1.2	API	API 5L	L320QO or X46QO	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L320QS or X46QS	—	—	63/46 [435/315]	Smls. & Welded Pipe	C-Mn
1	1	11.1	API	API 5L	L360 or X52	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360M or X52M	—	—	67/52 [460/360]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360MO or X52MO	—	—	67/52 [460/360]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360MS or X52MS	—	—	67/52 [460/360]	Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360N or X52N	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360NO or X52NO	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360NS or X52NS	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360Q or X52Q	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360QO or X52QO	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	1.2	API	API 5L	L360QS or X52QS	—	—	67/52 [460/360]	Smls. & Welded Pipe	C-Mn
1	1	11.1	API	API 5LS	X46	—	—	63/46 [435/315]	Spiral Welded Pipe	C-Mn
1	1	1.1	AS	AS 1448	K3	—	—	59.5/33 [410/230]	Forging	C-Si
1	1	1.2	AS	AS 1448	K8	—	—	69.5/43.5 [480/300]	Forging	C-Mn-Si
1	1	1.1	AS	AS 1448	S1	—	—	58/32 [400/220]	Forging	C-Si
1	1	1.1	AS	AS 1448	S3	—	—	59.5/33 [410/230]	Forging	C-Si
1	1	1.2	AS	AS 1548	7-430	—	—	62.5/43.5 [430/300]	Plate	C
1	1	1.2	AS	AS 1548	7-460	—	—	66.5/44 [460/305]	Plate	C
1	1	1.2	AS	AS 1548	PT430	—	—	62.5/43.5 [430/300]	Plate	C
1	1	1.2	AS	AS 1548	PT460	—	—	66.5/44 [460/305]	Plate	C
1	1	1.1	AS/ASME	AS or SA/AS 1548	PT430	—	—	62.5/36 [430/250]	Plate	C
1	1	1.1	AS/ASME	AS or SA/AS 1548	PT460	—	—	66.5/38.5 [460/265]	Plate	C
1	1	1.1	AS	AS 4728	200 L0	—	—	46.5/29 [320/200]	E.R.W. Pipe	C-Mn
1	1	1.1	AS	AS 4728	240 L0	—	—	55/35 [380/240]	E.R.W. Pipe	C-Mn
1	1	1.2	AS	AS 4728	290 L0	—	—	60/42 [415/290]	E.R.W. Pipe	C-Mn
1	1	1.1	AS/NZS	AS/NZS 1594	HA1	—	—	48/29 [330/200]	Plate, Sheet, Strip	C
1	1	1.1	AS/NZS	AS/NZS 1594	HA3	—	—	43.5/29 [300/200]	Plate, Sheet, Strip	C
1	1	1.1	AS/NZS	AS/NZS 1594	HA4N	—	—	40.5/25 [280/170]	Plate, Sheet, Strip	C
1	1	1.1	AS/NZS	AS/NZS 1594	HA200	—	—	43.5/29 [300/200]	Plate, Sheet, Strip	C
1	1	1.1	AS/NZS	AS/NZS 1594	HA250	—	—	51/36 [350/250]	Plate, Sheet, Strip	C
1	1	1.1	AS/NZS	AS/NZS 1594	HA250/1	—	—	55/36 [380/250]	Plate, Sheet, Strip	C
1	1	1.2	AS/NZS	AS/NZS 1594	HA300	—	—	58/43.5 [400/300]	Plate, Sheet, Strip	C-Mn
1	1	1.2	AS/NZS	AS/NZS 1594	HA300/1	—	—	62.5/43.5 [430/300]	Plate, Sheet, Strip	C-Mn
1	1	1.2	AS/NZS	AS/NZS 1594	HA350	—	—	62.5/51 [430/350]	Plate, Sheet, Strip	C-Mn
1	1	2.1	AS/NZS	AS/NZS 1594	HA400	—	—	66.5/55 [460/380]	Plate, Sheet, Strip	C-Mn
1	1	1.1	AS/NZS	AS/NZS 1594	HU250	—	—	51/36 [350/250]	Plate, Sheet, Strip	C
1	1	1.2	AS/NZS	AS/NZS 1594	HU300	—	—	58/43.5 [400/300]	Plate, Sheet, Strip	C-Mn
1	1	1.2	AS/NZS	AS/NZS 1594	HU300/1	—	—	62.5/43.5 [430/300]	Plate, Sheet, Strip	C-Mn
1	1	1.4	AS/NZS	AS/NZS 1594	HW350	—	—	65.5/50 [450/340]	Plate, Sheet, Strip	C-Mn-Cr-Ni-Cu
1	1	1.2	AS/NZS	AS/NZS 1594	XF300	—	—	64/43.5 [440/300]	Plate, Sheet, Strip	C-Mn
1	1	2.1	AS/NZS	AS/NZS 1594	XF400	—	—	66.5/55 [460/380]	Plate, Sheet, Strip	C-Mn
1	1	1.1	AS/NZS	AS/NZS 3678	200	—	—	43.5/29 [300/200]	Plate	C-Mn
1	1	1.2	AS/NZS	AS/NZS 3678	250	—	—	59.5/40.5 [410/280]	Plate	C-Mn
1	1	1.2	AS/NZS	AS/NZS 3678	250L15	—	—	59.5/40.5 [410/280]	Plate	C-Mn
1	1	1.1	AS/NZS	AS/NZS 3679.1	250	—	—	59.5/38 [410/260]	Bar, Section	C-Mn
1	1	1.1	AS/NZS	AS/NZS 3679.1	250L0	—	—	59.5/38 [410/260]	Bar, Section	C-Mn
1	1	1.1	AS/NZS	AS/NZS 3679.1	250L15	—	—	59.5/38 [410/260]	Bar, Section	C-Mn
1	1	11.1	ASTM	A27	60-30	J03000	—	60/30 [415/205]	Casting	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	1.1	ASTM	A27	U-60-30	J03000	—	60/30 [415/205]	Casting	C
1	1	11.1	ASTM	A27	65-35	J03001	—	65/35 [450/240]	Casting	C
1	1	11.1	ASTM/ASME	A or SA-31	B	K03100	—	58/29 [400/200]	Rivet	C
1	1	11.1	ASTM	A36	—	K02600	≤ 0.75 [20]	58/36 [400/250]	Plate, Bar, Shape	C-Mn-Si
1	1	11.1	ASTM	A36	—	K02600	> 0.75 [19] < 1.5 [38]	58/36 [400/250]	Plate, Bar, Shape	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-36	—	—	—	58/36 [400/250]	Bar	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-36	—	K02595	> 4 [100]	58/36 [400/250]	Plate	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-36	—	K02596	> 2.5 [65] ≤ 4 [100]	58/36 [400/250]	Plate	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-36	—	K02597	> 1.5 [40] ≤ 2.5 [65]	58/36 [400/250]	Plate	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-36	—	K02598	> 0.75 [19] ≤ 1.5 [40]	58/36 [400/250]	Plate	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-36	—	K02599	≤ 0.75 [20]	58/36 [400/250]	Plate	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-36	—	K02600	—	58/36 [400/250]	Shape	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-53	E, A	K02504	—	48/30 [330/205]	Resistance Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-53	S, A	K02504	—	48/30 [330/205]	Smls. Pipe	C
1	1	11.1	ASTM/ASME	A or SA-53	E, B	K03005	—	60/35 [415/240]	Resistance Welded Pipe	C-Mn
1	1	11.1	ASTM/ASME	A or SA-53	F	K03005	—	48/30 [330/205]	Furnace Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-53	S, B	K03005	—	60/35 [415/240]	Smls. Pipe	C-Mn
1	1	1.1	ASTM/ASME	A or SA-106	A	K02501	—	48/30 [330/205]	Smls. Pipe	C-Si
1	1	11.1	ASTM/ASME	A or SA-106	B	K03006	—	60/35 [415/240]	Smls. Pipe	C-Mn-Si
1	1	1.1	ASTM	A108	1015	G10150	—	—	Bar	C
1	1	1.1	ASTM	A108	1018	G10180	—	—	Bar	C
1	1	1.1	ASTM	A108	1020	G10200	—	—	Bar	C
1	1	1.1	ASTM	A131	A	—	—	58/34 [400/235]	Plate, Shape, Bar, Rivet	C
1	1	1.1	ASTM	A131	B	—	—	58/34 [400/235]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	1	1.1	ASTM	A131	CS	—	—	58/34 [400/235]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	1	1.1	ASTM	A131	D	—	—	58/34 [400/235]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	1	1.1	ASTM	A131	DS	—	—	58/34 [400/235]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-134	SA283 A	K01400	—	45/24 [310/165]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-134	SA285 A	K01700	—	45/24 [310/165]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-134	SA283 B	K01702	—	50/27 [345/185]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-134	SA285 B	K02200	—	50/27 [345/185]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-134	SA283 C	K02401	—	55/30 [380/205]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-134	SA36	K02599	—	58/36 [400/250]	Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-134	SA283 D	K02702	—	60/33 [415/230]	Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-134	SA285 C	K02801	—	55/30 [380/205]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-135	A	K02509	—	48/30 [330/205]	E.R.W. Pipe	C
1	1	11.1	ASTM/ASME	A or SA-135	B	K03018	—	60/35 [415/240]	E.R.W. Pipe	C
1	1	1.1	ASTM	A139	A	K02508	—	48/30 [330/205]	Welded Pipe	C
1	1	11.1	ASTM	A139	B	K03003	—	60/35 [415/240]	Welded Pipe	C
1	1	11.1	ASTM	A139	C	K03004	—	60/42 [415/290]	Welded Pipe	C
1	1	11.1	ASTM	A139	D	K03010	—	60/46 [415/315]	Welded Pipe	C
1	1	11.1	ASTM	A139	E	K03012	—	66/52 [455/360]	Welded Pipe	C
1	1	—	ASTM	A161	Low Carbon	K01504	—	47/26 [325/180]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-178	A	K01200	—	47/26 [325/180]	E.R.W. Tube	C
1	1	11.1	ASTM/ASME	A or SA-178	C	K03503	—	60/37 [415/255]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A or SA-179	—	K01200	—	47/26 [325/180]	Smls. Tube	C
1	1	11.1	ASTM/ASME	A or SA-181	Cl. 60	K03502	—	60/30 [415/205]	Pipe Flange, Fitting	C-Si
1	1	1.1	ASTM/ASME	A or SA-192	—	K01201	—	47/26 [325/180]	Smls. Tube	C-Si
1	1	11.1	ASTM/ASME	A or SA-210	A-1	K02707	—	60/37 [415/255]	Smls. Tube	C-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	1.1	ASTM	A211	A570-30	K02502	—	49/30 [340/205]	Welded Pipe	C
1	1	1.1	ASTM	A211	A570-33	K02502	—	52/33 [360/230]	Welded Pipe	C
1	1	1.1	ASTM	A211	A570-40	K02502	—	55/40 [380/275]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-214	—	K01807	—	47/26 [325/180]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A or SA-216	WCA	J02502	—	60/30 [415/205]	Casting	C-Si
1	1	1.1	ASTM	A226	—	K01201	—	47/26 [325/180]	E.R.W. Tube	C-Si
1	1	11.1	ASTM/ASME	A or SA-234	WPB	K03006	—	60/35 [415/240]	Piping Fitting	C-Mn-Si
1	1	—	ASTM	A252	1	—	—	50/30 [345/205]	Pipe Pile	C
1	1	—	ASTM	A252	2	—	—	60/35 [415/240]	Pipe Pile	C
1	1	—	ASTM	A252	3	—	—	66/45 [455/310]	Pipe Pile	C
1	1	11.1	ASTM/ASME	A or SA-266	1	K03506	—	60/30 [415/205]	Forging	C-Si
1	1	1.1	ASTM/ASME	A or SA-283	A	K01400	—	45/24 [310/165]	Plate	C
1	1	1.1	ASTM/ASME	A or SA-283	B	K01702	—	50/27 [345/185]	Plate	C
1	1	1.1	ASTM/ASME	A or SA-283	C	K02401	—	55/30 [380/205]	Plate	C
1	1	1.1	ASTM/ASME	A or SA-283	D	K02702	—	60/33 [415/230]	Plate	C
1	1	1.1	ASTM/ASME	A or SA-285	A	K01700	—	45/24 [310/165]	Plate	C
1	1	1.1	ASTM/ASME	A or SA-285	B	K02200	—	50/27 [345/185]	Plate	C
1	1	11.1	ASTM/ASME	A or SA-285	C	K02801	—	55/30 [380/205]	Plate	C
1	1	11.1	ASTM/ASME	A or SA-333	6	K03006	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-333	1	K03008	—	55/30 [380/205]	Smls. & Welded Pipe	C-Mn
1	1	11.1	ASTM/ASME	A or SA-334	6	K03006	—	60/35 [415/240]	Welded Tube	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-334	1	K03008	—	55/30 [380/205]	Welded Tube	C-Mn
1	1	11.1	ASTM/ASME	A or SA-350	LF1	K03009	—	60/30 [415/205]	Forging	C-Mn-Si
1	1	1.2	ASTM/ASME	A or SA-350	LF6, Cl. 1	K12202	—	66/52 [455/360]	Forging	C-Mn-Si-V
1	1	11.1	ASTM/ASME	A or SA-352	LCA	J02504	—	60/30 [415/205]	Casting	C-Si
1	1	1.1	ASTM/ASME	A or SA-352	LCB	J03003	—	65/35 [450/240]	Casting	C-Si
1	1	1.1	ASTM	A366	CS	—	—	43/20 [295/140]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-369	FPA	K02501	—	48/30 [330/205]	Forged Pipe	C-Si
1	1	1.1	ASTM/ASME	A or SA-369	FPB	K03006	—	60/35 [415/240]	Forged Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-372	A	K03002	—	60/35 [415/240]	Forging	C-Si
1	1	11.1	ASTM	A381	Y35	—	—	60/35 [415/240]	Welded Pipe	C
1	1	11.1	ASTM	A381	Y42	—	—	60/42 [415/290]	Welded Pipe	C
1	1	11.1	ASTM	A381	Y46	—	—	63/46 [435/315]	Welded Pipe	C
1	1	11.1	ASTM	A381	Y48	—	—	62/48 [425/330]	Welded Pipe	C
1	1	11.1	ASTM	A381	Y50	—	—	64/50 [440/345]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-414	A	K01501	—	45/25 [310/170]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-414	B	K02201	—	50/30 [345/205]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-414	C	K02503	—	55/33 [380/230]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-414	D	K02505	—	60/35 [415/240]	Sheet	C-Mn
1	1	11.1	ASTM/ASME	A or SA-414	E	K02704	—	65/38 [450/260]	Sheet	C-Mn
1	1	11.1	ASTM/ASME	A or SA-420	WPL6	K03006	—	60/35 [415/240]	Piping Fitting	C-Mn-Si
1	1	1.2	ASTM	A500	C	K02705	—	62/46 [425/315]	Smls. & Welded Tube	C
1	1	11.1	ASTM	A500	A	K03000	—	45/33 [310/230]	Smls. & Welded Tube	C
1	1	11.1	ASTM	A500	B	K03000	—	58/42 [400/290]	Smls. & Welded Tube	C
1	1	11.1	ASTM	A500	D	K03000	—	58/36 [400/250]	Smls. & Welded Tube	C
1	1	11.1	ASTM	A501	A	K03000	—	58/36 [400/250]	Smls. & Welded Tube	C
1	1	1.2	ASTM	A501	B	K03000	—	70/50 [485/345]	Smls. & Welded Tube	C
1	1	1.1	ASTM	A512	MTX 1015	—	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	MTX 1020	—	—	50/30 [345/205]	Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	1.1	ASTM	A512	1008	G10080	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1010	G10100	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	MT 1010	G10100	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1012	G10120	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1015	G10150	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	MT 1015	G10150	—	43/25 [295/170]	Tube	C
1	1	—	ASTM	A512	1016	G10160	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1018	G10180	—	43/25 [295/170]	Tube	C
1	1	—	ASTM	A512	1019	G10190	—	43/25 [295/170]	Tube	C
1	1	1.1	ASTM	A512	1020	G10200	—	50/30 [345/205]	Tube	C
1	1	1.1	ASTM	A512	MT 1020	G10200	—	50/30 [345/205]	Tube	C
1	1	—	ASTM	A512	1021	G10210	—	50/30 [345/205]	Tube	C
1	1	11.1	ASTM	A512	1026	G10260	—	55/35 [380/240]	Tube	C
1	1	1.1	ASTM	A513	1015 CW	G10150	—	—	Tube	C
1	1	—	ASTM/ASME	A or SA-513	MTX 1015	—	—	—	Tube	C
1	1	—	ASTM/ASME	A or SA-513	MTX 1020	—	—	—	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1008	G10080	—	42/30 [290/205]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1010	G10100	—	45/32 [310/220]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	MT 1010	G10100	—	45/32 [310/220]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1015	G10150	—	48/35 [330/240]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	MT 1015	G10150	—	—	Tube	C
1	1	—	ASTM/ASME	A or SA-513	1017	G10170	—	48/35 [330/240]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1018	G10180	—	48/35 [330/240]	Tube	C
1	1	—	ASTM/ASME	A or SA-513	1019	G10190	—	48/35 [330/240]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1020	G10200	—	52/38 [360/260]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	MT 1020	G10200	—	—	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1021	G10210	—	54/40 [370/275]	Tube	C
1	1	1.1	ASTM/ASME	A or SA-513	1022	G10220	—	52/38 [360/260]	Tube	C
1	1	—	ASTM/ASME	A or SA-513	1023	G10230	—	52/38 [360/260]	Tube	C
1	1	—	ASTM/ASME	A or SA-513	1024	G10240	—	52/38 [360/260]	Tube	C
1	1	11.1	ASTM/ASME	A or SA-513	1026	G10260	—	62/45 [425/310]	Tube	C
1	1	1.1	ASTM	A515	55	K02001	—	55/30 [380/205]	Plate	C-Si
1	1	11.1	ASTM/ASME	A or SA-515	60	—	> 1 [25]	60/32 [415/220]	Plate	C-Si
1	1	1.1	ASTM/ASME	A or SA-515	60	K02401	≤ 1 [25]	60/32 [415/220]	Plate	C
1	1	11.1	ASTM/ASME	A or SA-515	65	K02800	—	65/35 [450/240]	Plate	C-Si
1	1	1.1	ASTM/ASME	A or SA-516	55	K01800	—	55/30 [380/205]	Plate	C-Si
1	1	1.1	ASTM/ASME	A or SA-516	60	K02100	—	60/32 [415/220]	Plate	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-516	65	K02403	—	65/35 [450/240]	Plate	C-Mn-Si
1	1	—	ASTM	A519	MTX 1015	—	—	40/20 [275/140]	Tube	C
1	1	—	ASTM	A519	MTX 1020	—	—	50/30 [345/205]	Tube	C
1	1	1.1	ASTM	A519	1008	G10080	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A519	MT 1010	G10100	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A519	1012	G10120	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A519	1015	G10150	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A519	MT 1015	G10150	—	43/25 [295/170]	Tube	C
1	1	—	ASTM	A519	1016	G10160	—	40/20 [275/140]	Tube	C
1	1	—	ASTM	A519	1017	G10170	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A519	1018	G10180	—	43/25 [295/170]	Tube	C
1	1	1.1	ASTM	A519	1018 HR	G10180	—	—	Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	—	ASTM	A519	1019	G10190	—	50/30 [345/205]	Tube	C
1	1	1.1	ASTM	A519	1020	G10200	—	48/28 [330/195]	Tube	C
1	1	1.1	ASTM	A519	1020 HR	G10200	—	—	Tube	C
1	1	1.1	ASTM	A519	MT 1020	G10200	—	50/30 [345/205]	Tube	C
1	1	—	ASTM	A519	1021	G10210	—	50/30 [345/205]	Tube	C
1	1	1.1	ASTM	A519	1022	G10220	—	50/30 [345/205]	Tube	C
1	1	1.1	ASTM	A519	1022 HR	G10220	—	—	Tube	C
1	1	1.1	ASTM	A519	1025 HR	G10250	—	—	Tube	C
1	1	—	ASTM	A519	1026	G10260	—	55/35 [380/240]	Tube	C
1	1	11.1	ASTM	A519	1026 HR	G10260	—	—	Tube	C
1	1	—	ASTM	A521	CC	—	—	60/30 [415/205]	Die Forging	C
1	1	—	ASTM	A521	CC1	—	—	66/33 [455/230]	Die Forging	C
1	1	1.1	ASTM	A523	A	K02504	—	48/30 [330/205]	Pipe	C-Mn
1	1	11.1	ASTM	A523	B	K03005	—	60/35 [415/240]	Pipe	C-Mn
1	1	1.1	ASTM/ASME	A or SA-524	I	K02104	—	60/35 [415/240]	Smls. Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-524	II	K02104	—	55/30 [380/205]	Smls. Pipe	C-Mn-Si
1	1	—	ASTM	A526	II	—	—	42/25 [290/170]	Galvanized Sheet	—
1	1	—	ASTM	A527	II	—	—	42/25 [290/170]	Galvanized Sheet	—
1	1	11.1	ASTM	A529	42	K02703	—	60/42 [415/290]	Plate, Bar, Shape	C-Mn
1	1	—	ASTM	A539	—	K01506	—	45/35 [310/240]	Coiled Tube	C
1	1	1.1	ASTM/ASME	A or SA-556	A2	K01807	—	47/26 [325/180]	Smls. Tube	C
1	1	11.1	ASTM/ASME	A or SA-556	B2	K02707	—	60/37 [415/255]	Smls. Tube	C-Si
1	1	1.1	ASTM/ASME	A or SA-557	A2	K01807	—	47/26 [325/180]	E.R.W. Tube	C
1	1	11.1	ASTM/ASME	A or SA-557	B2	K03007	—	60/37 [415/255]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A or SA-562	—	K11224	—	55/30 [380/205]	Plate	C-Mn-Ti
1	1	1.1	ASTM	A569	30	K02502	—	49/30 [340/205]	Sheet, Strip	C
1	1	1.1	ASTM	A569	33	K02502	—	52/33 [360/230]	Sheet, Strip	C
1	1	1.1	ASTM	A569	36	K02502	—	53/36 [365/250]	Sheet, Strip	C
1	1	1.1	ASTM	A569	40	K02502	—	55/40 [380/275]	Sheet, Strip	C
1	1	1.2	ASTM	A569	45	K02502	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.2	ASTM	A569	50	K02502	—	65/50 [450/345]	Sheet, Strip	C
1	1	1.1	ASTM	A570	30	K02502	—	49/30 [340/205]	Sheet, Strip	C
1	1	1.1	ASTM	A570	33	K02502	—	52/33 [360/230]	Sheet, Strip	C
1	1	1.1	ASTM	A570	36	K02502	—	53/36 [365/250]	Sheet, Strip	C
1	1	1.1	ASTM	A570	40	K02502	—	55/40 [380/275]	Sheet, Strip	C
1	1	1.2	ASTM	A570	45	K02502	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.2	ASTM	A570	50	K02502	—	65/50 [450/345]	Sheet, Strip	C
1	1	1.3	ASTM	A570	55	K02502	—	70/55 [485/380]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-572	42	—	—	60/42 [415/290]	Plate, Shape	C-Mn-Si
1	1	1.2	ASTM/ASME	A or SA-572	50	—	—	65/50 [450/345]	Plate, Shape	C-Mn-Si
1	1	11.1	ASTM	A573	58	—	—	58/32 [400/220]	Plate	C
1	1	11.1	ASTM	A573	65	—	—	65/35 [450/240]	Plate	C
1	1	1.1	ASTM	A575	M 1008	—	—	—	Bar	C
1	1	1.1	ASTM	A575	M 1010	—	—	—	Bar	C
1	1	1.1	ASTM	A575	M 1012	—	—	—	Bar	C
1	1	1.1	ASTM	A575	M 1015	—	—	—	Bar	C
1	1	1.1	ASTM	A575	M 1017	—	—	—	Bar	C
1	1	11.1	ASTM	A575	M 1020	—	—	—	Bar	C
1	1	11.1	ASTM	A575	M 1023	—	—	—	Bar	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	11.1	ASTM	A575	M 1025	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10080	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10100	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10120	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10150	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10160	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10170	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10180	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10190	—	—	—	Bar	C
1	1	1.1	ASTM	A576	G10200	—	—	—	Bar	C
1	1	11.1	ASTM	A576	G10210	—	—	—	Bar	C
1	1	11.1	ASTM	A576	G10220	—	—	—	Bar	C
1	1	11.1	ASTM	A576	G10230	—	—	—	Bar	C
1	1	11.1	ASTM	A576	G10250	—	—	—	Bar	C
1	1	1.1	ASTM/ASME	A or SA-587	A2	K01807	—	47/26 [325/180]	E.R.W. Tube	C
1	1	—	ASTM/ASME	A or SA-587	B2	K03007	—	60/37 [415/255]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A or SA-587	—	K11500	—	48/30 [330/205]	E.R.W. Pipe	C
1	1	—	ASTM	A607	45	—	—	65/45 [450/310]	Sheet, Strip	C-Mn-Cb-V
1	1	—	ASTM	A607	50	—	—	65/50 [450/345]	Sheet, Strip	C-Mn-Cb-V
1	1	1.1	ASTM	A611	D	G10120	—	52/40 [360/275]	Sheet, Strip	C
1	1	—	ASTM	A611	A	G10170	—	42/25 [290/170]	Sheet, Strip	C
1	1	—	ASTM	A611	B	G10170	—	45/30 [310/205]	Sheet, Strip	C
1	1	—	ASTM	A611	C	G10170	—	48/33 [330/230]	Sheet, Strip	C
1	1	1.2	ASTM	A618	III	K12700	—	65/50 [450/345]	Tube	Mn-V
1	1	1.1	ASTM	A620	A	K00040	—	40/22 [275/150]	Sheet	C
1	1	1.1	ASTM	A620	B	K00040	—	40/22 [275/150]	Sheet	C
1	1	1.1	ASTM	A633	A	K01802	—	63/42 [435/290]	Plate	Mn-Cb
1	1	1.1	ASTM	A633	C	K12000	> 2.5 [65] ≤ 4 [100]	65/46 [450/315]	Plate	Mn-Cb
1	1	1.1	ASTM	A633	D	K12037	> 2.5 [65] ≤ 4 [100]	65/46 [450/315]	Plate	C-Mn-Si
1	1	—	ASTM	A653	33	—	—	45/33 [310/230]	Galvanized Sheet	—
1	1	—	ASTM	A653	37	—	—	52/37 [360/255]	Galvanized Sheet	—
1	1	—	ASTM	A653	40	—	—	55/40 [380/275]	Galvanized Sheet	—
1	1	—	ASTM	A653	80	—	—	82/80 [565/550]	Galvanized Sheet	—
1	1	1.2	ASTM/ASME	A or SA-656	T3, 50	—	—	60/50 [415/345]	Plate	C-Mn-Si-V-Cb
1	1	1.2	ASTM/ASME	A or SA-656	T7, 50	—	—	60/50 [415/345]	Plate	C-Mn-Si-V-Cb
1	1	1.2	ASTM/ASME	A or SA-656	50	K11804	≤ 2 [50]	60/50 [415/345]	Plate	C-Mn-V
1	1	1.3	ASTM/ASME	A or SA-656	60	K11804	≤ 1.5 [40]	70/60 [485/415]	Plate	C-Mn-V
1	1	1.1	ASTM	A659	1015	G10150	—	—	Sheet, Strip	C
1	1	—	ASTM	A659	1016	G10160	—	—	Sheet, Strip	C
1	1	—	ASTM	A659	1017	G10170	—	—	Sheet, Strip	C
1	1	1.1	ASTM	A659	1018	G10180	—	—	Sheet, Strip	C
1	1	1.1	ASTM	A659	1020	G10200	—	—	Sheet, Strip	C
1	1	—	ASTM	A659	1021	G10210	—	—	Sheet, Strip	C
1	1	—	ASTM	A659	1023	G10230	—	—	Sheet, Strip	C
1	1	11.1	ASTM/ASME	A or SA-660	WCA	J02504	—	60/30 [415/205]	Centrifugal Cast Pipe	C-Si
1	1	1.1	ASTM/ASME	A or SA-662	A	K01701	—	58/40 [400/275]	Plate	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-662	B	K02203	—	65/40 [450/275]	Plate	C-Mn-Si
1	1	—	ASTM	A663	—	—	—	—	Bar	C
1	1	—	ASTM	A663	45	—	—	45/25 [310/175]	Bar, Shape	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	—	ASTM	A663	50	—	—	50/28 [345/195]	Bar, Shape	C
1	1	—	ASTM	A663	55	—	—	55/30 [380/205]	Bar, Shape	C
1	1	—	ASTM	A663	60	—	—	60/33 [415/230]	Bar, Shape	C
1	1	—	ASTM	A663	65	—	—	65/36 [450/250]	Bar, Shape	C
1	1	1.1	ASTM	A668	B	G10200	—	60/30 [415/205]	Forging	C
1	1	1.1	ASTM/ASME	A or SA-671	CC60	K02100	—	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-671	CE55	K02202	—	55/30 [380/205]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-671	CB60	K02401	—	60/32 [415/220]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-671	CE60	K02402	—	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-671	CC65	K02403	—	65/35 [450/240]	Fusion Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-671	CB65	K02800	—	65/35 [450/240]	Fusion Welded Pipe	C-Si
1	1	11.1	ASTM/ASME	A or SA-671	CA55	K02801	—	55/30 [380/205]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-672	A45	K01700	—	45/24 [310/165]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-672	C55	K01800	—	55/30 [380/205]	Fusion Welded Pipe	C-Si
1	1	1.1	ASTM/ASME	A or SA-672	B55	K02001	—	55/30 [380/205]	Fusion Welded Pipe	C-Si
1	1	1.1	ASTM/ASME	A or SA-672	C60	K02100	—	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-672	A50	K02200	—	50/27 [345/185]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-672	E55	K02202	—	55/30 [380/205]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A or SA-672	B60	K02401	—	60/32 [415/220]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-672	E60	K02402	—	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A or SA-672	C65	K02403	—	65/35 [450/240]	Fusion Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A or SA-672	B65	K02800	—	65/35 [450/240]	Fusion Welded Pipe	C-Si
1	1	11.1	ASTM/ASME	A or SA-672	A55	K02801	—	55/30 [380/205]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A or SA-675	45	—	—	45/23 [310/160]	Bar	C
1	1	11.1	ASTM/ASME	A or SA-675	50	—	—	50/25 [345/170]	Bar	C
1	1	11.1	ASTM/ASME	A or SA-675	55	—	—	55/27 [380/185]	Bar	C
1	1	11.1	ASTM/ASME	A or SA-675	60	—	—	60/30 [415/205]	Bar	C
1	1	11.1	ASTM/ASME	A or SA-675	65	—	—	65/32 [450/220]	Bar	C
1	1	11.1	ASTM	A694	F42	K03014	—	60/42 [415/290]	Forging	C-Mn
1	1	11.1	ASTM	A694	F46	K03014	—	60/46 [415/315]	Forging	C-Mn
1	1	11.1	ASTM	A694	F48	K03014	—	62/48 [425/330]	Forging	C-Mn
1	1	11.1	ASTM	A694	F50	K03014	—	64/50 [440/345]	Forging	C-Mn
1	1	11.1	ASTM	A694	F52	K03014	—	66/52 [455/360]	Forging	C-Mn
1	1	11.1	ASTM/ASME	A or SA-695	B, 35	K03504	—	60/35 [415/240]	Bar	C
1	1	11.1	ASTM/ASME	A or SA-696	B	K03200	—	60/35 [415/240]	Bar	C-Mn-Si
1	1	1.2	ASTM	A707	L1, Cl. 1	K02302	—	60/42 [415/290]	Forging	C-Mn
1	1	1.2	ASTM	A707	L1, Cl. 2	K02302	—	66/52 [455/360]	Forging	C-Mn
1	1	11.1	ASTM	A707	L2, Cl. 1	K03301	—	60/42 [415/290]	Forging	C-Mn
1	1	11.1	ASTM	A707	L2, Cl. 2	K03301	—	66/52 [455/360]	Forging	C-Mn
1	1	—	ASTM	A707	L4, Cl. 1	K12089	—	60/42 [415/290]	Forging	1.8Ni-0.6Mn-0.3Mo
1	1	—	ASTM	A707	L4, Cl. 2	K12089	—	66/52 [455/360]	Forging	1.8Ni-0.6Mn-0.3Mo
1	1	1.2	ASTM	A707	L3, Cl. 1	K12510	—	60/42 [415/290]	Forging	C-Mn-V-N
1	1	1.2	ASTM	A707	L3, Cl. 2	K12510	—	66/52 [455/360]	Forging	C-Mn-V-N
1	1	—	ASTM	A707	L5, Cl. 1	K20934	—	60/42 [415/290]	Forging	1.1.2Cu-1Ni-0.7Cr-0.5Mn
1	1	—	ASTM	A707	L5, Cl. 2	K20934	—	66/52 [455/360]	Forging	1.2Cu-1Ni-0.7Cr-0.5Mn
1	1	11.1	ASTM	A709	36	—	—	58/36 [400/250]	Plate, Bar, Shape	C-Mn
1	1	1.2	ASTM	A709	50	—	—	65/50 [450/345]	Plate, Bar, Shape	C-Mn
1	1	1.2	ASTM	A709	50S	—	—	65/50 [450/345]	Plate, Bar, Shape	C-Mn
1	1	11.1	ASTM/ASME	A or SA-727	—	K02506	—	60/36 [415/250]	Forging	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	11.1	ASTM/ASME	A or SA-765	I	K03046	—	60/30 [415/205]	Forging	C-Mn-Si
1	1	—	ASTM	A795	E, A	—	—	60/ [415/]	Resistance Welded Pipe	C-Mn
1	1	—	ASTM	A795	E, B	—	—	60/ [415/]	Resistance Welded Pipe	C-Mn
1	1	—	ASTM	A795	F	—	—	60/ [415/]	Furnace Welded Pipe	—
1	1	—	ASTM	A795	S, A	—	—	60/ [415/]	Smls. Pipe	C-Mn
1	1	—	ASTM	A795	S, B	—	—	60/ [415/]	Smls. Pipe	C-Mn
1	1	1.4	ASTM	A808	—	K11852	≤ 2.5 [64]	60/42 [415/290]	Plate	C-Mn-Cb-V
1	1	1.1	ASTM	A830	1006	G10060	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1008	G10080	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1009	G10090	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1010	G10100	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1012	G10120	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1015	G10150	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1016	G10160	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1017	G10170	—	40/20 [275/140]	Plate	C
1	1	1.1	ASTM	A830	1018	G10180	—	43/25 [295/170]	Plate	C
1	1	1.1	ASTM	A830	1019	G10190	—	43/25 [295/170]	Plate	C
1	1	1.1	ASTM	A830	1020	G10200	—	43/25 [295/170]	Plate	C
1	1	1.1	ASTM	A830	1021	G10210	—	43/25 [295/170]	Plate	C
1	1	1.1	ASTM	A830	1022	G10220	—	43/25 [295/170]	Plate	C
1	1	11.1	ASTM	A830	1023	G10230	—	43/25 [295/170]	Plate	C
1	1	1.1	ASTM/ASME	A or SA-836	—	—	—	55/25 [380/175]	Forging	C-Si-Ti
1	1	1.1	ASTM	A857	25	—	—	38/25 [260/170]	Sheet, Strip	C
1	1	1.1	ASTM	A857	30	—	—	49/30 [340/205]	Sheet, Strip	C
1	1	1.1	ASTM	A857	33	—	—	52/33 [360/230]	Sheet, Strip	C
1	1	1.1	ASTM	A857	36	—	—	53/36 [365/250]	Sheet, Strip	C
1	1	1.2	ASTM	A860	WPHY 42	—	—	60/42 [415/290]	Smls. & Welded Fitting	C-Mn
1	1	1.2	ASTM	A860	WPHY 46	—	—	63/46 [435/315]	Smls. & Welded Fitting	C-Mn
1	1	1.2	ASTM	A860	WPHY 52	—	—	66/52 [455/360]	Smls. & Welded Fitting	C-Mn
1	1	1.2	ASTM	A935	45 Cl. 1	—	—	60/45 [415/310]	Sheet, Strip	C-Mn-Cb-V
1	1	1.2	ASTM	A935	45 Cl. 2	—	—	55/45 [380/310]	Sheet, Strip	C-Mn-Cb-V
1	1	1.2	ASTM	A935	50 Cl. 1	—	—	65/50 [450/345]	Sheet, Strip	C-Mn-Cb-V
1	1	1.2	ASTM	A935	50 Cl. 2	—	—	60/50 [415/345]	Sheet, Strip	C-Mn-Cb-V
1	1	1.3	ASTM	A935	55 Cl. 2	—	—	65/55 [450/380]	Sheet, Strip	C-Mn-Cb-V
1	1	1.1	ASTM	A984	35	—	—	60/35 [415/240]	Pipe	C
1	1	1.2	ASTM	A992	—	—	—	65/50 [450/345]	Shape	C-Mn-Si
1	1	1.1	ASTM	A1008	CS C	—	—	40/20 [275/140]	Sheet	C
1	1	1.1	ASTM	A1008	DS A	—	—	40/22 [275/150]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 45 Cl. 1	—	—	60/45 [415/310]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 45 Cl. 2	—	—	55/45 [380/310]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 50 Cl. 1	—	—	65/50 [450/345]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 50 Cl. 2	—	—	60/50 [415/345]	Sheet	C
1	1	1.3	ASTM	A1008	HSLAS 55 Cl. 2	—	—	65/55 [450/380]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS-F 50	—	—	60/50 [415/345]	Sheet	C
1	1	1.1	ASTM	A1008	SS 25	—	—	42/25 [290/170]	Sheet	C
1	1	1.1	ASTM	A1008	SS 30	—	—	45/30 [310/205]	Sheet	C
1	1	1.1	ASTM	A1008	SS 33 2	—	—	48/33 [330/230]	Sheet	C
1	1	1.1	ASTM	A1008	SS 33 1	—	—	48/33 [330/230]	Sheet	C
1	1	1.1	ASTM	A1008	SS 40 1	—	—	52/40 [360/275]	Sheet	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	1.1	ASTM	A1008	SS 40 2	—	—	52/40 [360/275]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-1008	CS A	—	—	40/20 [275/140]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-1008	CS B	—	—	40/20 [275/140]	Sheet	C
1	1	1.1	ASTM/ASME	A or SA-1008	DS B	—	—	40/22 [275/150]	Sheet	C
1	1	1.1	ASTM	A1011	CS A	—	—	40/30 [275/205]	Sheet, Strip	C
1	1	1.1	ASTM	A1011	CS C	—	—	40/30 [275/205]	Sheet, Strip	C
1	1	1.1	ASTM	A1011	CS D	—	—	40/30 [275/205]	Sheet, Strip	C
1	1	1.1	ASTM	A1011	DS A	—	—	40/30 [275/205]	Sheet, Strip	C
1	1	1.2	ASTM	A1011	HSLAS-F 50	—	—	60/50 [415/345]	Sheet, Strip	C
1	1	1.1	ASTM	A1011	SS 30	—	—	49/30 [340/205]	Sheet, Strip	C
1	1	1.2	ASTM	A1011	SS 45 2	—	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.1	ASTM/ASME	A or SA-1011	CS B	—	—	40/30 [275/205]	Sheet, Strip	C
1	1	1.1	ASTM/ASME	A or SA-1011	DS B	—	—	40/30 [275/205]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	HSLAS 45 Cl. 1	—	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	HSLAS 45 Cl. 2	—	—	55/45 [380/310]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	HSLAS 50 Cl. 1	—	—	65/50 [450/345]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	HSLAS 50 Cl. 2	—	—	60/50 [415/345]	Sheet, Strip	C
1	1	1.3	ASTM/ASME	A or SA-1011	HSLAS 55 Cl. 2	—	—	65/55 [450/380]	Sheet, Strip	C
1	1	1.1	ASTM/ASME	A or SA-1011	SS 33	—	—	52/33 [360/230]	Sheet, Strip	C
1	1	1.1	ASTM/ASME	A or SA-1011	SS 36 1	—	—	53/36 [365/250]	Sheet, Strip	C
1	1	1.1	ASTM/ASME	A or SA-1011	SS 36 2	—	—	58/36 [400/250]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	SS 40	—	—	55/40 [380/275]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	SS 45 1	—	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	SS 45	—	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.2	ASTM/ASME	A or SA-1011	SS 50	—	—	65/50 [450/345]	Sheet, Strip	C
1	1	1.2	ASTM	A1018	HSLAS 45 Cl. 1	—	—	60/45 [415/310]	Sheet, Strip	C
1	1	1.2	ASTM	A1018	HSLAS 45 Cl. 2	—	—	55/45 [380/310]	Sheet, Strip	C
1	1	1.2	ASTM	A1018	HSLAS 50 Cl. 1	—	—	65/50 [450/345]	Sheet, Strip	C
1	1	1.2	ASTM	A1018	HSLAS 50 Cl. 2	—	—	60/50 [415/345]	Sheet, Strip	C
1	1	1.3	ASTM	A1018	HSLAS 55 Cl. 2	—	—	65/55 [450/380]	Sheet, Strip	C
1	1	1.2	ASTM	A1018	HSLAS-F 50	—	—	60/50 [415/345]	Sheet, Strip	C
1	1	1.1	ASTM	A1018	SS 30	—	—	49/30 [340/205]	Sheet, Strip	C
1	1	1.1	ASTM	A1018	SS 33	—	—	52/33 [360/230]	Sheet, Strip	C
1	1	1.1	ASTM	A1018	SS 36 1	—	—	53/36 [365/250]	Sheet, Strip	C
1	1	1.1	ASTM	A1018	SS 36 2	—	—	58/36 [400/250]	Sheet, Strip	C
1	1	1.1	ASTM	A1018	SS 40	—	—	55/40 [380/275]	Sheet, Strip	C
1	1	11.1	ASTM	A1085	—	—	—	65/50 [450/345]	Structural Section	C-Mn-Si
1	1	1.1	CSA	CSA G40.21	260W	—	—	60/38 [415/260]	Plate, Bar, Shape	C-Mn
1	1	1.1	CSA	CSA G40.21	260WT	—	—	60/38 [415/260]	Plate, Bar, Shape	C-Mn-Si-Cb-V
1	1	1.2	CSA	CSA G40.21	300W	—	—	65/44 [450/305]	Plate, Bar, Shape	C-Mn
1	1	1.2	CSA	CSA G40.21	300WT	—	—	65/44 [450/305]	Plate, Bar, Shape	C-Mn-Si-Cb-V
1	1	1.2	CSA	CSA G40.21	350W	—	—	65/50 [450/345]	Plate, Bar, Shape	C-Mn
1	1	1.1	CSA/ASME	CSA or SA/CSA-G40.21	38W	—	—	60/38 [415/260]	Plate, Bar, Shape	C-Mn-Si
1	1	1.2	CSA/ASME	CSA or SA/CSA-G40.21	44W	—	—	65/44 [450/305]	Plate, Bar, Shape	C-Mn-Si
1	1	1.2	CSA/ASME	CSA or SA/CSA-G40.21	50W	—	—	65/50 [450/345]	Plate, Bar, Shape	C-Mn-Si
1	1	11.1	CSA	CSA Z245.1	172	—	—	45/25 [310/170]	Pipe	C
1	1	11.1	CSA	CSA Z245.1	207	—	—	48/30 [330/205]	Pipe	C
1	1	11.1	CSA	CSA Z245.1	241	—	—	60/35 [415/240]	Smls. & Welded Pipe	C-Mn
1	1	11.1	CSA	CSA Z245.1	290	—	—	60/42 [415/290]	Smls. & Welded Pipe	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	1	11.1	CSA	CSA Z245.1	359	—	—	66/52 [455/360]	Smls. & Welded Pipe	C-Mn
1	1	11.1	CSA	CSA Z245.11	207	—	—	48/30 [330/205]	Fitting	C-Mn
1	1	11.1	CSA	CSA Z245.11	241	—	—	60/35 [415/240]	Fitting	C-Mn
1	1	11.1	CSA	CSA Z245.11	290	—	—	60/42 [415/290]	Fitting	C-Mn
1	1	11.1	CSA	CSA Z245.12	248	—	—	60/36 [415/250]	Flange	C-Mn
1	1	11.1	CSA	CSA Z245.12	290	—	—	60/42 [415/290]	Flange	C-Mn
1	1	1.1	IRAM/IAS	IRAM/IAS U 500-42	F-24	—	> 4 [100] ≤ 6 [150]	49.5/28 [340/195]	Plate	C
1	1	1.1	IRAM/IAS	IRAM/IAS U 500-42	F-24	—	≥ 0.0625 [1.6] ≤ 4 [100]	52/31 [360/215]	Plate, Sheet, Strip	C
1	1	1.1	IRAM/IAS	IRAM/IAS U 500-42	F-26	—	> 4 [100] ≤ 6 [150]	55/31 [380/215]	Plate	C
1	1	1.1	IRAM/IAS	IRAM/IAS U 500-42	F-26	—	≥ 0.0625 [1.6] ≤ 4 [100]	58/34 [400/235]	Plate, Sheet, Strip	C
1	1	11.1	MSS	MSS SP-75	WPHY-42	—	—	60/42 [415/290]	Smls. & Welded Fitting	C-Mn
1	1	11.1	MSS	MSS SP-75	WPHY-46	—	—	63/46 [435/315]	Smls. & Welded Fitting	C-Mn
1	1	11.1	MSS	MSS SP-75	WPHY-52	—	—	66/52 [455/360]	Smls. & Welded Fitting	C-Mn
1	2	11.1	AAR	AAR M201	B	—	—	70/38 [485/260]	Casting	C-Mn-Si
1	2	1.2	ABS	ABS	AH36	K11852	—	71/51 [490/350]	Plate, Bar, Shape	C-Mn-Si
1	2	1.2	ABS	ABS	DH36	K11852	—	71/51 [490/350]	Plate, Bar, Shape	C-Mn-Si
1	2	1.2	ABS	ABS	EH36	K11852	—	71/51 [490/350]	Plate, Bar, Shape	C-Mn-Si
1	2	1.2	ABS	ABS	FH36	K11852	—	71/51 [490/350]	Plate, Bar, Shape	C-Mn-Si
1	2	1.3	ABS	ABS	AH40	K11857	—	74/57 [510/395]	Plate, Bar, Shape	C-Mn-Si
1	2	1.3	ABS	ABS	DH40	K11857	—	74/57 [510/395]	Plate, Bar, Shape	C-Mn-Si
1	2	1.3	ABS	ABS	EH40	K11857	—	74/57 [510/395]	Plate, Bar, Shape	C-Mn-Si
1	2	1.3	ABS	ABS	FH40	K11857	—	74/57 [510/395]	Plate, Bar, Shape	C-Mn-Si
1	2	1.2	API	API 2H	50	—	—	70/50 [485/345]	Plate	C-Mn
1	2	1.3	API	API 2W	60	—	—	75/60 [515/415]	Plate	C-Mn
1	2	1.2	API	API 2Y	50T	—	—	70/50 [485/345]	Plate	C-Mn
1	2	1.3	API	API 2Y	60	—	—	75/60 [515/415]	Plate	C-Mn
1	2	11.1	API	API 5L	L390 or X56	—	—	71/56 [490/385]	Smls. & Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L390M or X56M	—	—	71/56 [490/385]	Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L390MO or X56MO	—	—	71/56 [490/385]	Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L390MS or X56MS	—	—	71/56 [490/385]	Welded Pipe	C-Mn
1	2	1.3	API	API 5L	L390N or X56N	—	—	71/56 [490/385]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L390Q or X56Q	—	—	71/56 [490/385]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L390QO or X56QO	—	—	71/56 [490/385]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L390QS or X56QS	—	—	71/56 [490/385]	Smls. & Welded Pipe	C-Mn
1	2	11.1	API	API 5L	L415 or X60	—	—	75/60 [515/415]	Smls. & Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L415M or X60M	—	—	75/60 [515/415]	Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L415MO or X60MO	—	—	75/60 [515/415]	Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L415MS or X60MS	—	—	75/60 [515/415]	Welded Pipe	C-Mn
1	2	1.3	API	API 5L	L415N or X60N	—	—	75/60 [515/415]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L415Q or X60Q	—	—	75/60 [515/415]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L415QO or X60QO	—	—	75/60 [515/415]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L415QS or X60QS	—	—	75/60 [515/415]	Smls. & Welded Pipe	C-Mn
1	2	11.1	API	API 5L	L450 or X65	—	—	78/65 [540/450]	Smls. & Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L450M or X65M	—	—	78/65 [540/450]	Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L450MO or X65MO	—	—	78/65 [540/450]	Welded Pipe	C-Mn
1	2	2.1	API	API 5L	L450MS or X65MS	—	—	78/65 [540/450]	Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L450Q or X65Q	—	—	78/65 [540/450]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L450QO or X65QO	—	—	78/65 [540/450]	Smls. & Welded Pipe	C-Mn
1	2	3.1	API	API 5L	L450QS or X65QS	—	—	78/65 [540/450]	Smls. & Welded Pipe	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	2	11.2	AS	AS 1448	K4	—	—	72.5/36 [500/250]	Forging	C-Si
1	2	11.2	AS	AS 1448	K5	—	—	78.5/39 [540/270]	Forging	C-Mn-Si
1	2	1.2	AS	AS 1448	K9	—	—	78.5/43.5 [540/300]	Forging	C-Mn-Si
1	2	11.2	AS	AS 1448	S4	—	—	72.5/36 [500/250]	Forging	C-Si
1	2	11.2	AS	AS 1448	S5	—	—	78.5/39 [540/270]	Forging	C-Mn
1	2	1.2	AS	AS 1548	5-490	—	—	71/52 [490/360]	Plate	C
1	2	1.2	AS	AS 1548	7-490	—	—	71/46 [490/320]	Plate	C
1	2	1.2	AS	AS 1548	PT490	—	—	71/46 [490/320]	Plate	C
1	2	1.2	AS/ASME	AS or SA/AS 1548	PT490	—	—	71/46 [490/320]	Plate	C
1	2	1.2	AS	AS A945	50	—	—	70.5/50 [485/345]	Plate	C-Mn-Si
1	2	1.3	AS	AS A945	65	—	—	78.5/65 [540/450]	Plate	C-Mn-Si-Ti
1	2	1.2	AS/NZS	AS/NZS 3678	300	—	—	62.5/46 [430/320]	Plate	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3678	300L15	—	—	62.5/46 [430/320]	Plate	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3678	350	—	—	65.5/52 [450/360]	Plate	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3678	350L15	—	—	65.5/52 [450/360]	Plate	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3678	400	—	—	70.5/58 [485/400]	Plate	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3678	400L15	—	—	69.5/58 [480/400]	Plate	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3678	450	—	—	75.5/65 [520/450]	Plate	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3678	450L15	—	—	75.5/65 [520/450]	Plate	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3679.1	300	—	—	64/46 [440/320]	Bar, Section	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3679.1	300L0	—	—	64/46 [440/320]	Bar, Section	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3679.1	300L15	—	—	64/46 [440/320]	Bar, Section	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3679.1	350	—	—	70.5/52 [485/360]	Bar, Section	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3679.1	350L0	—	—	69.5/52 [480/360]	Bar, Section	C-Mn
1	2	1.2	AS/NZS	AS/NZS 3679.1	350L15	—	—	69.5/52 [480/360]	Bar, Section	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3679.1	400	—	—	75.5/58 [520/400]	Bar, Section	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3679.1	400L0	—	—	75.5/58 [520/400]	Bar, Section	C-Mn
1	2	1.3	AS/NZS	AS/NZS 3679.1	400L15	—	—	75.5/58 [520/400]	Bar, Section	C-Mn
1	2	1.1	ASTM	A27	70-40	J02501	—	70/40 [485/275]	Casting	C
1	2	11.1	ASTM	A27	70-36	J03501	—	70/36 [485/250]	Casting	C
1	2	11.1	ASTM/ASME	A or SA-105	—	K03504	—	70/36 [485/250]	Flange, Fitting	C
1	2	11.1	ASTM/ASME	A or SA-106	C	K03501	—	70/40 [485/275]	Smls. Pipe	C-Mn-Si
1	2	1.2	ASTM	A131	AH32	—	—	64/46 [440/315]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	1.2	ASTM	A131	AH36	—	—	71/51 [490/350]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	1.2	ASTM	A131	DH32	—	—	64/46 [440/315]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	1.2	ASTM	A131	DH36	—	—	71/51 [490/350]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	1.1	ASTM	A131	E	—	—	58/34 [400/235]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	1.2	ASTM	A131	EH32	—	—	64/46 [440/315]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	1.2	ASTM	A131	EH36	—	—	71/51 [490/350]	Plate, Shape, Bar, Rivet	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-178	D	K02709	—	70/40 [485/275]	E.R.W. Tube	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-181	Cl. 70	K03502	—	70/36 [485/250]	Pipe Flange, Fitting	C-Si
1	2	11.1	ASTM/ASME	A or SA-210	C	K03501	—	70/40 [485/275]	Smls. Tube	C-Mn-Si
1	2	1.1	ASTM/ASME	A or SA-216	WCC	J02503	—	70/40 [485/275]	Casting	C-Mn-Si
1	2	1.1	ASTM/ASME	A or SA-216	WCB	J03002	—	70/36 [485/250]	Casting	C-Si
1	2	11.1	ASTM/ASME	A or SA-234	WPC	K03501	—	70/40 [485/275]	Piping Fitting	C-Mn-Si
1	2	1.2	ASTM	A242	Type 1	K11510	> 1.5 [38] ≤ 4 [100]	63/42 [435/290]	Plate, Bar, Shape	C
1	2	1.2	ASTM	A242	Type 1	K11510	> 0.75 [19] ≤ 1.5 [38]	67/46 [460/315]	Plate, Bar, Shape	C
1	2	1.2	ASTM	A242	Type 1	K11510	≤ 0.75 [19]	70/50 [485/345]	Plate, Bar, Shape	C
1	2	11.1	ASTM/ASME	A or SA-266	4	K03017	—	70/36 [485/250]	Forging	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	2	11.1	ASTM/ASME	A or SA-266	2	K03506	—	70/36 [485/250]	Forging	C-Si
1	2	11.2	ASTM/ASME	A or SA-266	3	K05001	—	75/37.5 [515/260]	Forging	C-Si
1	2	11.1	ASTM/ASME	A or SA-299	A	K02803	—	75/40 [515/275]	Plate	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-350	LF2	K03011	—	70/36 [485/250]	Forging	C-Mn-Si
1	2	1.3	ASTM/ASME	A or SA-350	LF6, Cl. 3	K12202	—	75/60 [515/415]	Forging	C-Mn-Si-V
1	2	3.3	ASTM/ASME	A or SA-350	LF787, Cl. 2	K20747	—	65/55 [450/380]	Forging	1Ni-1Cu-0.75Cr-Mo-Nb
1	2	11.1	ASTM/ASME	A or SA-352	LCC	J02505	—	70/40 [485/275]	Casting	C-Mn-Si
1	2	11.1	ASTM	A356	1	J03502	—	70/36 [485/250]	Casting	C-Si
1	2	11.1	ASTM/ASME	A or SA-372	B	K04001	—	75/45 [515/310]	Forging	C-Mn-Si
1	2	11.1	ASTM	A381	Y52	—	—	66/52 [455/360]	Welded Pipe	C
1	2	11.1	ASTM	A381	Y56	—	—	71/56 [490/385]	Welded Pipe	C
1	2	11.1	ASTM	A381	Y60	—	—	75/60 [515/415]	Welded Pipe	C
1	2	11.1	ASTM/ASME	A or SA-414	F	K03102	—	70/42 [485/290]	Sheet	C-Mn
1	2	11.1	ASTM/ASME	A or SA-414	G	K03103	—	75/45 [515/310]	Sheet	C-Mn
1	2	—	ASTM	A441	Group 1	—	—	70/50 [485/345]	Shape	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 2	—	—	70/50 [485/345]	Shape	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 3	—	—	67/46 [460/315]	Shape	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 4	—	—	63/42 [435/290]	Shape	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 5	—	—	63/42 [435/290]	Shape	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	> 4 [100] ≤ 8 [200]	60/40 [415/275]	Plate, Bar	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	> 1.5 [40] ≤ 4 [100]	63/42 [435/290]	Plate, Bar	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	> 0.75 [19] < 1.5 [40]	67/46 [460/315]	Plate, Bar	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	≤ 0.75 [20]	70/50 [485/345]	Plate, Bar	C-Mn-Si-Cb-V
1	2	11.2	ASTM/ASME	A or SA-455	—	K03300	> 0.580 [15] ≤ 0.75 [19]	70/35 [485/240]	Plate	C-Mn-Si
1	2	11.2	ASTM/ASME	A or SA-455	—	K03300	> 0.375 [10] ≤ 0.580 [15]	73/37 [505/255]	Plate	C-Mn-Si
1	2	11.2	ASTM/ASME	A or SA-455	—	K03300	≤ 0.375 [10]	75/38 [515/260]	Plate	C-Mn-Si
1	2	1.1	ASTM/ASME	A or SA-487	16, Cl. A	J31200	—	70/40 [485/275]	Casting	Low C-Mn-Ni
1	2	11.1	ASTM/ASME	A or SA-508	1	K13502	—	70/36 [485/250]	Forging	C
1	2	11.1	ASTM/ASME	A or SA-508	1A	K13502	—	70/36 [485/250]	Forging	C
1	2	11.1	ASTM	A512	1025	G10250	—	55/35 [380/240]	Tube	C
1	2	11.1	ASTM	A512	1030	G10300	—	65/40 [450/275]	Tube	C
1	2	1.1	ASTM	A513	1020 CW	G10200	—	—	Tube	C
1	2	1.2	ASTM	A513	1025 CW	G10250	—	—	Tube	C
1	2	11.1	ASTM/ASME	A or SA-513	1025	G10250	—	56/40 [385/275]	Tube	C
1	2	11.1	ASTM/ASME	A or SA-513	1030	G10300	—	62/45 [425/310]	Tube	C
1	2	11.1	ASTM/ASME	A or SA-515	70	K03101	—	70/38 [485/260]	Plate	C-Si
1	2	11.1	ASTM/ASME	A or SA-516	70	K02700	—	70/38 [485/260]	Plate	C-Mn-Si
1	2	1.1	ASTM	A519	1018 CW	G10180	—	—	Tube	C
1	2	1.1	ASTM	A519	1020 CW	G10200	—	—	Tube	C
1	2	1.1	ASTM	A519	1022 CW	G10220	—	—	Tube	C
1	2	11.1	ASTM	A519	1025	G10250	—	53/30 [365/205]	Tube	C
1	2	1.2	ASTM	A519	1025 CW	G10250	—	—	Tube	C
1	2	11.1	ASTM	A519	1026 CW	G10260	—	—	Tube	C
1	2	—	ASTM	A519	1030	G10300	—	75/55 [515/380]	Tube	C
1	2	—	ASTM	A521	CE	—	—	75/37 [515/255]	Die Forging	C
1	2	11.1	ASTM	A529	50	—	—	70/50 [485/345]	Plate, Bar, Shape	C-Mn
1	2	11.1	ASTM	A529	55	—	—	70/55 [485/380]	Plate, Bar, Shape	C-Mn
1	2	1.2	ASTM/ASME	A or SA-537	Cl. 1	K12437	> 2.5 [65] ≤ 4 [100]	65/45 [450/310]	Plate	C-Mn-Si
1	2	1.2	ASTM/ASME	A or SA-537	Cl. 1	K12437	≤ 2.5 [65]	70/50 [485/345]	Plate	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	2	11.1	ASTM/ASME	A or SA-541	1A	K03020	—	70/36 [485/250]	Forging	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-541	1	K03506	—	70/36 [485/250]	Forging	C-Si
1	2	11.1	ASTM/ASME	A or SA-556	C2	K03006	—	70/40 [485/275]	Smls. Tube	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-557	C2	K03505	—	70/40 [485/275]	E.R.W. Tube	C-Mn
1	2	1.3	ASTM/ASME	A or SA-572	55	—	—	70/55 [485/380]	Plate, Shape	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-572	60	—	—	75/60 [515/415]	Plate, Shape	C-Mn-Si
1	2	11.1	ASTM	A573	70	—	—	70/42 [485/290]	Plate	C
1	2	11.1	ASTM	A595	A	K02004	—	65/55 [450/380]	Welded Tube	Low C
1	2	11.1	ASTM	A595	B	K02005	—	70/60 [485/415]	Welded Tube	Low C
1	2	1.4	ASTM	A606	2, CR, AR	—	—	65/45 [450/310]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	2, HR, A	—	—	65/45 [450/310]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	2, HR, AR	—	—	70/50 [485/345]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	2, HR, N	—	—	65/45 [450/310]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	4, CR, AR	—	—	65/45 [450/310]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	4, HR, A	—	—	65/45 [450/310]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	4, HR, AR	—	—	70/50 [485/345]	Sheet, Strip	C-Mn
1	2	1.4	ASTM	A606	4, HR, N	—	—	65/45 [450/310]	Sheet, Strip	C-Mn
1	2	—	ASTM	A607	55	—	—	70/55 [485/380]	Sheet, Strip	C-Mn-Cb-V
1	2	1.2	ASTM	A618	Ia	—	> 0.75 [19] ≤ 1.5 [38]	67/46 [460/315]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	Ia	—	≤ 0.75 [19]	70/50 [485/345]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	Ib	K02601	> 0.75 [19] ≤ 1.5 [38]	67/46 [460/315]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	Ib	K02601	≤ 0.75 [19]	70/50 [485/345]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	II	K12609	> 0.75 [19] ≤ 1.5 [38]	67/46 [460/315]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	II	K12609	≤ 0.75 [19]	70/50 [485/345]	Tube	Mn-Cu-V
1	2	1.1	ASTM	A633	C	K12000	≤ 2.5 [65]	70/50 [485/345]	Plate	Mn-Cb
1	2	1.1	ASTM	A633	D	K12037	≤ 2.5 [65]	70/50 [485/345]	Plate	C-Mn-Si
1	2	1.3	ASTM/ASME	A or SA-656	T3, 60	—	—	70/60 [485/415]	Plate	C-Mn-Si-V-Cb
1	2	1.3	ASTM/ASME	A or SA-656	T7, 60	—	—	70/60 [485/415]	Plate	C-Mn-Si-V-Cb
1	2	1.3	ASTM/ASME	A or SA-656	70	K11804	≤ 1 [25]	80/70 [550/485]	Plate	C-Mn-V
1	2	11.1	ASTM/ASME	A or SA-660	WCC	J02505	—	70/40 [485/275]	Centrifugal Cast Pipe	C-Mn-Si
1	2	1.1	ASTM/ASME	A or SA-660	WCB	J03003	—	70/36 [485/250]	Centrifugal Cast Pipe	C-Si
1	2	1.1	ASTM/ASME	A or SA-662	C	K02007	—	70/43 [485/295]	Plate	C-Mn-Si
1	2	—	ASTM	A663	70	—	—	70/39 [485/270]	Bar, Shape	C
1	2	—	ASTM	A663	75	—	—	75/41 [515/285]	Bar, Shape	C
1	2	11.1	ASTM	A668	C	G10250	—	66/33 [455/230]	Forging	C
1	2	11.1	ASTM	A668	D	G10300	—	75/37 [515/255]	Forging	C
1	2	11.1	ASTM/ASME	A or SA-671	CC70	K02700	—	70/38 [485/260]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-671	CK75	K02803	—	75/40 [515/275]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-671	CB70	K03101	—	70/38 [485/260]	Fusion Welded Pipe	C-Si
1	2	1.2	ASTM/ASME	A or SA-671	CD70	K12437	—	70/50 [485/345]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-672	C70	K02700	—	70/38 [485/260]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-672	N75	K02803	—	75/40 [515/275]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-672	B70	K03101	—	70/38 [485/260]	Fusion Welded Pipe	C-Si
1	2	1.2	ASTM/ASME	A or SA-672	D70	K12437	—	70/45 [485/310]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-675	70	—	—	70/35 [485/240]	Bar	C
1	2	1.2	ASTM	A678	A	K01600	≤ 1.5 [40]	70/50 [485/345]	Plate	C-Mn-Si
1	2	1.4	ASTM	A690	—	K12249	> 4 [100]	70/50 [485/345]	Marine Piling Plate, Bar	0.75Mn-0.6Ni-0.12P
1	2	11.1	ASTM/ASME	A or SA-691	CMS-75	K02803	—	75/40 [515/275]	Fusion Welded Pipe	C-Mn-Si
1	2	1.2	ASTM/ASME	A or SA-691	CMSH-70	K12437	> 2.5 [65] ≤ 4 [100]	65/45 [450/310]	Fusion Welded Pipe	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	2	1.2	ASTM/ASME	A or SA-691	CMSH-70	K12437	≤ 2.5 [65]	70/50 [485/345]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM	A694	F56	K03014	—	68/56 [470/385]	Forging	C-Mn
1	2	11.1	ASTM	A694	F60	K03014	—	75/60 [515/415]	Forging	C-Mn
1	2	11.1	ASTM	A694	F65	K03014	—	77/65 [530/450]	Forging	C-Mn
1	2	11.1	ASTM/ASME	A or SA-695	B, 40	K03504	—	70/40 [485/275]	Bar	C
1	2	11.1	ASTM/ASME	A or SA-696	C	K03200	—	70/40 [485/275]	Bar	C-Mn-Si
1	2	11.1	ASTM	A707	L2, Cl. 3	K03301	—	75/60 [515/415]	Forging	C-Mn
1	2	—	ASTM	A707	L4, Cl. 3	K12089	—	75/60 [515/415]	Forging	1.8Ni-0.6Mn-0.3Mo
1	2	1.3	ASTM	A707	L3, Cl. 3	K12510	—	75/60 [515/415]	Forging	C-Mn-V-N
1	2	—	ASTM	A707	L5, Cl. 3	K20934	—	75/60 [515/415]	Forging	1.2Cu-1Ni-0.7Cr-0.5Mn
1	2	1.4	ASTM	A709	50W, A	—	—	70/50 [485/345]	Plate, Bar, Shape	C-Mn
1	2	1.4	ASTM	A709	50W, B	—	—	70/50 [485/345]	Plate, Bar, Shape	C-Mn
1	2	1.4	ASTM	A709	HPS 50W	—	—	70/50 [485/345]	Plate, Bar, Shape	C-Mn
1	2	11.1	ASTM/ASME	A or SA-737	B	K12001	—	70/50 [485/345]	Plate	C-Mn-Si-Cb
1	2	11.1	ASTM/ASME	A or SA-738	A	K12447	—	75/45 [515/310]	Plate	C-Mn-Si
1	2	11.1	ASTM/ASME	A or SA-765	II	K03047	—	70/36 [485/250]	Forging	C-Mn-Si
1	2	11.1	ASTM	A830	1025	G10250	—	43/25 [295/170]	Plate	C
1	2	1.2	ASTM/ASME	A or SA-841	A, Cl. 1	—	> 2.5 [65]	65/45 [450/310]	Plate	C-Mn-Si
1	2	1.2	ASTM/ASME	A or SA-841	A, Cl. 1	—	≤ 2.5 [65]	70/50 [485/345]	Plate	C-Mn-Si
1	2	1.3	ASTM	A860	WPHY 60	—	—	75/60 [515/415]	Smls. & Welded Fitting	C-Mn
1	2	1.3	ASTM	A860	WPHY 65	—	—	77/65 [530/450]	Smls. & Welded Fitting	C-Mn
1	2	1.2	ASTM	A913	50	—	—	65/50 [450/345]	Shape	C-Mn-Ni-Cr-Cb-V
1	2	1.3	ASTM	A935	55 Cl. 1	—	—	70/55 [485/380]	Sheet, Strip	C-Mn-Cb-V
1	2	11.1	ASTM	A935	60 Cl. 1	—	—	75/60 [515/415]	Sheet, Strip	C-Mn-Cb-V
1	2	1.3	ASTM	A935	60 Cl. 2	—	—	70/60 [485/415]	Sheet, Strip	C-Mn-Cb-V
1	2	1.3	ASTM	A935	65 Cl. 2	—	—	75/65 [515/450]	Sheet, Strip	C-Mn-Cb-V
1	2	1.2	ASTM	A984	50	—	—	70/50 [485/345]	Pipe	C
1	2	1.3	ASTM	A984	60	—	—	75/60 [515/415]	Pipe	C
1	2	1.3	ASTM	A1008	HSLAS 55 Cl. 1	—	—	70/55 [485/380]	Sheet	C
1	2	11.1	ASTM	A1008	HSLAS 60 Cl. 1	—	—	75/60 [515/415]	Sheet	C
1	2	1.3	ASTM	A1008	HSLAS 60 Cl. 2	—	—	70/60 [485/415]	Sheet	C
1	2	1.3	ASTM	A1008	HSLAS 65 Cl. 2	—	—	75/65 [515/450]	Sheet	C
1	2	1.3	ASTM	A1008	HSLAS-F 60	—	—	70/60 [485/415]	Sheet	C
1	2	1.3	ASTM	A1011	HSLAS 60 Cl. 2	—	—	70/60 [485/415]	Sheet, Strip	C
1	2	1.3	ASTM	A1011	HSLAS 65 Cl. 2	—	—	75/65 [515/450]	Sheet, Strip	C
1	2	1.3	ASTM	A1011	HSLAS-F 60	—	—	70/60 [485/415]	Sheet, Strip	C
1	2	1.3	ASTM/ASME	A or SA-1011	HSLAS 55 Cl. 1	—	—	70/55 [485/380]	Sheet, Strip	C
1	2	1.3	ASTM/ASME	A or SA-1011	HSLAS 60 Cl. 1	—	—	75/60 [515/415]	Sheet, Strip	C
1	2	1.3	ASTM/ASME	A or SA-1011	HSLAS 60 Cl. 2	—	—	70/60 [485/415]	Sheet, Strip	C
1	2	1.3	ASTM/ASME	A or SA-1011	SS 55	—	—	70/55 [485/380]	Sheet, Strip	C
1	2	1.3	ASTM/ASME	A or SA-1011	SS 60	—	—	75/60 [515/415]	Sheet, Strip	C
1	2	1.3	ASTM	A1018	HSLAS 55 Cl. 1	—	—	70/55 [485/380]	Sheet, Strip	C
1	2	11.1	ASTM	A1018	HSLAS 60 Cl. 1	—	—	70/60 [485/415]	Sheet, Strip	C
1	2	1.3	ASTM	A1018	HSLAS 60 Cl. 2	—	—	70/60 [485/415]	Sheet, Strip	C
1	2	11.1	ASTM	A1018	HSLAS 65 Cl. 1	—	—	80/65 [550/450]	Sheet, Strip	C
1	2	1.3	ASTM	A1018	HSLAS 65 Cl. 2	—	—	75/65 [515/450]	Sheet, Strip	C
1	2	1.3	AWS/ASME	A or SFA-5.18	ER70S-8	—	—	70/ [485/]	Weld Metal	C-Mn-Si
1	2	1.3	AWS/ASME	A or SFA-5.18	ER70S-2	K10726	—	70/ [485/]	Weld Metal	C-Mn-Si
1	2	1.3	AWS/ASME	A or SFA-5.18	ER70S-3	K11022	—	70/ [485/]	Weld Metal	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	2	1.3	AWS/ASME	A or SFA-5.18	ER70S-7	K11125	—	70/ [485/]	Weld Metal	C-Mn-Si
1	2	1.3	AWS/ASME	A or SFA-5.18	ER70S-4	K11132	—	70/ [485/]	Weld Metal	C-Mn-Si
1	2	1.3	AWS/ASME	A or SFA-5.18	ER70S-6	K11140	—	70/ [485/]	Weld Metal	C-Mn-Si
1	2	1.4	CSA	CSA G40.21	350A	—	—	70/50 [485/345]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	1.4	CSA	CSA G40.21	350AT	—	—	70/50 [485/345]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	1.4	CSA	CSA G40.21	350R	—	—	70/50 [485/345]	HSLA Plate, Bar, Shape	C-Mn-P
1	2	1.2	CSA	CSA G40.21	350WT	—	—	70/50 [485/345]	Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	1.3	CSA	CSA G40.21	380W	—	—	70/55 [485/380]	Plate, Bar, Shape	C-Mn
1	2	1.3	CSA	CSA G40.21	380WT	—	—	70/55 [485/380]	Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	1.4	CSA	CSA G40.21	400A	—	—	75/60 [515/415]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	1.4	CSA	CSA G40.21	400AT	—	—	75/60 [515/415]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	1.3	CSA	CSA G40.21	400W	—	—	75/60 [515/415]	HSLA Plate, Bar, Shape	C-Mn
1	2	1.3	CSA	CSA G40.21	400WT	—	—	75/60 [515/415]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	2	11.1	CSA	CSA Z245.1	317	—	—	63/46 [435/315]	Pipe	C-Mn
1	2	11.1	CSA	CSA Z245.1	386	—	—	71/56 [490/385]	Smls. & Welded Pipe	C-Mn
1	2	11.1	CSA	CSA Z245.1	414	—	—	75/60 [515/415]	Smls. & Welded Pipe	C-Mn
1	2	11.1	CSA	CSA Z245.1	448	—	—	77/65 [530/450]	Smls. & Welded Pipe	C-Mn
1	2	11.1	CSA	CSA Z245.11	317	—	—	63/46 [435/315]	Fitting	C-Mn
1	2	11.1	CSA	CSA Z245.11	359	—	—	66/52 [455/360]	Fitting	C-Mn
1	2	11.1	CSA	CSA Z245.11	386	—	—	71/56 [490/385]	Fitting	C-Mn
1	2	11.1	CSA	CSA Z245.12	317	—	—	63/46 [435/315]	Flange	C-Mn
1	2	11.1	CSA	CSA Z245.12	359	—	—	66/52 [455/360]	Flange	C-Mn
1	2	11.1	CSA	CSA Z245.12	386	—	—	71/56 [490/385]	Flange	C-Mn
1	2	11.1	MSS	MSS SP-75	WPHY-56	—	—	71/56 [490/385]	Smls. & Welded Fitting	C-Mn
1	2	11.1	MSS	MSS SP-75	WPHY-60	—	—	75/60 [515/415]	Smls. & Welded Fitting	C-Mn
1	2	11.1	MSS	MSS SP-75	WPHY-65	—	—	77/65 [530/450]	Smls. & Welded Fitting	C-Mn
1	3	11.1	AAR	AAR M201	B+	—	—	80/50 [550/345]	Casting	C-Mn-Si
1	3	11.1	API	API 5L	L485 or X70	—	—	83/70 [570/485]	Smls. & Welded Pipe	C-Mn
1	3	2.2	API	API 5L	L485M or X70M	—	—	83/70 [570/485]	Welded Pipe	C-Mn
1	3	2.2	API	API 5L	L485MO or X70MO	—	—	83/70 [570/485]	Welded Pipe	C-Mn
1	3	2.2	API	API 5L	L485MS or X70MS	—	—	83/70 [570/485]	Welded Pipe	C-Mn
1	3	3.1	API	API 5L	L485Q or X70Q	—	—	83/70 [570/485]	Smls. & Welded Pipe	C-Mn
1	3	3.1	API	API 5L	L485QO or X70QO	—	—	83/70 [570/485]	Smls. & Welded Pipe	C-Mn
1	3	3.1	API	API 5L	L485QS or X70QS	—	—	83/70 [570/485]	Smls. & Welded Pipe	C-Mn
1	3	11.2	AS	AS 1448	K6	—	—	87/43.5 [600/300]	Forging	C-Mn-Si
1	3	11.1	AS	AS 1448	K10	—	—	84/43.5 [580/300]	Forging	C-Mn-Si
1	3	11.2	AS	AS 1448	S6	—	—	87/43.5 [600/300]	Forging	C-Mn
1	3	2.2	AS/NZS	AS/NZS 1594	XF500	—	—	82.5/69.5 [570/480]	Plate, Sheet, Strip	C-Mn
1	3	11.1	ASTM/ASME	A or SA-299	B	K02803	—	80/45 [550/310]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A or SA-333	10	—	—	80/65 [550/450]	Smls. & Welded Pipe	C-Mn-Si
1	3	4.1	ASTM/ASME	A or SA-350	LF6, Cl. 2	K12202	—	75/60 [515/415]	Forging	C-Mn-Si-V
1	3	3.3	ASTM/ASME	A or SA-350	LF787, Cl. 3	K20747	—	75/65 [515/450]	Forging	1Ni-1Cu-0.75Cr-Mo-Nb
1	3	11.1	ASTM	A381	Y65	—	—	77/65 [530/450]	Welded Pipe	C
1	3	11.1	ASTM	A513	1026 CW	G10260	—	—	Tube	C
1	3	1.2	ASTM/ASME	A or SA-537	Cl. 2	K12437	> 4 [100] ≤ 6 [150]	70/46 [485/315]	Plate	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-537	Cl. 2	K12437	> 2.5 [65] ≤ 4 [100]	75/55 [515/380]	Plate	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-537	Cl. 2	K12437	≤ 2.5 [65]	80/60 [550/415]	Plate	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-537	Cl. 3	K12437	> 4 [100]	70/40 [485/275]	Plate	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-537	Cl. 3	K12437	> 2.5 [65] ≤ 4 [100]	75/50 [515/345]	Plate	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	3	1.2	ASTM/ASME	A or SA-537	Cl. 3	K12437	≤ 2.5 [65]	80/55 [550/380]	Plate	C-Mn-Si
1	3	1.3	ASTM/ASME	A or SA-572	65	—	—	80/65 [550/450]	Plate, Shape	C-Mn-Si
1	3	—	ASTM	A607	60	—	—	75/60 [515/415]	Sheet, Strip	C-Mn-Cb-V
1	3	—	ASTM	A607	65	—	—	80/65 [550/450]	Sheet, Strip	C-Mn-Cb-V
1	3	—	ASTM	A607	70	—	—	85/70 [585/485]	Sheet, Strip	C-Mn-Cb-V
1	3	—	ASTM	A611	E	G10170	—	82/80 [565/550]	Sheet, Strip	C
1	3	4.1	ASTM	A633	E	K12202	> 4 [100] ≤ 6 [150]	75/55 [515/380]	Plate	C-Mn-Si-V
1	3	4.1	ASTM	A633	E	K12202	≤ 4 [100]	80/60 [550/415]	Plate	C-Mn-Si-V
1	3	2.2	ASTM/ASME	A or SA-656	T3, 70	—	—	80/70 [550/485]	Plate	C-Mn-Si-V-Cb
1	3	2.2	ASTM/ASME	A or SA-656	T7, 70	—	—	80/70 [550/485]	Plate	C-Mn-Si-V-Cb
1	3	1.3	ASTM/ASME	A or SA-656	80	K11804	≤ 0.75 [20]	90/80 [620/550]	Plate	C-Mn-V
1	3	—	ASTM	A663	80	—	—	80/44 [550/305]	Bar, Shape	C
1	3	11.1	ASTM	A668	F	—	> 10 [250] ≤ 20 [500]	82/48 [565/330]	Forging	C
1	3	11.1	ASTM	A668	F	—	> 4 [100] ≤ 10 [250]	85/50 [585/345]	Forging	C
1	3	11.1	ASTM	A668	F	—	≤ 4 [100]	90/55 [620/380]	Forging	C
1	3	1.2	ASTM/ASME	A or SA-671	CD80	K12437	—	80/60 [550/415]	Fusion Welded Pipe	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-672	D80	K12437	—	80/46 [550/315]	Fusion Welded Pipe	C-Mn-Si
1	3	—	ASTM/ASME	A or SA-675	80	—	—	80/40 [550/275]	Bar	C
1	3	1.3	ASTM	A678	B	K02002	≤ 2.5 [65]	80/60 [550/415]	Plate	C-Mn-Si
1	3	1.3	ASTM	A678	C	K02204	> 1.5 [40] ≤ 2 [50]	85/65 [585/450]	Plate	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-691	CMSH-80	K12437	> 2.5 [65] ≤ 4 [100]	75/55 [515/380]	Fusion Welded Pipe	C-Mn-Si
1	3	1.2	ASTM/ASME	A or SA-691	CMSH-80	K12437	≤ 2.5 [65]	80/60 [550/415]	Fusion Welded Pipe	C-Mn-Si
1	3	11.1	ASTM	A694	F70	K03014	—	82/70 [565/485]	Forging	C-Mn
1	3	4.1	ASTM/ASME	A or SA-737	C	K12202	—	80/60 [550/415]	Plate	C-Mn-Si-V
1	3	11.1	ASTM/ASME	A or SA-738	C	K02008	> 4 [100] ≤ 6 [150]	70/46 [485/315]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A or SA-738	C	K02008	> 2.5 [65] ≤ 4 [100]	75/55 [515/380]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A or SA-738	C	K02008	≤ 2.5 [65]	80/60 [550/415]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A or SA-738	B	K12007	—	85/60 [585/415]	Plate	C-Mn-Si-Cb
1	3	1.1	ASTM/ASME	A or SA-765	IV	K02009	—	80/50 [550/345]	Forging	C-Mn-Si
1	3	1.3	ASTM/ASME	A or SA-841	B, Cl. 2	—	> 2.5 [65]	75/55 [515/380]	Plate	C-Mn-Si
1	3	1.3	ASTM/ASME	A or SA-841	B, Cl. 2	—	≤ 2.5 [65]	80/60 [550/415]	Plate	C-Mn-Si
1	3	1.3	ASTM	A860	WPHY 70	—	—	80/70 [550/485]	Smls. & Welded Fitting	C-Mn
1	3	3.1	ASTM	A913	60	—	—	75/60 [515/415]	Shape	C-Mn-Ni-Cr-Cb-V
1	3	3.1	ASTM	A913	65	—	—	80/65 [550/450]	Shape	C-Mn-Ni-Cr-Cb-V
1	3	11.1	ASTM	A935	65 Cl. 1	—	—	80/65 [550/450]	Sheet, Strip	C-Mn-Cb-V
1	3	11.1	ASTM	A935	70 Cl. 1	—	—	85/70 [585/485]	Sheet, Strip	C-Mn-Cb-V
1	3	1.3	ASTM	A935	70 Cl. 2	—	—	80/70 [550/485]	Sheet, Strip	C-Mn-Cb-V
1	3	—	ASTM	A984	70	—	—	80/70 [550/485]	Pipe	C
1	3	11.1	ASTM	A1008	HSLAS 65 Cl. 1	—	—	80/65 [550/450]	Sheet	C
1	3	11.1	ASTM	A1008	HSLAS 70 Cl. 1	—	—	85/70 [585/485]	Sheet	C
1	3	1.3	ASTM	A1008	HSLAS 70 Cl. 2	—	—	80/70 [550/485]	Sheet	C
1	3	1.3	ASTM	A1008	HSLAS-F 70	—	—	80/70 [550/485]	Sheet	C
1	3	1.3	ASTM	A1008	SS 80	—	—	82/80 [565/550]	Sheet	C
1	3	11.1	ASTM	A1011	HSLAS 65 Cl. 1	—	—	80/65 [550/450]	Sheet, Strip	C
1	3	11.1	ASTM	A1011	HSLAS 70 Cl. 1	—	—	85/70 [585/485]	Sheet, Strip	C
1	3	1.3	ASTM	A1011	HSLAS 70 Cl. 2	—	—	80/70 [550/485]	Sheet, Strip	C
1	3	1.3	ASTM	A1011	HSLAS-F 70	—	—	80/70 [550/485]	Sheet, Strip	C
1	3	1.3	ASTM	A1011	SS 70	—	—	85/70 [585/485]	Sheet, Strip	C
1	3	11.1	ASTM	A1018	HSLAS 70 Cl. 1	—	—	80/70 [550/485]	Sheet, Strip	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	3	1.3	ASTM	A1018	HSLAS 70 Cl. 2	—	—	80/70 [550/485]	Sheet, Strip	C
1	3	1.3	ASTM	A1018	HSLAS-F 60	—	—	70/60 [485/415]	Sheet, Strip	C
1	3	1.3	ASTM	A1018	HSLAS-F 70	—	—	80/70 [550/485]	Sheet, Strip	C
1	3	9.1	AWS/ASME	A or SFA-5.28	ER80S-Ni1	K11260	—	80/ [550/]	Weld Metal	C-Mn-0.8Ni
1	3	1.4	CSA	CSA G40.21	480A	—	—	85/70 [585/485]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	3	1.4	CSA	CSA G40.21	480AT	—	—	85/70 [585/485]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	3	11.1	CSA	CSA G40.21	480W	—	—	85/70 [585/485]	HSLA Plate, Bar, Shape	C-Mn
1	3	11.1	CSA	CSA G40.21	480WT	—	—	85/70 [585/485]	HSLA Plate, Bar, Shape	C-Mn-Si-Cb-V
1	3	11.1	CSA	CSA Z245.1	483	—	—	82/70 [565/485]	Smls. & Welded Pipe	C-Mn
1	3	11.1	CSA	CSA Z245.11	414	—	—	75/60 [515/415]	Fitting	C-Mn
1	3	11.1	CSA	CSA Z245.11	448	—	—	77/65 [530/450]	Fitting	C-Mn
1	3	11.1	CSA	CSA Z245.11	483	—	—	82/70 [565/485]	Fitting	C-Mn
1	3	11.1	CSA	CSA Z245.12	414	—	—	75/60 [515/415]	Flange	C-Mn
1	3	11.1	CSA	CSA Z245.12	448	—	—	77/65 [530/450]	Flange	C-Mn
1	3	11.1	CSA	CSA Z245.12	483	—	—	82/70 [565/485]	Flange	C-Mn
1	3	11.1	MSS	MSS SP-75	WPHY-70	—	—	82/70 [565/485]	Smls. & Welded Fitting	C-Mn
1	4	11.1	AAR	AAR M201	C	—	—	90/60 [620/415]	Casting	C-Mn-Si
1	4	2.2	API	API 5L	L555M or X80M	—	—	91/80 [625/550]	Welded Pipe	C-Mn
1	4	2.2	API	API 5L	L555MO or X80MO	—	—	91/80 [625/550]	Welded Pipe	C-Mn
1	4	3.1	API	API 5L	L555Q or X80Q	—	—	91/80 [625/550]	Smls. & Welded Pipe	C-Mn
1	4	3.1	API	API 5L	L555QO or X80QO	—	—	91/80 [625/550]	Smls. & Welded Pipe	C-Mn
1	4	2.2	ASTM/ASME	A or SA-656	T3, 80	—	—	90/80 [620/550]	Plate	C-Mn-Si-V-Cb
1	4	2.2	ASTM/ASME	A or SA-656	T7, 80	—	—	90/80 [620/550]	Plate	C-Mn-Si-V-Cb
1	4	—	ASTM/ASME	A or SA-675	90	—	—	90/55 [620/380]	Bar	C
1	4	1.3	ASTM	A678	C	K02204	> 0.75 [19] ≤ 1.5 [40]	90/70 [620/485]	Plate	C-Mn-Si
1	4	1.3	ASTM	A678	C	K02204	≤ 0.75 [20]	95/75 [655/515]	Plate	C-Mn-Si
1	4	1.3	ASTM	A678	D	K12202	≤ 3 [75]	90/75 [620/515]	Plate	C-Mn-Si-V-N
1	4	—	ASTM	A707	L5, Cl. 4	K20934	—	90/75 [620/515]	Forging	1.2Cu-1Ni-0.7Cr-0.5Mn
1	4	3.1	ASTM/ASME	A or SA-724	A	K11831	—	90/70 [620/485]	Plate	C-Mn-Si
1	4	3.1	ASTM/ASME	A or SA-724	B	K12031	—	95/75 [655/515]	Plate	C-Mn-Si
1	4	1.1	ASTM/ASME	A or SA-724	C	K12037	—	90/70 [620/485]	Plate	C-Mn-Si
1	4	3.1	ASTM	A913	70	—	—	90/70 [620/485]	Shape	C-Mn-Ni-Cr-Cb-V
1	4	—	ASTM	A984	80	—	—	90/80 [620/550]	Pipe	C
1	4	1.3	ASTM	A1008	HSLAS-F 80	—	—	90/80 [620/550]	Sheet	C
1	4	1.3	ASTM	A1011	HSLAS-F 80	—	—	90/80 [620/550]	Sheet, Strip	C
1	4	1.3	ASTM	A1011	SS 80	—	—	95/80 [655/550]	Sheet, Strip	C
1	4	1.3	ASTM	A1018	HSLAS-F 80	—	—	90/80 [620/550]	Sheet, Strip	C
1	4	1.4	CSA	CSA G40.21	550A	—	—	90/80 [620/550]	Plate, Bar, Shape	C-Mn-Si
1	4	1.4	CSA	CSA G40.21	550AT	—	—	90/80 [620/550]	Plate, Bar, Shape	C-Mn-Si
1	4	1.3	CSA	CSA G40.21	550W	—	—	90/80 [620/550]	Plate, Bar, Shape	C-Mn
1	4	1.3	CSA	CSA G40.21	550WT	—	—	90/80 [620/550]	Plate, Bar, Shape	C-Mn-Si
1	4	11.1	CSA	CSA Z245.1	550	—	—	90/80 [620/550]	Smls. & Welded Pipe	C-Mn
1	4	11.1	CSA	CSA Z245.1	620	—	—	100/90 [690/620]	Smls. & Welded Pipe	C-Mn
1	4	11.1	CSA	CSA Z245.11	550	—	—	90/80 [620/550]	Fitting	C-Mn
1	4	11.1	CSA	CSA Z245.11	620	—	—	100/90 [690/620]	Fitting	C-Mn
1	4	11.1	CSA	CSA Z245.12	550	—	—	90/80 [620/550]	Flange	C-Mn
1	4	11.1	CSA	CSA Z245.12	620	—	—	100/90 [690/620]	Flange	C-Mn
1A	4	—	ASTM	A615	40	—	—	60/40 [415/275]	Rebar	C
1A	4	—	ASTM	A615	60	—	—	90/60 [620/415]	Rebar	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1A	4	1.3	ASTM	A706	60	—	—	80/60 [550/415]	Rebar	C
1A	4	—	CSA	CSA G30.18	300R	—	—	60/40 [415/275]	Rebar	C
1A	4	—	CSA	CSA G30.18	400R	—	—	78.5/58 [540/400]	Rebar	C
1A	4	11.1	CSA	CSA G30.18	400W	—	—	78.5/58 [540/400]	Rebar	C
1A	4	—	CSA	CSA G30.18	500R	—	—	98/72.5 [675/500]	Rebar	C
1A	4	11.1	CSA	CSA G30.18	500W	—	—	90.5/72.5 [625/500]	Rebar	C
3	1	1.4	AS/NZS	AS/NZS 3678	WR350	—	—	65.5/50 [450/340]	Plate	C-Mn-Cr-Ni-Cu
3	1	1.4	AS/NZS	AS/NZS 3678	WR350L0	—	—	65.5/50 [450/340]	Plate	C-Mn-Cr-Ni-Cu
3	1	1.1	ASTM	A161	T1	K11522	—	55/30 [380/205]	Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-204	A	K11820	—	65/37 [450/255]	Plate	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-209	T1b	K11422	—	53/28 [365/195]	Smls. Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-209	T1	K11522	—	55/30 [380/205]	Smls. Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-209	T1a	K12023	—	60/32 [415/220]	Smls. Tube	C-0.5Mo
3	1	4.2	ASTM/ASME	A or SA-213	T2	K11547	—	60/30 [415/205]	Smls. Tube	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-217	WC1	J12524	—	65/35 [450/240]	Casting	C-0.5Mo
3	1	11.2	ASTM/ASME	A or SA-234	WP1	K12821	—	55/30 [380/205]	Piping Fitting	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-250	T1b	K11422	—	53/28 [365/195]	E.R.W. Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-250	T1	K11522	—	55/30 [380/205]	E.R.W. Tube	C-0.5Mo
3	1	4.2	ASTM/ASME	A or SA-250	T2	K11547	—	60/30 [415/205]	E.R.W. Tube	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-250	T1a	K12023	—	60/32 [415/220]	E.R.W. Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-335	P1	K11522	—	55/30 [380/205]	Smls. Pipe	C-0.5Mo
3	1	4.2	ASTM/ASME	A or SA-335	P2	K11547	—	55/30 [380/205]	Smls. Pipe	0.5Cr-0.5Mo
3	1	—	ASTM/ASME	A or SA-335	P15	K11578	—	60/30 [415/205]	Smls. Pipe	1.5Si-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-352	LC1	J12522	—	65/35 [450/240]	Casting	C-0.5Mo
3	1	1.1	ASTM	A356	2	J12523	—	65/35 [450/240]	Casting	C-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-369	FP1	K11522	—	55/30 [380/205]	Forged Pipe	C-0.5Mo
3	1	4.2	ASTM/ASME	A or SA-369	FP2	K11547	—	55/30 [380/205]	Forged Pipe	0.5Cr-0.5Mo
3	1	4.2	ASTM/ASME	A or SA-387	2, Cl. 1	K12143	—	55/33 [380/230]	Plate	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-426	CP15	J11522	—	60/30 [415/205]	Centrifugal Cast Pipe	C-0.5Mo-Si
3	1	4.2	ASTM/ASME	A or SA-426	CP2	J11547	—	60/30 [415/205]	Centrifugal Cast Pipe	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A or SA-426	CP1	J12521	—	65/35 [450/240]	Centrifugal Cast Pipe	C-0.5Mo
3	1	1.4	ASTM	A588	K	—	> 5 [125] ≤ 8 [200]	63/42 [435/290]	Plate, Bar	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	K	—	> 4 [100] ≤ 5 [125]	67/46 [460/315]	Plate, Bar	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	K	—	—	70/50 [485/345]	Shape	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	K	—	≤ 4 [100]	70/50 [485/345]	Plate, Bar	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	A	K11430	> 5 [125] ≤ 8 [200]	63/42 [435/290]	Plate, Bar	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	A	K11430	> 4 [100] ≤ 5 [125]	67/46 [460/315]	Plate, Bar	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	A	K11430	—	70/50 [485/345]	Shape	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	A	K11430	≤ 4 [100]	70/50 [485/345]	Plate, Bar	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	> 5 [125] ≤ 8 [200]	63/42 [435/290]	Plate, Bar	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	> 4 [100] ≤ 5 [125]	67/46 [460/315]	Plate, Bar	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	≤ 4 [100]	70/50 [485/345]	Plate, Bar	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	—	70/50 [485/345]	Shape	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	> 5 [125] ≤ 8 [200]	63/42 [435/290]	Plate, Bar	Mn-0.6Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	> 4 [100] ≤ 5 [125]	67/46 [460/315]	Plate, Bar	Mn-0.6Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	—	70/50 [485/345]	Shape	Mn-0.6Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	≤ 4 [100]	70/50 [485/345]	Plate, Bar	Mn-0.6Cr-0.3Cu-Si-V
3	1	11.1	ASTM	A595	C	K11526	—	70/60 [485/415]	Welded Tube	Low C
3	1	1.1	ASTM/ASME	A or SA-672	L65	K11820	—	65/37 [450/255]	Fusion Welded Pipe	C-0.5Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
3	1	1.1	ASTM/ASME	A or SA-691	CM-65	K11820	—	65/37 [450/255]	Fusion Welded Pipe	C-0.5Mo
3	1	4.2	ASTM/ASME	A or SA-691	0.5CR, Cl. 1	K12143	—	55/33 [380/230]	Fusion Welded Pipe	0.5Cr-0.5Mo
3	1	—	ASTM	A707	L6, Cl. 1	K02902	—	60/42 [415/290]	Forging	2Mn-0.3Mo-Cb
3	1	—	ASTM	A707	L6, Cl. 2	K02902	—	66/52 [455/360]	Forging	2Mn-0.3Mo-Cb
3	1	1.2	ASTM	A1066	50	—	—	65/50 [450/345]	Plate	Mn-Ni-Cr-Mo
3	2	4.2	ASTM/ASME	A or SA-182	F2	K12122	—	70/40 [485/275]	Forging	0.5Cr-0.5Mo
3	2	1.1	ASTM/ASME	A or SA-182	F1	K12822	—	70/40 [485/275]	Forging	C-0.5Mo
3	2	1.1	ASTM/ASME	A or SA-204	B	K12020	—	70/40 [485/275]	Plate	C-0.5Mo
3	2	1.2	ASTM/ASME	A or SA-204	C	K12320	—	75/43 [515/295]	Plate	C-0.5Mo
3	2	1.1	ASTM/ASME	A or SA-302	A	K12021	—	75/45 [515/310]	Plate	Mn-0.5Mo
3	2	1.1	ASTM/ASME	A or SA-336	F1	K12520	—	70/40 [485/275]	Forging	C-0.5Mo
3	2	4.2	ASTM/ASME	A or SA-387	2, Cl. 2	K12143	—	70/45 [485/310]	Plate	0.5Cr-0.5Mo
3	2	1.2	ASTM/ASME	A or SA-672	L70	K12020	—	70/40 [485/275]	Fusion Welded Pipe	C-0.5Mo
3	2	1.1	ASTM/ASME	A or SA-672	H75	K12021	—	75/45 [515/310]	Fusion Welded Pipe	Mn-0.5Mo
3	2	1.2	ASTM/ASME	A or SA-672	L75	K12320	—	75/43 [515/295]	Fusion Welded Pipe	C-0.5Mo
3	2	1.2	ASTM/ASME	A or SA-691	CM-70	K12020	—	70/40 [485/275]	Fusion Welded Pipe	C-0.5Mo
3	2	4.2	ASTM/ASME	A or SA-691	0.5CR, Cl. 2	K12143	—	70/45 [485/310]	Fusion Welded Pipe	0.5Cr-0.5Mo
3	2	1.2	ASTM/ASME	A or SA-691	CM-75	K12320	—	75/43 [515/295]	Fusion Welded Pipe	C-0.5Mo
3	2	—	ASTM	A707	L6, Cl. 3	K02902	—	75/60 [515/415]	Forging	2Mn-0.3Mo-Cb
3	2	4.2	ASTM	A871	60	—	—	75/60 [515/415]	Plate	C-Mn-Ni-Cr-Cu-V
3	2	2.1	ASTM	A1066	60	—	—	75/60 [515/415]	Plate	Mn-Ni-Cr-Mo
3	2	—	AWS/ASME	A or SFA-5.28	ER80S-D2	K10945	—	80/ [550/]	Weld Metal	C-0.5Mo
3	2	—	AWS/ASME	A or SFA-5.28	ER90S-D2	K10945	—	90/ [620/]	Weld Metal	C-0.5Mo
3	2	1.3	AWS/ASME	A or SFA-5.28	ER70S-A1	K11235	—	75/ [515/]	Weld Metal	C-0.5Mo
3	3	4.1	ASTM	A108	8620	G86200	—	—	Bar	0.5Ni-0.5Cr-Mo
3	3	1.2	ASTM/ASME	A or SA-302	B	K12022	—	80/50 [550/345]	Plate	Mn-0.5Mo
3	3	—	ASTM/ASME	A or SA-302	C	K12039	—	80/50 [550/345]	Plate	Mn-0.5Mo-0.5Ni
3	3	—	ASTM/ASME	A or SA-302	D	K12054	—	80/50 [550/345]	Plate	Mn-0.5Mo-0.75Ni
3	3	2.1	ASTM/ASME	A or SA-487	2, Cl. A	J13005	—	85/53 [585/365]	Casting	Mn-0.25Mo-V
3	3	2.1	ASTM/ASME	A or SA-487	2, Cl. B	J13005	—	90/65 [620/450]	Casting	Mn-0.25Mo-V
3	3	3.1	ASTM/ASME	A or SA-487	4, Cl. A	J13047	—	90/60 [620/415]	Casting	0.5Ni-0.5Cr-0.25Mo-V
3	3	3.1	ASTM/ASME	A or SA-487	4, Cl. C	J13047	—	90/60 [620/415]	Casting	0.5Ni-0.5Cr-0.25Mo-V
3	3	3.1	ASTM/ASME	A or SA-508	3, Cl. 1	K12042	—	80/50 [550/345]	Forging	0.75Ni-0.5Mo-Cr-V
3	3	3.1	ASTM/ASME	A or SA-508	3, Cl. 2	K12042	—	90/65 [620/450]	Forging	0.75Ni-0.5Mo-Cr-V
3	3	3.1	ASTM/ASME	A or SA-508	2, Cl. 1	K12766	—	80/50 [550/345]	Forging	0.75Ni-0.5Mo-0.3Cr-V
3	3	3.1	ASTM/ASME	A or SA-508	2, Cl. 2	K12766	—	90/65 [620/450]	Forging	0.75Ni-0.5Mo-0.3Cr-V
3	3	3.1	ASTM/ASME	A or SA-508	4N, Cl. 3	K22375	—	90/70 [620/485]	Forging	3.5Ni-1.75Cr-0.5Mo-V
3	3	3.1	ASTM/ASME	A or SA-533	A, Cl. 1	K12521	—	80/50 [550/345]	Plate	Mn-0.5Mo
3	3	3.1	ASTM/ASME	A or SA-533	A, Cl. 2	K12521	—	90/70 [620/485]	Plate	Mn-0.5Mo
3	3	3.1	ASTM/ASME	A or SA-533	D, Cl. 1	K12529	—	80/50 [550/345]	Plate	Mn-0.5Mo-0.25Ni
3	3	3.1	ASTM/ASME	A or SA-533	D, Cl. 2	K12529	—	90/70 [620/485]	Plate	Mn-0.5Mo-0.25Ni
3	3	3.1	ASTM/ASME	A or SA-533	B, Cl. 1	K12539	—	80/50 [550/345]	Plate	Mn-0.5Mo-0.5Ni
3	3	3.1	ASTM/ASME	A or SA-533	B, Cl. 2	K12539	—	90/70 [620/485]	Plate	Mn-0.5Mo-0.5Ni
3	3	3.1	ASTM/ASME	A or SA-533	C, Cl. 1	K12554	—	80/50 [550/345]	Plate	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME	A or SA-533	C, Cl. 2	K12554	—	90/70 [620/485]	Plate	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME	A or SA-533	E, Cl. 1	K12554	—	80/50 [550/345]	Plate	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME	A or SA-533	E, Cl. 2	K12554	—	90/70 [620/485]	Plate	Mn-0.5Mo-0.75Ni
3	3	4.1	ASTM/ASME	A or SA-541	3, Cl. 1	K12045	—	80/50 [550/345]	Forging	0.5Ni-0.5Mo-V
3	3	4.1	ASTM/ASME	A or SA-541	3, Cl. 2	K12045	—	90/65 [620/450]	Forging	0.5Ni-0.5Mo-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME	A or SA-814	TP304LN	S30453	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A or SA-814	TP316	S31600	—	75/30 [515/205]	Cold-Worked Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A or SA-814	TP316L	S31603	—	70/25 [485/170]	Cold-Worked Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A or SA-814	TP316H	S31609	—	75/30 [515/205]	Cold-Worked Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A or SA-814	TP316N	S31651	—	80/35 [550/240]	Cold-Worked Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A or SA-814	TP316LN	S31653	—	75/30 [515/205]	Cold-Worked Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A or SA-814	TP317	S31700	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A or SA-814	TP317L	S31703	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A or SA-814	TP321	S32100	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A or SA-814	TP321H	S32109	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A or SA-814	TP347	S34700	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-814	TP347H	S34709	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-814	TP348	S34800	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-814	TP348H	S34809	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-814	TPXM-15	S38100	—	75/30 [515/205]	Cold-Worked Welded Pipe	18Cr-18Ni-2Si
8	1	8.1	ASTM/ASME	A or SA-965	F304	S30400	—	70/30 [485/205]	Forging	18Cr-8Ni
8	1	8.1	ASTM/ASME	A or SA-965	F304L	S30403	—	65/25 [450/170]	Forging	18Cr-8Ni
8	1	8.1	ASTM/ASME	A or SA-965	F304H	S30409	—	70/30 [485/205]	Forging	18Cr-8Ni
8	1	8.1	ASTM/ASME	A or SA-965	F304N	S30451	—	80/35 [550/240]	Forging	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A or SA-965	F304LN	S30453	—	70/30 [485/205]	Forging	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A or SA-965	F46	S30600	—	78/32 [540/220]	Forging	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A or SA-965	F316	S31600	—	70/30 [485/205]	Forging	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A or SA-965	F316L	S31603	—	65/25 [450/170]	Forging	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A or SA-965	F316H	S31609	—	70/30 [485/205]	Forging	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A or SA-965	F316N	S31651	—	80/35 [550/240]	Forging	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A or SA-965	F316LN	S31653	—	70/30 [485/205]	Forging	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A or SA-965	F321	S32100	—	70/30 [485/205]	Forging	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A or SA-965	F321H	S32109	—	70/30 [485/205]	Forging	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A or SA-965	F347	S34700	—	70/30 [485/205]	Forging	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-965	F347H	S34709	—	70/30 [485/205]	Forging	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-965	F348	S34800	—	70/30 [485/205]	Forging	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A or SA-965	F348H	S34809	—	70/30 [485/205]	Forging	18Cr-10Ni-Cb
8	1	8.1	AWS/ASME	A or SFA-5.9	ER16-8-2	S16880	—	80/ [550/]	Weld Metal	15Cr-8Ni-Mn-Mo
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308	S30880	—	80/ [550/]	Weld Metal	21Cr-10Ni
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308H	S30880	—	80/ [550/]	Weld Metal	21Cr-10Ni
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308Si	S30881	—	80/ [550/]	Weld Metal	21Cr-10Ni
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308Mo	S30882	—	80/ [550/]	Weld Metal	20Cr-10Ni-Mo
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308L	S30883	—	75/ [515/]	Weld Metal	21Cr-10Ni
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308LMo	S30886	—	75/ [515/]	Weld Metal	20Cr-10Ni-Mo
8	1	8.2	AWS/ASME	A or SFA-5.9	ER308LSi	S30888	—	75/ [515/]	Weld Metal	21Cr-10Ni
8	1	8.1	AWS/ASME	A or SFA-5.9	ER316	S31680	—	75/ [515/]	Weld Metal	19Cr-12Ni-Mo
8	1	8.1	AWS/ASME	A or SFA-5.9	ER316H	S31680	—	75/ [515/]	Weld Metal	19Cr-12Ni-Mo
8	1	8.1	AWS/ASME	A or SFA-5.9	ER316L	S31683	—	70/ [485/]	Weld Metal	20Cr-12Ni-Mo
8	1	8.1	AWS/ASME	A or SFA-5.9	ER316LSi	S31688	—	70/ [485/]	Weld Metal	19Cr-12Ni-Mo
8	1	8.1	AWS/ASME	A or SFA-5.9	ER316Si	S31688	—	75/ [515/]	Weld Metal	19Cr-12Ni-Mo
8	1	8.2	AWS/ASME	A or SFA-5.9	ER317	S31780	—	80/ [550/]	Weld Metal	20Cr-14Ni-Mo
8	1	8.2	AWS/ASME	A or SFA-5.9	ER317L	S31783	—	75/ [515/]	Weld Metal	20Cr-14Ni-Mo
8	1	8.1	AWS/ASME	A or SFA-5.9	ER318	S31980	—	80/ [550/]	Weld Metal	19Cr-12Ni-Mo
8	1	8.2	AWS/ASME	A or SFA-5.9	ER347	S34780	—	75/ [515/]	Weld Metal	20Cr-10Ni-Mn-Nb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	1	8.2	AWS/ASME	A or SFA-5.9	ER347Si	S34788	—	75/ [515/]	Weld Metal	20Cr-10Ni-Mn-Nb
8	2	8.2	ASTM	A167	308	S30800	—	75/30 [515/205]	Plate, Sheet, Strip	20Cr-10Ni
8	2	8.2	ASTM	A167	309	S30900	—	75/30 [515/205]	Plate, Sheet, Strip	23Cr-12Ni
8	2	8.2	ASTM	A167	310	S31000	—	75/30 [515/205]	Plate, Sheet, Strip	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-182	F45	S30815	—	87/45 [600/310]	Forging	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-182	F310	S31000	> 5 [125]	70/30 [485/205]	Forging	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-182	F310	S31000	≤ 5 [125]	75/30 [515/205]	Forging	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-182	F310H	S31009	> 5 [125]	70/30 [485/205]	Forging	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-182	F310H	S31009	≤ 5 [125]	75/30 [515/205]	Forging	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-182	F310MoLN	S31050	—	78/37 [540/255]	Forging	25Cr-22Ni-2Mo-N
8	2	8.1	ASTM/ASME	A or SA-182	F10	S33100	—	80/30 [550/205]	Forging	20Ni-8Cr
8	2	8.2	ASTM/ASME	A or SA-213	S30815	S30815	—	87/45 [600/310]	Smls. Tube	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-213	TP309S	S30908	—	75/30 [515/205]	Smls. Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-213	TP309H	S30909	—	75/30 [515/205]	Smls. Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-213	TP309Cb	S30940	—	75/30 [515/205]	Smls. Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-213	TP309HCb	S30941	—	75/30 [515/205]	Smls. Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-213	Type 310	S31000	—	75/30 [515/205]	Smls. Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-213	—	S31002	—	73/30 [505/205]	Smls. Tube	25Cr-20Ni-N
8	2	8.2	ASTM/ASME	A or SA-213	TP310S	S31008	—	75/30 [515/205]	Smls. Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-213	TP310H	S31009	—	75/30 [515/205]	Smls. Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-213	TP310Cb	S31040	—	75/30 [515/205]	Smls. Tube	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-213	TP310HCb	S31041	—	75/30 [515/205]	Smls. Tube	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-213	TP310MoLN	S31050	> 0.25 [6]	78/37 [540/255]	Smls. Tube	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-213	TP310MoLN	S31050	≤ 0.25 [6]	84/39 [580/270]	Smls. Tube	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-240	S30815	S30815	—	87/45 [600/310]	Plate, Sheet, Strip	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-240	309S	S30908	—	75/30 [515/205]	Plate, Sheet, Strip	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-240	309H	S30909	—	75/30 [515/205]	Plate, Sheet, Strip	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-240	309Cb	S30940	—	75/30 [515/205]	Plate, Sheet, Strip	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-240	309HCb	S30941	—	75/30 [515/205]	Plate, Sheet, Strip	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-240	310S	S31008	—	75/30 [515/205]	Plate, Sheet, Strip	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-240	310H	S31009	—	75/30 [515/205]	Plate, Sheet, Strip	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-240	310Cb	S31040	—	75/30 [515/205]	Plate, Sheet, Strip	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-240	310HCb	S31041	—	75/30 [515/205]	Plate, Sheet, Strip	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-240	310MoLN	S31050	> 0.25 [6]	78/37 [540/255]	Plate	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-240	310MoLN	S31050	≤ 0.25 [6]	84/39 [580/270]	Sheet, Strip	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-249	S30815	S30815	—	87/45 [600/310]	Welded Tube	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-249	TP309	S30900	—	75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-249	TP309S	S30908	—	75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-249	TP309H	S30909	—	75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-249	TP309Cb	S30940	—	75/30 [515/205]	Welded Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-249	TP309HCb	S30941	—	75/30 [515/205]	Welded Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-249	TP310S	S31008	—	75/30 [515/205]	Welded Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-249	TP310H	S31009	—	75/30 [515/205]	Welded Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-249	TP310Cb	S31040	—	75/30 [515/205]	Welded Tube	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-249	TP310HCb	S31041	—	75/30 [515/205]	Welded Tube	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-249	TP310MoLN	S31050	> 0.25 [6]	78/37 [540/255]	Welded Tube	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-249	TP310MoLN	S31050	≤ 0.25 [6]	84/39 [580/270]	Welded Tube	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-276	314	S31400	—	—	Bar, Shape	24Cr-20Ni-Si
8	2	8.2	ASTM	A297	HF	J92603	—	70/35 [485/240]	Casting	21Cr-10Ni-2Mn-2Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	2	8.2	ASTM	A297	HE	J93403	—	85/40 [585/275]	Casting	28Cr-10Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HH	J93503	—	75/35 [515/240]	Casting	26Cr-13Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HI	J94003	—	70/35 [485/240]	Casting	28Cr-16Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HK	J94224	—	65/35 [450/240]	Casting	26Cr-20Ni-2Mn-2Si
8	2	8.2	ASTM/ASME	A or SA-312	S30815	S30815	—	87/45 [600/310]	Smls. & Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-312	TP309S	S30908	—	75/30 [515/205]	Smls. & Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-312	TP309H	S30909	—	75/30 [515/205]	Smls. & Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-312	TP309Cb	S30940	—	75/30 [515/205]	Smls. & Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-312	TP309HCb	S30941	—	75/30 [515/205]	Smls. & Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-312	—	S31002	—	73/30 [505/205]	Smls. Pipe	25Cr-20Ni-N
8	2	8.2	ASTM/ASME	A or SA-312	TP310S	S31008	—	75/30 [515/205]	Smls. & Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-312	TP310H	S31009	—	75/30 [515/205]	Smls. & Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-312	TP310Cb	S31040	—	75/30 [515/205]	Smls. & Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-312	TP310HCb	S31041	—	75/30 [515/205]	Smls. & Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-312	TP310MoLN	S31050	> 0.25 [6]	78/37 [540/255]	Smls. & Welded Pipe	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-312	TP310MoLN	S31050	≤ 0.25 [6]	84/39 [580/270]	Smls. & Welded Pipe	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A or SA-336	F310	S31000	—	75/30 [515/205]	Forging	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-351	CE20N	J92802	—	80/40 [550/275]	Casting	25Cr-8Ni-N
8	2	8.2	ASTM/ASME	A or SA-351	CH8	J93400	—	65/28 [450/195]	Casting	25Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-351	CH10	J93401	—	70/30 [485/205]	Casting	25Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-351	CH20	J93402	—	70/30 [485/205]	Casting	25Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-351	CK20	J94202	—	65/28 [450/195]	Casting	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-351	HK30	J94203	—	65/35 [450/240]	Casting	25Cr-20Ni-0.5Mo
8	2	8.2	ASTM/ASME	A or SA-351	HK40	J94204	—	62/35 [425/240]	Casting	25Cr-20Ni-0.5Mo
8	2	8.2	ASTM/ASME	A or SA-358	S30815	S30815	—	87/45 [600/310]	Fusion Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-358	309	S30900	—	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-358	309S	S30908	—	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-358	309Cb	S30940	—	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-358	310	S31000	—	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-358	310S	S31008	—	75/30 [515/205]	Fusion Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-358	310Cb	S31040	—	75/30 [515/205]	Fusion Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-403	WP309	S30900	—	75/30 [515/205]	Wrought Piping Fitting	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-403	WP310	S31000	—	75/30 [515/205]	Wrought Piping Fitting	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-403	WP310S	S31008	—	75/30 [515/205]	Wrought Piping Fitting	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-409	S30815	S30815	—	87/45 [600/310]	Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-409	TP309S	S30908	—	75/30 [515/205]	Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-409	TP309Cb	S30940	—	75/30 [515/205]	Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-409	TP310S	S31008	—	75/30 [515/205]	Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-409	TP310Cb	S31040	—	75/30 [515/205]	Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-451	CPE20N	J92802	—	80/40 [550/275]	Centrifugal Cast Pipe	25Cr-8Ni-N
8	2	8.2	ASTM/ASME	A or SA-451	CPH8	J93400	—	65/28 [450/195]	Centrifugal Cast Pipe	25Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-451	CPH10	J93402	—	70/30 [485/205]	Centrifugal Cast Pipe	25Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-451	CPH20	J93402	—	70/30 [485/205]	Centrifugal Cast Pipe	25Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-451	CPK20	J94202	—	65/28 [450/195]	Centrifugal Cast Pipe	25Cr-20Ni
8	2	8.2	ASTM	A473	308	S30800	—	75/30 [515/205]	Forging	20Cr-10Ni
8	2	8.2	ASTM	A473	S30815	S30815	—	87/45 [600/310]	Forging	21Cr-11Ni-N
8	2	8.2	ASTM	A473	309	S30900	—	75/30 [515/205]	Forging	23Cr-12Ni
8	2	8.2	ASTM	A473	309S	S30908	—	75/30 [515/205]	Forging	23Cr-12Ni
8	2	8.2	ASTM	A473	310	S31000	—	75/30 [515/205]	Forging	25Cr-20Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	2	8.2	ASTM	A473	310S	S31008	—	75/30 [515/205]	Forging	25Cr-20Ni
8	2	8.2	ASTM	A473	314	S31400	—	75/30 [515/205]	Forging	25Cr-21Ni-S
8	2	8.2	ASTM/ASME	A or SA-479	S30815	S30815	—	87/45 [600/310]	Bar, Shape	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-479	309S	S30908	—	75/30 [515/205]	Bar, Shape	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-479	309Cb	S30940	—	75/30 [515/205]	Bar, Shape	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-479	310S	S31008	—	75/30 [515/205]	Bar, Shape	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-479	310Cb	S31040	—	75/30 [515/205]	Bar, Shape	25Cr-20Ni-Cb
8	2	8.2	ASTM	A511	MT 309S	S30908	—	75/30 [515/205]	Smls. Tube	23Cr-12Ni
8	2	8.2	ASTM	A511	MT 310S	S31008	—	75/30 [515/205]	Smls. Tube	25Cr-20Ni
8	2	8.2	ASTM	A554	MT 309S	S30908	—	75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM	A554	MT 309S-Cb	S30940	—	75/30 [515/205]	Welded Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM	A554	MT 310S	S31008	—	75/30 [515/205]	Welded Tube	25Cr-20Ni
8	2	8.2	ASTM	A743	CF20	J92602	—	70/30 [485/205]	Casting	20Cr-10Ni
8	2	8.2	ASTM	A743	CG12	J93001	—	70/28 [485/195]	Casting	22Cr-12Ni
8	2	8.2	ASTM	A743	CH10	J93401	—	70/30 [485/205]	Casting	25Cr-12Ni
8	2	8.2	ASTM	A743	CH20	J93402	—	70/30 [485/205]	Casting	25Cr-12Ni
8	2	8.2	ASTM	A743	CE30	J93423	—	80/40 [550/275]	Casting	29Cr-9Ni-2Mn-2Si
8	2	8.2	ASTM	A743	CN3M	J94652	—	63/25 [435/170]	Casting	25Ni-21Cr-5Mo
8	2	8.2	ASTM/ASME	A or SA-813	S30815	S30815	—	87/45 [600/310]	Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-813	TP309S	S30908	—	75/30 [515/205]	Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-813	TP309Cb	S30940	—	75/30 [515/205]	Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-813	TP310S	S31008	—	75/30 [515/205]	Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-813	TP310Cb	S31040	—	75/30 [515/205]	Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-814	S30815	S30815	—	87/45 [600/310]	Cold-Worked Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A or SA-814	TP309S	S30908	—	75/30 [515/205]	Cold-Worked Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A or SA-814	TP309Cb	S30940	—	75/30 [515/205]	Cold-Worked Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-814	TP310S	S31008	—	75/30 [515/205]	Cold-Worked Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A or SA-814	TP310Cb	S31040	—	75/30 [515/205]	Cold-Worked Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A or SA-965	F310	S31000	—	75/30 [515/205]	Forging	25Cr-20Ni
8	2	8.2	AWS/ASME	A or SFA-5.9	ER309	S30980	—	80/ [550/]	Weld Metal	24Cr-13Ni
8	2	8.2	AWS/ASME	A or SFA-5.9	ER309Si	S30981	—	80/ [550/]	Weld Metal	24Cr-13Ni
8	2	8.2	AWS/ASME	A or SFA-5.9	ER309Mo	S30982	—	80/ [550/]	Weld Metal	24Cr-13Ni-Mo
8	2	8.2	AWS/ASME	A or SFA-5.9	ER309L	S30983	—	75/ [515/]	Weld Metal	24Cr-13Ni
8	2	8.2	AWS/ASME	A or SFA-5.9	ER309LMo	S30986	—	75/ [515/]	Weld Metal	24Cr-13Ni-Mo
8	2	8.2	AWS/ASME	A or SFA-5.9	ER309LSi	S30988	—	75/ [515/]	Weld Metal	24Cr-13Ni
8	2	8.2	AWS/ASME	A or SFA-5.9	ER310	S31080	—	80/ [550/]	Weld Metal	26Cr-21Ni
8	2	8.2	AWS/ASME	A or SFA-5.9	ER312	S31380	—	95/ [655/]	Weld Metal	30Cr-9Ni
8	3	8.3	ASTM/ASME	A or SA-182	FXM-19	S20910	—	100/55 [690/380]	Forging	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-182	FXM-11	S21904	—	90/50 [620/345]	Forging	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-213	TP201	S20100	—	95/38 [655/260]	Smls. Tube	17Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-213	TP202	S20200	—	90/45 [620/310]	Smls. Tube	18Cr-5Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-213	XM-19	S20910	—	100/55 [690/380]	Smls. Tube	22Cr-13Ni-5Mn
8	3	8.2	ASTM/ASME	A or SA-213	TP310HCbN	S31042	—	95/43 [655/295]	Smls. Tube	25Cr-20Ni-Cb-N
8	3	8.2	ASTM	A213	—	S31043	—	95/43 [655/295]	Smls. Tube	25Cr-20Ni-Cb-Ta-N
8	3	8.3	ASTM/ASME	A or SA-240	201-1	S20100	—	75/38 [515/260]	Plate, Sheet, Strip	17Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-240	201-2	S20100	—	95/45 [655/310]	Plate, Sheet, Strip	17Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-240	201LN	S20153	—	95/45 [655/310]	Plate, Sheet, Strip	16Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-240	202	S20200	—	90/38 [620/260]	Plate, Sheet, Strip	18Cr-5Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-240	—	S20400	—	95/48 [655/330]	Plate, Sheet, Strip	16Cr-9Mn-2Ni-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	3	8.3	ASTM/ASME	A or SA-240	XM-19	S20910	≥ 0.187 [5]	100/55 [690/380]	Plate	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-240	XM-19	S20910	< 0.187 [5]	105/60 [725/415]	Sheet, Strip	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-240	XM-17	S21600	≥ 0.187 [5]	90/50 [620/345]	Plate	19Cr-8Mn-6Ni-Mo-N
8	3	8.3	ASTM/ASME	A or SA-240	XM-17	S21600	< 0.187 [5]	100/60 [690/415]	Sheet, Strip	19Cr-8Mn-6Ni-Mo-N
8	3	8.3	ASTM/ASME	A or SA-240	XM-18	S21603	≥ 0.187 [5]	90/50 [620/345]	Plate	19Cr-8Mn-6Ni-Mo-N
8	3	8.3	ASTM/ASME	A or SA-240	XM-18	S21603	< 0.187 [5]	100/60 [690/415]	Sheet, Strip	19Cr-8Mn-6Ni-Mo-N
8	3	8.1	ASTM/ASME	A or SA-240	S21800	S21800	—	95/50 [655/345]	Plate, Sheet, Strip	18Cr-8Ni-8Mn-4Si-N
8	3	8.3	ASTM/ASME	A or SA-240	XM-29	S24000	—	100/55 [690/380]	Plate, Sheet, Strip	18Cr-3Ni-12Mn
8	3	8.2	ASTM/ASME	A or SA-240	—	S31655	—	92/45 [635/310]	Plate, Sheet, Strip	20.5Cr-8.8Ni-Mo-N
8	3	8.3	ASTM/ASME	A or SA-249	TP 201	S20100	—	95/38 [655/260]	Welded Tube	17Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-249	TP 202	S20200	—	90/38 [620/260]	Welded Tube	18Cr-5Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-249	TP XM-19	S20910	—	100/55 [690/380]	Welded Tube	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-249	TP XM-29	S24000	—	100/55 [690/380]	Welded Tube	18Cr-3Ni-12Mn
8	3	8.2	ASTM/ASME	A or SA-249	—	S31655	—	92/45 [635/310]	Welded Tube	20.5Cr-8.8Ni-Mo-N
8	3	8.3	ASTM	A269	TPXM-19	S20910	—	100/55 [690/380]	Smls. & Welded Tube	22Cr-13Ni-5Mn
8	3	8.3	ASTM	A269	TPXM-10	S21900	—	90/50 [620/345]	Smls. & Welded Tube	20Cr-6Ni-9Mn
8	3	8.3	ASTM	A269	TPXM-11	S21904	—	90/50 [620/345]	Smls. & Welded Tube	21Cr-6Ni-9Mn
8	3	8.3	ASTM	A269	TPXM-29	S24000	—	100/55 [690/380]	Smls. & Welded Tube	18Cr-3Ni-12Mn
8	3	8.3	ASTM	A269	TPXM-15	S38100	—	90/50 [620/345]	Smls. & Welded Tube	18Cr-18Ni-2Si
8	3	8.3	ASTM/ASME	A or SA-312	TP201LN	S20153	—	95/45 [655/310]	Smls. & Welded Pipe	16Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-312	TPXM-19	S20910	—	100/55 [690/380]	Smls. & Welded Pipe	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-312	TPXM-11	S21904	—	90/50 [620/345]	Smls. & Welded Pipe	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-312	TPXM-29	S24000	—	100/55 [690/380]	Smls. & Welded Pipe	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A or SA-336	FXM-19	S20910	—	100/55 [690/380]	Forging	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-336	FXM-11	S21904	—	90/50 [620/345]	Forging	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-351	CG6MMN	J93790	—	85/42 [585/290]	Casting	22Cr-12Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-358	201LN	S20153	—	95/45 [655/310]	Fusion Welded Pipe	16Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-358	XM-19	S20910	—	100/55 [690/380]	Fusion Welded Pipe	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-358	XM-29	S24000	—	100/55 [690/380]	Fusion Welded Pipe	18Cr-3Ni-12Mn
8	3	8.2	ASTM/ASME	A or SA-358	—	S31655	—	92/45 [635/310]	Fusion Welded Pipe	20.5Cr-8.8Ni-Mo-N
8	3	8.3	ASTM/ASME	A or SA-403	WPXM-19	S20910	—	100/55 [690/380]	Wrought Piping Fitting	22Cr-13Ni-5Mn
8	3	8.3	ASTM	A473	201	S20100	—	75/30 [515/205]	Forging	17Cr-4Ni-6Mn
8	3	8.3	ASTM	A473	202	S20200	—	90/45 [620/310]	Forging	18Cr-5Ni-9Mn
8	3	8.3	ASTM	A473	XM-10	S21900	—	90/50 [620/345]	Forging	20Cr-6Ni-9Mn
8	3	8.3	ASTM	A473	XM-11	S21904	—	90/50 [620/345]	Forging	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-479	XM-19	S20910	—	100/55 [690/380]	Bar, Shape	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-479	XM-17	S21600	—	90/50 [620/345]	Bar, Shape	19Cr-8Mn-6Ni-Mo-N
8	3	8.3	ASTM/ASME	A or SA-479	XM-18	S21603	—	90/50 [620/345]	Bar, Shape	19Cr-8Mn-6Ni-Mo-N
8	3	8.1	ASTM/ASME	A or SA-479	S21800	S21800	—	95/50 [655/345]	Bar, Shape	18Cr-8Ni-8Mn-4Si-N
8	3	8.3	ASTM/ASME	A or SA-479	XM-11	S21904	—	90/50 [620/345]	Bar, Shape	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-479	XM-29	S24000	—	100/55 [690/380]	Bar, Shape	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A or SA-666	201-1	S20100	—	75/38 [515/260]	Plate, Sheet, Strip	17Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-666	201-2	S20100	—	95/45 [655/310]	Plate, Sheet, Strip	17Cr-4Ni-6Mn
8	3	8.3	ASTM/ASME	A or SA-666	XM-11	S21904	—	90/50 [620/345]	Plate, Sheet, Strip	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-688	XM-29	S24000	—	100/55 [690/380]	Welded Tube	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A or SA-813	TPXM-19	S20910	—	100/55 [690/380]	Welded Pipe	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-813	TPXM-11	S21904	—	90/50 [620/345]	Welded Pipe	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-813	TPXM-29	S24000	—	100/55 [690/380]	Welded Pipe	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A or SA-814	TPXM-19	S20910	—	100/55 [690/380]	Cold-Worked Welded Pipe	22Cr-13Ni-5Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	3	8.3	ASTM/ASME	A or SA-814	TPXM-11	S21904	—	90/50 [620/345]	Cold-Worked Welded Pipe	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A or SA-814	TPXM-29	S24000	—	100/55 [690/380]	Cold-Worked Welded Pipe	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A or SA-965	FXM-19	S20910	—	100/55 [690/380]	Forging	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A or SA-965	FXM-11	S21904	—	90/50 [620/345]	Forging	21Cr-6Ni-9Mn
8	3	8.3	AWS/ASME	A or SFA-5.9	ER209	S20980	—	100/ [690/]	Weld Metal	22Cr-10Ni-5Mn
8	3	8.3	AWS/ASME	A or SFA-5.9	ER219	S21980	—	90/ [620/]	Weld Metal	21Cr-9Ni-6Mn
8	3	8.3	AWS/ASME	A or SFA-5.9	ER240	S24080	—	100/ [690/]	Weld Metal	18Cr-12Mn-5Ni
8	3	8.3	AWS/ASME	A or SFA-5.9	ER307	S30780	—	85/ [585/]	Weld Metal	21Cr-9Ni-4Mn
8	3	8.2	AWS/ASME	A or SFA-5.9	ER316LMn	S31682	—	80/ [550/]	Weld Metal	20Cr-12Ni-Mn-Mo
8	4	8.2	ASTM/ASME	A or SA-182	F44	S31254	—	94/44 [650/305]	Forging	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-182	—	S32053	—	93/43 [640/295]	Forging	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A or SA-182	F49	S34565	—	115/60 [795/415]	Forging	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-213	—	S31254	> 0.187 [5]	95/45 [655/310]	Smls. Tube	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-213	—	S31254	≤ 0.187 [5]	98/45 [675/310]	Smls. Tube	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-213	TP317LM	S31725	—	75/30 [515/205]	Smls. Tube	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-213	TP317LMN	S31726	—	80/35 [550/240]	Smls. Tube	19Cr-15.5Ni-4Mo
8	4	8.3	ASTM/ASME	A or SA-213	S34565	S34565	—	115/60 [795/415]	Smls. Tube	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-240	S31254	S31254	≥ 0.187 [5]	95/45 [655/310]	Plate	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-240	S31254	S31254	< 0.187 [5]	100/45 [690/310]	Sheet, Strip	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-240	S31725	S31725	—	75/30 [515/205]	Plate, Sheet, Strip	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-240	S31726	S31726	—	80/35 [550/240]	Plate, Sheet, Strip	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-240	—	S32053	—	93/43 [640/295]	Plate, Sheet, Strip	23Cr-25Ni-5.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-240	—	S32654	—	109/62 [750/430]	Plate, Sheet, Strip	24Cr-22Ni-7Mo-3Mn
8	4	8.3	ASTM/ASME	A or SA-240	S34565	S34565	—	115/60 [795/415]	Plate, Sheet, Strip	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-249	S31254	S31254	> 0.187 [5]	95/45 [655/310]	Welded Tube	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-249	S31254	S31254	≤ 0.187 [5]	98/45 [675/310]	Welded Tube	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-249	S31725	S31725	—	75/30 [515/205]	Welded Tube	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-249	S31726	S31726	—	80/35 [550/240]	Welded Tube	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-249	—	S32053	—	93/43 [640/295]	Welded Tube	23Cr-25Ni-5.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-312	S31254	S31254	> 0.187 [5]	95/45 [655/310]	Smls. & Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-312	S31254	S31254	≤ 0.187 [5]	98/45 [675/310]	Smls. & Welded Pipe	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-312	S31725	S31725	—	75/30 [515/205]	Smls. & Welded Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-312	S31726	S31726	—	80/35 [550/240]	Smls. & Welded Pipe	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-312	—	S32053	—	93/43 [640/295]	Smls. & Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A or SA-312	S34565	S34565	—	115/60 [795/415]	Smls. & Welded Pipe	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-351	CK3MCuN	J93254	—	80/38 [550/260]	Casting	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-358	S31254	S31254	≥ 0.187 [5]	95/45 [655/310]	Fusion Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-358	S31254	S31254	< 0.187 [5]	100/45 [690/310]	Fusion Welded Pipe	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-358	S31725	S31725	—	75/30 [515/205]	Fusion Welded Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-358	S31726	S31726	—	80/35 [550/240]	Fusion Welded Pipe	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-358	—	S32053	—	93/43 [640/295]	Fusion Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.1	ASTM/ASME	A or SA-376	S31725	S31725	—	75/30 [515/205]	Smls. Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-376	S31726	S31726	—	80/35 [550/240]	Smls. Pipe	19Cr-15.5Ni-4Mo
8	4	8.3	ASTM/ASME	A or SA-376	S34565	S34565	—	115/60 [795/415]	Smls. Pipe	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-403	—	S31254	—	94/44 [650/305]	Wrought Piping Fitting	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-403	WP S31726	S31726	—	80/35 [550/240]	Wrought Piping Fitting	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-403	—	S32053	—	93/43 [640/295]	Wrought Piping Fitting	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A or SA-403	S34565	S34565	—	115/60 [795/415]	Wrought Piping Fitting	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-409	S31254	S31254	—	94/44 [650/305]	Welded Pipe	20Cr-18Ni-6Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	4	8.1	ASTM/ASME	A or SA-409	S31725	S31725	—	75/30 [515/205]	Welded Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-409	S31726	S31726	—	80/35 [550/240]	Welded Pipe	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-409	—	S32053	—	93/43 [640/295]	Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A or SA-409	S34565	S34565	—	115/60 [795/415]	Welded Pipe	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-479	S31254	S31254	—	95/44 [655/305]	Bar, Shape	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A or SA-479	S31725	S31725	—	75/30 [515/205]	Bar, Shape	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A or SA-479	S31726	S31726	—	80/35 [550/240]	Bar, Shape	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A or SA-479	—	S32053	—	93/43 [640/295]	Bar, Shape	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A or SA-479	—	S34565	—	115/60 [795/415]	Bar, Shape	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM	A743	CK3MCuN	J93254	—	80/38 [550/260]	Casting	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-813	S31254	S31254	—	94/44 [650/305]	Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-813	—	S32053	—	93/43 [640/295]	Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.2	ASTM/ASME	A or SA-814	S31254	S31254	—	94/44 [650/305]	Cold-Worked Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A or SA-814	—	S32053	—	93/43 [640/295]	Cold-Worked Welded Pipe	23Cr-25Ni-5.5Mo-N
9A	1	9.1	ASTM/ASME	A or SA-182	FR	K22035	—	63/46 [435/315]	Forging	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A or SA-203	A	K21703	—	65/37 [450/255]	Plate	2.25Ni
9A	1	9.1	ASTM/ASME	A or SA-203	B	K22103	—	70/40 [485/275]	Plate	2.25Ni
9A	1	9.1	ASTM/ASME	A or SA-234	WPR	K22035	—	63/46 [435/315]	Piping Fitting	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A or SA-333	7	K21903	—	65/35 [450/240]	Smls. & Welded Pipe	2.5Ni
9A	1	9.1	ASTM/ASME	A or SA-333	9	K22035	—	63/46 [435/315]	Smls. & Welded Pipe	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A or SA-334	7	K21903	—	65/35 [450/240]	Welded Tube	2.5Ni
9A	1	9.1	ASTM/ASME	A or SA-334	9	K22035	—	63/46 [435/315]	Welded Tube	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A or SA-350	LF5 Cl. 1	K13050	—	60/30 [415/205]	Forging	1.5Ni
9A	1	9.1	ASTM/ASME	A or SA-350	LF5 Cl. 2	K13050	—	70/37.5 [485/260]	Forging	1.5Ni
9A	1	9.1	ASTM/ASME	A or SA-350	LF9	K22036	—	63/46 [435/315]	Forging	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A or SA-352	LC2	J22500	—	70/40 [485/275]	Casting	2.5Ni
9A	1	9.1	ASTM/ASME	A or SA-420	WPL9	K22035	—	63/46 [435/315]	Piping Fitting	2Ni-1Cu
9A	1	9.1	ASTM	A714	V	K22035	—	65/46 [450/315]	Smls. & Welded Pipe	2Ni-1Cu
9A	1	9.1	ASTM	A714	V, E	K22035	—	65/46 [450/315]	Smls. & Welded Pipe	2Ni-1Cu
9A	1	9.1	AWS/ASME	A or SFA-5.28	ER80S-Ni2	K21240	—	80/ [550/]	Weld Metal	C-Mn-2.5Ni
9B	1	9.2	ASTM/ASME	A or SA-203	F	—	> 2 [50]	75/50 [515/345]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-203	F	—	≤ 2 [50]	80/55 [550/380]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-203	D	K31718	—	65/37 [450/255]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-203	E	K32018	—	70/40 [485/275]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-333	3	K31918	—	65/35 [450/240]	Smls. & Welded Pipe	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-334	3	K31918	—	65/35 [450/240]	Welded Tube	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-350	LF3	K32025	—	70/37.5 [485/260]	Forging	3.5Ni
9B	1	9.3	ASTM/ASME	A or SA-352	LC3	J31550	—	70/40 [485/275]	Casting	3.5Ni
9B	1	9.2	ASTM/ASME	A or SA-420	WPL3	K31918	—	65/35 [450/240]	Piping Fitting	3.5Ni
9B	1	—	ASTM	A707	L7, Cl. 1	K32218	—	60/42 [415/290]	Forging	3.5Ni
9B	1	—	ASTM	A707	L7, Cl. 2	K32218	—	66/52 [455/360]	Forging	3.5Ni
9B	1	—	ASTM	A707	L8, Cl. 1	K42247	—	60/42 [415/290]	Forging	3.5Ni-1.8Cr-0.5Mo-0.3Mn
9B	1	—	ASTM	A707	L8, Cl. 2	K42247	—	66/52 [455/360]	Forging	3.5Ni-1.8Cr-0.5Mo-0.3Mn
9B	1	—	ASTM	A707	L8, Cl. 3	K42247	—	75/60 [515/415]	Forging	3.5Ni-1.8Cr-0.5Mo-0.3Mn
9B	1	—	ASTM	A707	L8, Cl. 4	K42247	—	90/75 [620/515]	Forging	3.5Ni-1.8Cr-0.5Mo-0.3Mn
9B	1	9.2	ASTM/ASME	A or SA-765	III	K32026	—	70/37.5 [485/260]	Forging	3.5Ni
9B	1	9.2	AWS/ASME	A or SFA-5.28	ER80S-Ni3	K31240	—	80/ [550/]	Weld Metal	C-Mn-3.5Ni
9C	1	9.3	ASTM/ASME	A or SA-352	LC4	J41500	—	70/40 [485/275]	Casting	4.5Ni
9C	1	9.2	AWS/ASME	A or SFA-5.28	ER70S-Ni4	—	—	70/ [485/]	Weld Metal	C-Mn-4.5Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
10A	1	2.1	ASTM/ASME	A or SA-225	D	K12004	> 3 [75]	75/55 [515/380]	Plate	Mn-0.5Ni-V
10A	1	2.1	ASTM/ASME	A or SA-225	D	K12004	≤ 3 [75]	80/60 [550/415]	Plate	Mn-0.5Ni-V
10A	1	4.1	ASTM/ASME	A or SA-225	C	K12524	—	105/70 [725/485]	Plate	Mn-0.5Ni-V
10A	1	2.1	ASTM/ASME	A or SA-487	1, Cl. A	J13002	—	85/55 [585/380]	Casting	Mn-V
10A	1	2.1	ASTM/ASME	A or SA-487	1, Cl. B	J13002	—	90/65 [620/450]	Casting	Mn-V
10B	1	4.1	ASTM/ASME	A or SA-213	T17	K12047	—	60/30 [415/205]	Smls. Tube	1Cr-V
10C	1	11.1	AAR	AAR TC128	B	—	—	81/50 [560/345]	Plate	C-Mn-Si
10C	1	1.3	ASTM/ASME	A or SA-612	—	K02900	> 0.5 [13] ≤ 1 [25]	81/50 [560/345]	Plate	C-Mn-Si
10C	1	1.3	ASTM/ASME	A or SA-612	—	K02900	≤ 0.5 [13]	83/50 [570/345]	Plate	C-Mn-Si
10H	1	10.2	ASTM/ASME	A or SA-182	F50	S31200	—	100/65 [690/450]	Forging	25Cr-6Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-182	F51	S31803	—	90/65 [620/450]	Forging	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM/ASME	A or SA-182	—	S32202	—	94/65 [650/450]	Forging	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-182	F60	S32205	—	95/70 [655/485]	Forging	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A or SA-182	—	S32506	—	90/65 [620/450]	Forging	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-182	F61	S32550	—	109/80 [750/550]	Forging	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-182	F53	S32750	—	116/80 [800/550]	Forging	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-182	F55	S32760	—	109/80 [750/550]	Forging	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-182	F54	S39274	—	116/80 [800/550]	Forging	25Cr-7Ni-3Mo-2W-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-240	S31200	S31200	—	100/65 [690/450]	Plate, Sheet, Strip	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-240	S31260	S31260	—	100/70 [690/485]	Plate, Sheet, Strip	25Cr-6.5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-240	S31803	S31803	—	90/65 [620/450]	Plate, Sheet, Strip	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S32003	—	90/65 [620/450]	Plate, Sheet, Strip	21Cr-3.5Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S32101	> 0.187 [5]	94/65 [650/450]	Plate	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S32101	≤ 0.187 [5]	101/77 [700/530]	Sheet, Strip	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S32202	—	94/65 [650/450]	Plate, Sheet, Strip	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-240	2205	S32205	—	95/65 [655/450]	Plate, Sheet, Strip	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-240	—	S32304	—	87/58 [600/400]	Plate, Sheet, Strip	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-240	—	S32506	—	90/65 [620/450]	Plate, Sheet, Strip	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-240	S32550	S32550	—	110/80 [760/550]	Plate, Sheet, Strip	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-240	S32750	S32750	—	116/80 [800/550]	Plate, Sheet, Strip	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-240	S32760	S32760	—	108/80 [745/550]	Plate, Sheet, Strip	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-240	329	S32900	—	90/70 [620/485]	Plate, Sheet, Strip	26Cr-4Ni-Mo
10H	1	10.2	ASTM/ASME	A or SA-240	S32906	S32906	≥ 0.40 [10]	109/80 [750/550]	Plate	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A or SA-240	S32906	S32906	< 0.40 [10]	116/94 [800/650]	Plate, Sheet, Strip	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A or SA-240	S32950	S32950	—	100/70 [690/485]	Plate, Sheet, Strip	26Cr-4Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S82012	> 0.187 [5]	94/58 [650/400]	Plate	20Cr-1Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S82012	≤ 0.187 [5]	102/73 [705/500]	Sheet, Strip	20Cr-1Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S82031	> 0.187 [5]	94/58 [650/400]	Plate	21Cr-3Ni-1Mo-N
10H	1	10.3	ASTM/ASME	A or SA-240	—	S82031	≤ 0.187 [5]	102/73 [705/500]	Sheet, Strip	21Cr-3Ni-1Mo-N
10H	1	10.1	ASTM/ASME	A or SA-240	—	S82441	≥ 0.40 [10]	99/70 [680/480]	Plate	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A or SA-240	—	S82441	< 0.40 [10]	107/78 [740/540]	Plate, Sheet, Strip	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A or SA-276	S32205	S32205	—	95/65 [655/450]	Bar	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-276	—	S32550	—	94/65 [650/450]	Bar, Shape	25Cr-5Ni-3Mo-2Cu
10H	1	10.3	ASTM	A276	—	S32101	—	94/65 [650/450]	Bar	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-351	CE8MN	J93345	—	95/65 [655/450]	Casting	24Cr-10Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-351	CD4MCu	J93370	—	100/70 [690/485]	Casting	26Cr-5Ni-2Mo-3Cu
10H	1	10.2	ASTM/ASME	A or SA-351	CD3MWCuN	J93380	—	100/65 [690/450]	Casting	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.1	ASTM/ASME	A or SA-479	—	S31803	—	90/65 [620/450]	Bar, Shape	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM/ASME	A or SA-479	—	S32101	—	94/65 [650/450]	Bar, Shape	21Cr-5Mn-1.5Ni-Cu-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
10H	1	10.3	ASTM/ASME	A or SA-479	—	S32202	—	94/65 [650/450]	Bar, Shape	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-479	—	S32205	—	95/65 [655/450]	Bar, Shape	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A or SA-479	—	S32506	—	90/65 [620/450]	Bar, Shape	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-479	S32550	S32550	—	110/80 [760/550]	Bar, Shape	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-479	S32750	S32750	—	116/80 [800/550]	Bar, Shape	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-479	S32906	S32906	—	109/80 [750/550]	Bar, Shape	29Cr-6.5Ni-2Mo-N
10H	1	10.1	ASTM/ASME	A or SA-479	—	S82441	≥ 0.4375 [11]	99/70 [680/480]	Bar	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A or SA-479	—	S82441	< 0.4375 [11]	107/78 [740/540]	Bar	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S31200	S31200	—	100/65 [690/450]	Smls. & Welded Tube	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S31260	S31260	—	100/65 [690/450]	Smls. & Welded Tube	25Cr-6.5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-789	S31500	S31500	—	92/64 [635/440]	Smls. & Welded Tube	18Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-789	S31803	S31803	—	90/65 [620/450]	Smls. & Welded Tube	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM/ASME	A or SA-789	—	S32003	—	100/70 [690/485]	Smls. & Welded Tube	21Cr-3.5Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-789	—	S32101	> 0.187 [5]	94/65 [650/450]	Smls. & Welded Tube	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-789	—	S32101	≤ 0.187 [5]	101/77 [700/530]	Smls. & Welded Tube	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-789	—	S32202	—	94/65 [650/450]	Smls. & Welded Tube	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-789	—	S32205	—	95/70 [655/485]	Smls. & Welded Tube	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-789	S32304	S32304	> 1 [25] O.D.	87/58 [600/400]	Smls. & Welded Tube	23Cr-4Ni-Mo-Cu-N
10H	1	10.1	ASTM/ASME	A or SA-789	S32304	S32304	≤ 1 [25] O.D.	100/65 [690/450]	Smls. & Welded Tube	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-789	—	S32506	—	90/65 [620/450]	Smls. & Welded Tube	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S32550	S32550	—	110/80 [760/550]	Smls. & Welded Tube	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-789	—	S32707	—	133/101 [915/700]	Smls. & Welded Tube	27Cr-6.5Ni-4.5Mo-Co-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-789	S32750	S32750	—	116/80 [800/550]	Smls. & Welded Tube	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S32760	S32760	—	109/80 [750/550]	Smls. & Welded Tube	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-789	S32900	S32900	—	90/70 [620/485]	Smls. & Welded Tube	26Cr-4Ni-Mo
10H	1	10.2	ASTM/ASME	A or SA-789	S32906	S32906	≥ 0.40 [10]	109/80 [750/550]	Smls. & Welded Tube	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S32906	S32906	< 0.40 [10]	116/94 [800/650]	Smls. & Welded Tube	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S32950	S32950	—	100/70 [690/485]	Smls. & Welded Tube	26Cr-4Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-789	S39274	S39274	—	116/80 [800/550]	Smls. & Welded Tube	25Cr-7Ni-3Mo-2W-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-789	—	S82011	> 0.187 [5]	95/65 [655/450]	Smls. & Welded Tube	22Cr-1.5Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-789	—	S82011	≤ 0.187 [5]	101/75 [700/515]	Smls. & Welded Tube	22Cr-1.5Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-789	—	S82441	≥ 0.40 [10]	99/70 [680/480]	Smls. & Welded Tube	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A or SA-789	—	S82441	< 0.40 [10]	107/78 [740/540]	Smls. & Welded Tube	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S31200	S31200	—	100/65 [690/450]	Smls. & Welded Pipe	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S31260	S31260	—	100/65 [690/450]	Smls. & Welded Pipe	25Cr-6.5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-790	S31500	S31500	—	92/64 [635/440]	Smls. & Welded Pipe	18Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-790	S31803	S31803	—	90/65 [620/450]	Smls. & Welded Pipe	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM/ASME	A or SA-790	—	S32003	—	90/65 [620/450]	Smls. & Welded Pipe	21Cr-3.5Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-790	—	S32101	> 0.187 [5]	94/65 [650/450]	Smls. & Welded Pipe	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-790	—	S32101	≤ 0.187 [5]	101/77 [700/530]	Smls. & Welded Pipe	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-790	—	S32202	—	94/65 [650/450]	Smls. & Welded Pipe	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-790	2205	S32205	—	95/65 [655/450]	Smls. & Welded Pipe	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A or SA-790	S32304	S32304	—	87/58 [600/400]	Smls. & Welded Pipe	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-790	—	S32506	—	90/65 [620/450]	Smls. & Welded Pipe	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S32550	S32550	—	110/80 [760/550]	Smls. & Welded Pipe	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-790	—	S32707	—	133/101 [915/700]	Smls. & Welded Pipe	27Cr-6.5Ni-4.5Mo-Co-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-790	S32750	S32750	—	116/80 [800/550]	Smls. & Welded Pipe	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S32760	S32760	—	109/80 [750/550]	Smls. & Welded Pipe	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-790	S32900	S32900	—	90/70 [620/485]	Smls. & Welded Pipe	26Cr-4Ni-Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
10H	1	10.2	ASTM/ASME	A or SA-790	S32906	S32906	≥ 0.40 [10]	109/80 [750/550]	Smls. & Welded Pipe	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S32906	S32906	< 0.40 [10]	116/94 [800/650]	Smls. & Welded Pipe	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S32950	S32950	—	100/70 [690/485]	Smls. & Welded Pipe	26Cr-4Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-790	S39274	S39274	—	116/80 [800/550]	Smls. & Welded Pipe	25Cr-7Ni-3Mo-2W-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-790	—	S82011	≥ 0.187 [5]	95/65 [655/450]	Smls. & Welded Pipe	22Cr-1.5Ni-Mo-N
10H	1	10.3	ASTM/ASME	A or SA-790	—	S82011	< 0.187 [5]	101/75 [700/515]	Smls. & Welded Pipe	22Cr-1.5Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-790	—	S82441	≥ 0.40 [10]	99/70 [680/480]	Smls. & Welded Pipe	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A or SA-790	—	S82441	< 0.40 [10]	107/78 [740/540]	Smls. & Welded Pipe	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A or SA-815	—	S31803	—	90/65 [620/450]	Fitting	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM/ASME	A or SA-815	—	S32101	—	94/65 [650/450]	Fitting	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.3	ASTM/ASME	A or SA-815	—	S32202	—	94/65 [650/450]	Fitting	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A or SA-815	—	S32205	—	95/65 [655/450]	Fitting	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A or SA-815	S32550	S32550	—	110/80 [760/550]	Fitting	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-815	—	S32750	—	116/80 [800/550]	Fitting	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-815	—	S32760	—	109/80 [750/550]	Fitting	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.1	ASTM	A890	4A	J92205	—	90/60 [620/415]	Casting	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM	A890	2A	J93345	—	95/65 [655/450]	Casting	24Cr-10Ni-Mo-N
10H	1	10.2	ASTM	A890	1A	J93370	—	100/70 [690/485]	Casting	26Cr-5Ni-2Mo-3Cu
10H	1	10.2	ASTM	A890	3A	J93371	—	95/65 [655/450]	Casting	25Cr-5Ni-Mo-N
10H	1	10.2	ASTM	A890	1B	J93372	—	100/70 [690/485]	Casting	25Cr-5Ni-Mo-Cu-N
10H	1	10.2	ASTM	A890	1C	J93373	—	100/65 [690/450]	Casting	25Cr-6Ni-Mo-Cu-N
10H	1	10.2	ASTM	A890	7A	J93379	—	100/75 [690/515]	Casting	27Cr-7Ni-Mo-W-N
10H	1	10.2	ASTM	A890	6A	J93380	—	100/65 [690/450]	Casting	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM	A890	5A	J93404	—	100/75 [690/515]	Casting	25Cr-7Ni-Mo-N
10H	1	10.1	ASTM	A928	S31803	S31803	—	90/65 [620/450]	Welded Pipe	22Cr-5Ni-3Mo-N
10H	1	10.3	ASTM	A928	S32003	S32003	> 0.187 [5]	95/65 [655/450]	Welded Pipe	21Cr-3.5Ni-Mo-N
10H	1	10.3	ASTM	A928	S32003	S32003	≤ 0.187 [5]	100/70 [690/485]	Welded Pipe	21Cr-3.5Ni-Mo-N
10H	1	10.1	ASTM	A928	2205	S32205	—	95/65 [655/450]	Welded pipe	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM	A928	2304	S32304	—	87/58 [600/400]	Welded Pipe	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM	A928	255	S32550	—	110/80 [760/550]	Welded pipe	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM	A928	2507	S32750	—	116/80 [800/550]	Welded Pipe	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM	A928	—	S32760	—	108/80 [745/550]	Welded pipe	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.1	ASTM/ASME	A or SA-995	4A	J92205	—	90/60 [620/415]	Casting	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A or SA-995	2A	J93345	—	95/65 [655/450]	Casting	24Cr-10Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A or SA-995	3A	J93371	—	95/65 [655/450]	Casting	25Cr-5Ni-Mo-N
10H	1	10.2	ASTM/ASME	A or SA-995	1B	J93372	—	100/70 [690/485]	Casting	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A or SA-995	7A	J93379	—	100/75 [690/515]	Casting	27Cr-7Ni-Mo-W-N
10H	1	10.2	ASTM/ASME	A or SA-995	6A	J93380	—	100/65 [690/450]	Casting	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A or SA-995	5A	J93404	—	100/75 [690/515]	Casting	25Cr-7Ni-4Mo-N
10H	1	10.2	AWS/ASME	A or SFA-5.9	ER2594	S32750	—	110/ [760/]	Weld Metal	25Cr-7Ni-4Mo
10H	1	10.1	AWS/ASME	A or SFA-5.9	ER2209	S39209	—	100/ [690/]	Weld Metal	22Cr-8Ni-Mo
10H	1	10.2	AWS/ASME	A or SFA-5.9	ER2553	S39553	—	110/ [760/]	Weld Metal	25Cr-5Ni-3Mo
10H	1	10.2	AWS/ASME	A or SFA-5.9	ER2307	S82371	—	100/ [690/]	Weld Metal	24Cr-8Ni
10I	1	7.1	ASTM/ASME	A or SA-182	FXM-27Cb	S44627	—	60/35 [415/240]	Forging	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A or SA-240	XM-33	S44626	—	68/45 [470/310]	Plate, Sheet, Strip	27Cr-1Mo-Ti
10I	1	7.1	ASTM/ASME	A or SA-240	XM-27	S44627	—	65/40 [450/275]	Plate, Sheet, Strip	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A or SA-240	S44635	S44635	—	90/75 [620/515]	Plate, Sheet, Strip	25Cr-4Ni-4Mo-Ti
10I	1	7.1	ASTM/ASME	A or SA-268	TP446-1	S44600	—	70/40 [485/275]	Smls. & Welded Tube	27Cr
10I	1	7.1	ASTM/ASME	A or SA-268	TP446-2	S44600	—	65/40 [450/275]	Smls. & Welded Tube	27Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
10I	1	7.1	ASTM/ASME	A or SA-268	TPXM-33	S44626	—	68/45 [470/310]	Smls. & Welded Tube	27Cr-1Mo-Ti
10I	1	7.1	ASTM/ASME	A or SA-268	TPXM-27	S44627	—	65/40 [450/275]	Smls. & Welded Tube	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A or SA-268	25-4-4	S44635	—	90/75 [620/515]	Smls. & Welded Tube	25Cr-4Ni-4Mo-Ti
10I	1	7.1	ASTM/ASME	A or SA-336	FXM-27Cb	S44627	—	60/35 [415/240]	Forging	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A or SA-479	XM-27	S44627	—	65/40 [450/275]	Bar, Shape	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A or SA-731	TPXM-33	S44626	—	65/40 [450/275]	Smls. & Welded Pipe	27Cr-1Mo-Ti
10I	1	7.1	ASTM/ASME	A or SA-731	TPXM-27	S44627	—	65/40 [450/275]	Smls. & Welded Pipe	27Cr-1Mo
10J	1	7.1	ASTM/ASME	A or SA-240	S44700	S44700	—	80/60 [550/415]	Plate, Sheet, Strip	29Cr-4Mo
10J	1	7.1	ASTM/ASME	A or SA-268	29-4	S44700	—	80/60 [550/415]	Smls. & Welded Tube	29Cr-4Mo
10J	1	7.1	ASTM/ASME	A or SA-268	S44735	S44735	—	75/60 [515/415]	Smls. & Welded Tube	29Cr-4Mo-Ti
10J	1	7.1	ASTM/ASME	A or SA-479	S44700	S44700	—	70/55 [485/380]	Bar, Shape	29Cr-4Mo
10J	1	7.1	ASTM/ASME	A or SA-731	S44700	S44700	—	80/60 [550/415]	Smls. & Welded Pipe	29Cr-4Mo
10K	1	7.1	ASTM/ASME	A or SA-240	S44660	S44660	—	85/65 [585/450]	Plate, Sheet, Strip	26Cr-3Ni-3Mo
10K	1	7.1	ASTM/ASME	A or SA-240	S44800	S44800	—	80/60 [550/415]	Plate, Sheet, Strip	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A or SA-268	26-3-3	S44660	—	85/65 [585/450]	Smls. & Welded Tube	26Cr-3Ni-3Mo
10K	1	7.1	ASTM/ASME	A or SA-268	29-4-2	S44800	—	80/60 [550/415]	Smls. & Welded Tube	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A or SA-479	S44800	S44800	—	70/55 [485/380]	Bar, Shape	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A or SA-731	S44660	S44660	—	85/65 [585/450]	Smls. & Welded Pipe	26Cr-3Ni-3Mo
10K	1	7.1	ASTM/ASME	A or SA-731	S44800	S44800	—	80/60 [550/415]	Smls. & Welded Pipe	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A or SA-803	26-3-3	S44660	—	85/65 [585/450]	Welded Tube	26Cr-3Ni-3Mo
11A	1	9.3	ASTM/ASME	A or SA-333	8	K81340	—	100/75 [690/515]	Smls. & Welded Pipe	9Ni
11A	1	9.3	ASTM/ASME	A or SA-334	8	K81340	—	100/75 [690/515]	Welded Tube	9Ni
11A	1	9.3	ASTM/ASME	A or SA-353	—	K81340	—	100/75 [690/515]	Plate	9Ni
11A	1	9.3	ASTM/ASME	A or SA-420	WPL8	K81340	—	100/75 [690/515]	Piping Fitting	9Ni
11A	1	9.3	ASTM/ASME	A or SA-522	II	K71340	—	100/75 [690/515]	Forging	8Ni
11A	1	9.3	ASTM/ASME	A or SA-522	I	K81340	—	100/75 [690/515]	Forging	9Ni
11A	1	9.2	ASTM/ASME	A or SA-553	III	—	—	100/85 [690/585]	Plate	7Ni
11A	1	9.3	ASTM/ASME	A or SA-553	II	K71340	—	100/85 [690/585]	Plate	8Ni
11A	1	9.3	ASTM/ASME	A or SA-553	I	K81340	—	100/85 [690/585]	Plate	9Ni
11A	1	9.3	ASTM	A844	—	K81340	—	100/85 [690/585]	Plate	9Ni
11A	2	9.2	ASTM/ASME	A or SA-645	A	K41583	—	95/65 [655/450]	Plate	5Ni-0.25Mo
11A	2	3.1	ASTM	A734	A	K21205	—	77/65 [530/450]	Plate	C-Mn-1Ni-1Cr-0.3Mo
11A	3	3.1	ASTM/ASME	A or SA-487	4, Cl. B	J13047	—	105/85 [725/585]	Casting	0.5Ni-0.5Cr-0.25Mo-V
11A	3	3.1	ASTM/ASME	A or SA-487	4, Cl. E	J13047	—	115/95 [795/655]	Casting	0.5Ni-0.5Cr-0.25Mo-V
11A	4	3.1	ASTM/ASME	A or SA-533	A, Cl. 3	K12521	—	100/83 [690/570]	Plate	Mn-0.5Mo
11A	4	3.1	ASTM/ASME	A or SA-533	D, Cl. 3	K12529	—	100/83 [690/570]	Plate	Mn-0.5Mo-0.25Ni
11A	4	3.2	ASTM/ASME	A or SA-533	B, Cl. 3	K12539	—	100/83 [690/570]	Plate	Mn-0.5Mo-0.5Ni
11A	4	3.2	ASTM/ASME	A or SA-533	C, Cl. 3	K12554	—	100/83 [690/570]	Plate	Mn-0.5Mo-0.75Ni
11A	4	3.2	ASTM/ASME	A or SA-672	J100	K12521	—	100/83 [690/570]	Fusion Welded Pipe	Mn-0.5Mo
11A	5	9.2	ASTM/ASME	A or SA-352	LC2-1	J42215	—	105/80 [725/550]	Casting	3Ni-1.5Cr-0.5Mo
11A	5	3.1	ASTM/ASME	A or SA-508	4N, Cl. 1	K22375	—	105/85 [725/585]	Forging	3.5Ni-1.75Cr-0.5Mo-V
11A	5	3.1	ASTM/ASME	A or SA-508	5, Cl. 1	K42365	—	105/85 [725/585]	Forging	3.5Ni-1.75Cr-0.5Mo-V
11A	5	3.1	ASTM/ASME	A or SA-543	C, Cl. 1	—	—	105/85 [725/585]	Plate	2.75Ni-1.5Cr-0.5Mo
11A	5	3.1	ASTM/ASME	A or SA-543	B, Cl. 1	K42339	—	105/85 [725/585]	Plate	3Ni-1.75Cr-0.5Mo
11B	—	3.1	AS/NZS	AS/NZS 3597	700PV	—	—	120/109 [825/750]	Plate	C-Mn-1Cr.25Mo
11B	1	3.1	ASTM	A514	A	K11856	≤ 1.25 [32]	110/100 [760/690]	Plate	0.5Cr-0.25Mo-Si
11B	1	3.1	ASTM/ASME	A or SA-517	A	K11856	≤ 1.25 [32]	115/100 [795/690]	Plate	0.5Cr-0.25Mo-Si
11B	1	3.1	ASTM/ASME	A or SA-592	A	K11856	≤ 1.5 [38]	115/100 [795/690]	Forging	0.5Cr-0.25Mo-Si
11B	2	3.1	ASTM	A514	E	K21604	> 2.5 [65] ≤ 6 [150]	100/90 [690/620]	Plate	1.75Cr-0.5Mo-Cu

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
11B	2	3.1	ASTM	A514	E	K21604	≤ 2.5 [65]	110/100 [760/690]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A or SA-517	E	K21604	> 2.5 [65] ≤ 6 [150]	105/90 [725/620]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A or SA-517	E	K21604	≤ 2.5 [65]	115/100 [795/690]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A or SA-592	E	K11695	≥ 2.5 [65] ≤ 4 [100]	105/90 [725/620]	Forging	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A or SA-592	E	K11695	≤ 2.5 [65]	115/100 [795/690]	Forging	1.75Cr-0.5Mo-Cu
11B	3	3.1	ASTM	A514	F	K11576	≤ 2.5 [65]	110/100 [760/690]	Plate	0.75Ni-0.5Cr-0.5Mo-V
11B	3	3.1	ASTM	A514	H	K11646	≤ 2 [50]	110/100 [760/690]	Plate	0.5Ni-0.5Cr-0.25Mo-V
11B	3	3.1	ASTM/ASME	A or SA-517	F	K11576	≤ 2.5 [65]	115/100 [795/690]	Plate	0.75Ni-0.5Cr-0.5Mo-V
11B	3	3.1	ASTM/ASME	A or SA-517	H	K11646	≤ 2 [50]	115/100 [795/690]	Plate	0.5Ni-0.5Cr-0.25Mo-V
11B	3	3.1	ASTM/ASME	A or SA-592	F	K11576	≥ 2.5 [65] ≤ 4 [100]	105/90 [725/620]	Forging	0.75Ni-0.5Cr-0.5Mo-V
11B	3	3.1	ASTM/ASME	A or SA-592	F	K11576	≤ 2.5 [65]	115/100 [795/690]	Forging	0.75Ni-0.5Cr-0.5Mo-V
11B	3	—	AWS/ASME	A or SFA-5.28	ER100S-M7	—	—	100/ [690/]	Weld Metal	0.9Ni-0.3Cr-0.5Mo
11B	3	—	AWS/ASME	A or SFA-5.28	ER110S-M6	—	—	110/ [760/]	Weld Metal	1.5Ni-0.3Cr-0.5Mo
11B	3	—	AWS/ASME	A or SFA-5.28	ER120S-M8	—	—	120/ [825/]	Weld Metal	2.1Ni-0.3Cr-0.5Mo
11B	3	—	AWS/ASME	A or SFA-5.28	ER100S-1	K10882	—	100/ [690/]	Weld Metal	1.8Ni-0.5Mo
11B	3	—	AWS/ASME	A or SFA-5.28	ER110S-1	K21015	—	110/ [760/]	Weld Metal	2.2Ni-0.5Mo
11B	3	—	AWS/ASME	A or SFA-5.28	ER120S-1	K21030	—	120/ [825/]	Weld Metal	2.7Ni-0.5Mo
11B	4	3.1	ASTM	A514	B	K11630	≤ 1.25 [32]	110/100 [760/690]	Plate	0.5Cr-0.2Mo-V
11B	4	3.1	ASTM/ASME	A or SA-517	B	K11630	≤ 1.25 [32]	115/100 [795/690]	Plate	0.5Cr-0.2Mo-V
11B	4	—	ASTM	A782	1	—	—	97/80 [670/550]	Plate	1Mn-1Cr-1Si-0.5Mo-Zr
11B	4	—	ASTM	A782	1	—	—	107/90 [740/620]	Plate	1Mn-1Cr-1Si-0.5Mo-Zr
11B	4	—	ASTM	A782	1	—	—	115/100 [795/690]	Plate	1Mn-1Cr-1Si-0.5Mo-Zr
11B	6	3.1	ASTM	A514	S	—	≤ 2.5 [64]	110/100 [760/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	T	—	> 2.5 [64] ≤ 6 [152]	100/90 [690/620]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	T	—	≤ 2.5 [64]	110/100 [760/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	C	K11511	> 2.5 [64] ≤ 6 [152]	100/90 [690/620]	Plate	1.2Mn-0.2Mo
11B	6	3.1	ASTM	A514	C	K11511	≤ 2.5 [64]	110/100 [760/690]	Plate	1.2Mn-0.2Mo
11B	6	3.1	ASTM	A514	K	K11523	> 2.5 [64] ≤ 6 [152]	100/90 [690/620]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	K	K11523	≤ 2.5 [64]	110/100 [760/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	J	K11625	> 2.5 [64] ≤ 6 [152]	100/90 [690/620]	Plate	C-0.5Mo
11B	6	3.1	ASTM	A514	J	K11625	≤ 2.5 [64]	110/100 [760/690]	Plate	C-0.5Mo
11B	6	3.1	ASTM	A517	T	—	≤ 2 [50]	115/100 [795/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A517	K	K11523	≤ 2 [50]	115/100 [795/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A517	J	K11625	≤ 1.25 [32]	115/100 [795/690]	Plate	C-0.5Mo
11B	6	3.1	ASTM/ASME	A or SA-517	S	—	≤ 2 [50]	115/100 [795/690]	Plate	Mn-Mo-B
11B	8	3.1	ASTM	A514	P	K21650	> 2.5 [65] ≤ 6 [150]	100/90 [690/620]	Plate	1.25Ni-1Cr-0.5Mo
11B	8	3.1	ASTM	A514	P	K21650	≤ 2.5 [65]	110/100 [760/690]	Plate	1.25Ni-1Cr-0.5Mo
11B	8	3.1	ASTM/ASME	A or SA-517	P	K21650	> 2.5 [65] ≤ 4 [100]	105/90 [725/620]	Plate	1.25Ni-1Cr-0.5Mo
11B	8	3.1	ASTM/ASME	A or SA-517	P	K21650	≤ 2.5 [65]	115/100 [795/690]	Plate	1.25Ni-1Cr-0.5Mo
11B	9	3.1	ASTM	A514	Q	—	> 2.5 [65] ≤ 6 [150]	100/90 [690/620]	Plate	1.3Ni-1.3Cr-0.5Mo-V
11B	9	3.1	ASTM	A514	Q	—	≤ 2.5 [65]	110/100 [760/690]	Plate	1.3Ni-1.3Cr-0.5Mo-V
11B	9	3.1	ASTM/ASME	A or SA-517	Q	—	> 2.5 [64] ≤ 6 [152]	105/90 [725/620]	Plate	1.3Ni-1.3Cr-0.5Mo-V
11B	9	3.1	ASTM/ASME	A or SA-517	Q	—	≤ 2.5 [64]	115/100 [795/690]	Plate	1.3Ni-1.3Cr-0.5Mo-V
11B	9	—	ASTM	A519	4130	G41300	—	75/55 [515/380]	Tube	1Cr-0.2Mo
11B	9	—	ASTM	A519	8630	G86300	—	75/55 [515/380]	Tube	0.5Ni-0.5Cr-0.2Mo
11B	10	3.1	ASTM/ASME	A or SA-508	4N, Cl. 2	K22375	—	115/100 [795/690]	Forging	3.5Ni-1.75Cr-0.5Mo-V
11B	10	3.1	ASTM/ASME	A or SA-508	5, Cl. 2	K42365	—	115/100 [795/690]	Forging	3.5Ni-1.75Cr-0.5Mo-V
11B	10	3.1	ASTM	A514	M	K11683	> 2.5 [64] ≤ 6 [152]	100/90 [690/620]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM	A514	M	K11683	> 2 [50] ≤ 2.5 [64]	110/100 [760/690]	Plate	1.3Ni-0.5Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/ Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
11B	10	3.1	ASTM	A514	M	K11683	≤ 2 [50]	115/100 [795/690]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM	A517	M	K11683	≤ 2 [50]	115/100 [795/690]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM/ASME	A or SA-543	C, Cl. 2	—	—	115/100 [795/690]	Plate	2.75Ni-1.5Cr-0.5Mo
11B	10	3.1	ASTM/ASME	A or SA-543	B, Cl. 2	K42339	—	115/100 [795/690]	Plate	3Ni-1.75Cr-0.5Mo
11B	11	1.4	ASTM	A709	HPS 70W	—	—	85/70 [585/485]	Plate, Bar, Shape	C-Mn
11B	11	4.2	ASTM	A852	—	K12043	—	90/70 [620/485]	Plate	C-Mn
11B	12	3.1	ASTM	A514	R	—	> 2.5 [64] ≤ 6 [152]	100/90 [690/620]	Plate	C-Mn-Ni-Cu-V
11B	12	3.1	ASTM	A514	R	—	≤ 2.5 [64]	110/100 [760/690]	Plate	C-Mn-Ni-Cu-V
11B	14	3.1	ASTM	A517	C	K11511	< 1.25 [32]	115/100 [795/690]	Plate	1.2Mn-0.2Mo
11C	1	3.3	ASTM	A859	A, Cl. 1	K20747	—	65/55 [450/380]	Forging	1Ni-1Cu-0.75Cr-Mo-Nb
11C	1	3.3	ASTM	A859	A, Cl. 2	K20747	—	75/65 [515/450]	Forging	1Ni-1Cu-0.75Cr-Mo-Nb
12A	1	3.3	ASTM	A710	A Cl. 2	K20747	> 4 [100]	60/50 [415/345]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12A	1	3.3	ASTM	A710	A Cl. 2	K20747	> 2 [50] ≤ 4 [100]	60/55 [415/380]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12A	1	3.3	ASTM	A710	A Cl. 2	K20747	≤ 2 [50]	72/60 [495/415]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12B	1	3.3	ASTM	A710	A Cl. 3	K20747	> 4 [100]	70/60 [485/415]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12B	1	3.3	ASTM	A710	A Cl. 3	K20747	> 2 [50] ≤ 4 [100]	75/65 [515/450]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12B	1	3.3	ASTM	A710	A Cl. 3	K20747	≤ 2 [50]	85/75 [585/515]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12C	1	3.3	ASTM	A710	A Cl. 1	K20747	≤ 0.75 [19]	90/80 [620/550]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
15E	1	6.4	ASTM/ASME	A or SA-182	F91	K90901	—	90/60 [620/415]	Forging	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-182	F92	K92460	—	90/64 [620/440]	Forging	9Cr-2W
15E	1	6.4	ASTM	A199	T91	K90901	—	85/60 [585/415]	Smls. Tube	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-213	T91	K90901	—	85/60 [585/415]	Smls. Tube	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-213	T92	K92460	—	90/64 [620/440]	Smls. Tube	9Cr-2W
15E	1	6.4	ASTM/ASME	A or SA-217	C12A	J84090	—	85/60 [585/415]	Casting	9Cr-1Mo-V
15E	1	6.4	ASTM	A234	WP92	K92460	—	90/64 [620/440]	Piping Fitting	9Cr-2W
15E	1	6.4	ASTM/ASME	A or SA-234	WP91	K90901	—	85/60 [585/415]	Piping Fitting	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-335	P91	K90901	—	85/60 [585/415]	Smls. Pipe	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-335	P92	K92460	—	90/64 [620/440]	Smls. Pipe	9Cr-2W
15E	1	6.4	ASTM/ASME	A or SA-336	F91	K90901	—	90/60 [620/415]	Forging	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-336	F92	K92460	—	90/64 [620/440]	Forging	9Cr-2W
15E	1	6.4	ASTM	A356	12A	J84090	—	85/60 [585/415]	Casting	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-369	FP91	K90901	—	85/60 [585/415]	Forged Pipe	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-369	FP92	K92460	—	90/64 [620/440]	Forged Pipe	9Cr-2W
15E	1	6.4	ASTM/ASME	A or SA-387	91, Cl. 2	K90901	—	85/60 [585/415]	Plate	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-691	91	K90901	—	85/60 [585/415]	Fusion Welded Pipe	9Cr-1Mo-V
15E	1	6.4	ASTM/ASME	A or SA-1017	92	K92460	—	90/64 [620/440]	Plate	9Cr-2W
15E	1	6.4	ASTM	A1091	C91	J84090	—	85/60 [585/415]	Casting	9Cr-1Mo-V

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
21	—	ASTM/ASME	B or SB-209	Alclad 3003	—	> 0.05 [1.3] < 0.5 [13]	13/4.5 [90/31]	Plate, Sheet	Al-Mn-Cu
21	—	ASTM/ASME	B or SB-209	Alclad 3003	—	≥ 0.5 [13] ≤ 3 [75]	14/5 [97/34]	Plate	Al-Mn-Cu
21	—	ASTM/ASME	B or SB-209	Alclad 3003	A83003	< 0.5 [13]	13/4.5 [90/31]	Plate, Sheet	Al-Mn-Cu
21	—	ASTM/ASME	B or SB-209	Alclad 3003	A83003	≥ 0.5 [13]	14/5 [97/34]	Plate, Sheet	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-209	1060	A91060	—	8/2.5 [55/17]	Plate, Sheet	99.60Al
21	21	ASTM/ASME	B or SB-209	1100	A91100	—	11/3.5 [76/24]	Plate, Sheet	99.0Al-Cu
21	22.1	ASTM/ASME	B or SB-209	3003	A93003	—	14/5 [97/34]	Plate, Sheet	Al-Mn-Cu
21	22.2	ASTM/ASME	B or SB-209	5050	A95050	—	18/6 [125/41]	Plate, Sheet	Al-1.5Mg
21	—	ASTM	B210	Alclad 3102	—	—	10/3.5 [69/24]	Smls. Tube	Al-0.3Mg
21	—	ASTM	B210	Alclad 3303	—	—	13/4.5 [90/31]	Smls. Tube	Al-Mn
21	—	ASTM	B210	Alclad 3003	A83003	—	13/4.5 [90/31]	Smls. Tube	Al-Mn-Cu
21	21	ASTM	B210	1100	A91100	—	11/3.5 [76/24]	Smls. Tube	99.0Al-Cu
21	22.1	ASTM	B210	3102	A93102	—	12/4 [82/28]	Smls. Tube	Al-0.3Mg
21	—	ASTM	B210	3303	A93303	—	14/5 [97/34]	Smls. Tube	Al-Mn
21	22.2	ASTM	B210	5050	A95050	—	18/6 [125/41]	Smls. Tube	Al-1.5Mg
21	—	ASTM/ASME	B or SB-210	Alclad 3003	—	—	13/4.5 [90/31]	Smls. Tube	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-210	1060	A91060	—	8.5/2.5 [59/17]	Smls. Tube	99.60Al
21	22.1	ASTM/ASME	B or SB-210	3003	A93003	—	14/5 [97/34]	Smls. Tube	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-211	1060	A91060	—	8/2.5 [55/17]	Bar, Rod, Wire	99.60Al
21	21	ASTM/ASME	B or SB-211	1100	A91100	—	11/3 [76/21]	Bar, Rod, Wire	99.0Al-Cu
21	22.1	ASTM/ASME	B or SB-211	3003	A93003	—	14/5 [97/34]	Bar, Rod, Wire	Al-Mn-Cu
21	—	ASTM/ASME	B or SB-221	Alclad 3003	A83003	—	13/4.5 [90/31]	Bar, Rod, Shape	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-221	1060	A91060	—	8.5/2.5 [59/17]	Bar, Rod, Shape	99.60Al
21	21	ASTM/ASME	B or SB-221	1100	A91100	—	11/3 [76/21]	Bar, Rod, Shape	99.0Al-Cu
21	22.1	ASTM/ASME	B or SB-221	3003	A93003	—	14/5 [97/34]	Bar, Rod, Shape	Al-Mn-Cu
21	22.1	ASTM/ASME	B or SB-221	3102	A93102	—	12/4 [82/28]	Bar, Rod, Shape	Al-0.3Mg
21	21	ASTM	B230	1350	A91350	—	8/ [55/]	Wire	99.50Al
21	—	ASTM/ASME	B or SB-234	Alclad 3003	—	—	13/4.5 [90/31]	Smls. Tube	Al-Mn-Cu
21	—	ASTM/ASME	B or SB-234	Alclad 3003	A83003	—	13/4.5 [90/31]	Smls. Tube	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-234	1060	A91060	—	8.5/2.5 [59/17]	Smls. Tube	99.60Al
21	22.1	ASTM/ASME	B or SB-234	3003	A93003	—	14/5 [97/34]	Smls. Tube	Al-Mn-Cu
21	21	ASTM	B236	1350	A91350	—	8/ [55/]	Bar	99.50Al
21	—	ASTM/ASME	B or SB-241	Alclad 3003	—	—	13/4.5 [90/31]	Smls. Pipe, Tube	Al-Mn-Cu
21	—	ASTM/ASME	B or SB-241	Alclad 3003	A83003	—	13/4.5 [90/31]	Smls. Pipe, Tube	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-241	1060	A91060	—	8.5/2.5 [59/17]	Smls. Pipe, Tube	99.60Al
21	21	ASTM/ASME	B or SB-241	1100	A91100	—	11/3 [76/21]	Smls. Pipe, Tube	99.0Al-Cu
21	22.1	ASTM/ASME	B or SB-241	3003	A93003	—	14/5 [97/34]	Smls. Pipe, Tube	Al-Mn-Cu
21	21	ASTM/ASME	B or SB-247	1100	A91100	—	11/4 [76/28]	Forging	99.0Al-Cu
21	22.1	ASTM/ASME	B or SB-247	3003	A93003	—	14/5 [97/34]	Forging	Al-Mn-Cu
21	21	ASTM	B313	1100	A91100	—	11/3.5 [76/24]	Welded Tube	99.0Al-Cu
21	22.1	ASTM	B313	3003	A93003	—	14/5 [97/34]	Welded Tube	Al-Mn-Cu
21	22.2	ASTM	B313	5050	A95050	—	18/6 [125/41]	Welded Tube	Al-1.5Mg
21	21	ASTM	B324	1350	A91350	—	8.5/ [59/]	Wire	99.50Al
21	—	ASTM	B345	Alclad 3003	A83003	—	13/4.5 [90/31]	Smls. Pipe, Tube	Al-Mn-Cu
21	21	ASTM	B345	1060	A91060	—	8.5/2.5 [59/17]	Smls. Pipe, Tube	99.60Al
21	22.1	ASTM	B345	3003	A93003	—	14/5 [97/34]	Smls. Pipe, Tube	Al-Mn-Cu
21	—	ASTM	B361	WP Alclad 3003	A83003	—	13/4.5 [90/31]	Fitting	Al-Mn-Cu
21	21	ASTM	B361	WP1060	A91060	—	8.5/2.5 [59/17]	Fitting	99.60Al

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
21	21	ASTM	B361	WP1100	A91100	—	11/3 [76/21]	Fitting	99.0Al-Cu
21	22.1	ASTM	B361	WP3003	A93003	—	14/5 [97/34]	Fitting	Al-Mn-Cu
21	21	ASTM	B483	1060	A91060	—	8.5/2.5 [59/17]	Tube	99.60Al
21	21	ASTM	B483	1100	A91100	—	11/3.5 [76/24]	Tube	99.0Al-Cu
21	21	ASTM	B483	1435	A91435	—	9.5/3 [66/21]	Tube	99.35Al-Fe
21	22.1	ASTM	B483	3003	A93003	—	14/5 [97/34]	Tube	Al-Mn-Cu
21	22.1	ASTM	B483	3102	A93102	—	11/3.5 [76/24]	Tube	Al-0.3Mg
21	22.2	ASTM	B483	5050	A95050	—	18/6 [125/41]	Tube	Al-1.5Mg
21	21	ASTM	B491	1050	A91050	—	8/2.5 [55/17]	Extruded Tube	99.5Al-Fe
21	21	ASTM	B491	1100	A91100	—	11/3 [76/21]	Extruded Tube	99.0Al-Cu
21	21	ASTM	B491	1200	A91200	—	11/9.5 [76/66]	Extruded Tube	99.0Al-Si-Fe
21	21	ASTM	B491	1235	A91235	—	9/3 [62/21]	Extruded Tube	99.5Al-Fe
21	22.1	ASTM	B491	3003	A93003	—	14/5 [97/34]	Extruded Tube	Al-Mn-Cu
21	22.1	ASTM	B491	3102	A93102	—	11/3.5 [76/24]	Extruded Tube	Al-0.3Mg
21	—	ASTM	B547	Alclad 3003	A83003	—	13/4.5 [90/31]	Welded Tube	Al-Mn-Cu
21	21	ASTM	B547	1100	A91100	—	11/3.5 [76/24]	Welded Tube	99.0Al-Cu
21	22.1	ASTM	B547	3003	A93003	—	14/5 [97/34]	Welded Tube	Al-Mn-Cu
21	22.2	ASTM	B547	5050	A95050	—	18/6 [125/41]	Welded Tube	Al-1.5Mg
21	21	ASTM	B609	1350	A91350	—	8.5/ [59/]	Wire	99.50Al
22	—	ASTM/ASME	B or SB-209	Alclad 3004	—	> 0.05 [1.3] < 0.5 [13]	21/8 [145/55]	Plate, Sheet	Al-Mn-Mg
22	—	ASTM/ASME	B or SB-209	Alclad 3004	—	< 0.5 [13]	21/8 [145/55]	Plate, Sheet	Al-Mn-Mg
22	—	ASTM/ASME	B or SB-209	Alclad 3004	—	≥ 0.5 [13] ≤ 3 [75]	22/8.5 [150/59]	Plate	Al-Mn-Mg
22	—	ASTM/ASME	B or SB-209	Alclad 3004	—	≥ 0.5 [13]	22/8.5 [150/59]	Plate, Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B or SB-209	3004	A93004	—	22/8.5 [150/59]	Plate, Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B or SB-209	3005	A93005	—	17/6.5 [115/45]	Plate, Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B or SB-209	3105	A93105	—	14/5 [97/34]	Plate, Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B or SB-209	5005	A95005	—	15/5 [105/34]	Plate, Sheet	Al-1.5Mg
22	22.2	ASTM/ASME	B or SB-209	5010	A95010	—	15/5 [105/34]	Plate, Sheet	Al-0.4Mg-0.2Mn
22	22.3	ASTM/ASME	B or SB-209	5052	A95052	—	25/9.5 [170/66]	Plate, Sheet	Al-2.5Mg
22	22.4	ASTM/ASME	B or SB-209	5154	A95154	—	30/11 [205/76]	Plate, Sheet	Al-3.5Mg
22	22.3	ASTM/ASME	B or SB-209	5252	A95252	—	25/9.5 [170/66]	Plate, Sheet	Al-2.5Mg
22	22.4	ASTM/ASME	B or SB-209	5254	A95254	—	30/11 [205/76]	Plate, Sheet	Al-3.5Mg
22	22.3	ASTM/ASME	B or SB-209	5454	A95454	—	31/12 [215/83]	Plate, Sheet	Al-2.7Mg-Mn
22	22.2	ASTM/ASME	B or SB-209	5457	A95457	—	16/ [110/]	Plate, Sheet	Al-1Mg-0.3Mn
22	22.3	ASTM/ASME	B or SB-209	5652	A95652	—	25/9.5 [170/66]	Plate, Sheet	Al-2.5Mg
22	22.2	ASTM	B210	5005	A95005	—	15/5 [105/34]	Smls. Tube	Al-1.5Mg
22	22.3	ASTM/ASME	B or SB-210	5052	A95052	—	25/10 [170/69]	Smls. Tube	Al-2.5Mg
22	22.4	ASTM/ASME	B or SB-210	5154	A95154	—	30/11 [205/76]	Smls. Tube	Al-3.5Mg
22	22.3	ASTM/ASME	B or SB-211	5052	A95052	—	25/9.5 [170/66]	Bar, Rod, Wire	Al-2.5Mg
22	22.4	ASTM/ASME	B or SB-211	5154	A95154	—	30/11 [205/76]	Bar, Rod, Wire	Al-3.5Mg
22	22.2	ASTM/ASME	B or SB-221	3004	A93004	—	23/8.5 [160/59]	Bar, Rod, Shape	Al-Mn-Mg
22	22.3	ASTM/ASME	B or SB-221	5052	A95052	—	25/10 [170/69]	Bar, Rod, Shape	Al-2.5Mg
22	22.4	ASTM/ASME	B or SB-221	5154	A95154	—	30/11 [205/76]	Bar, Rod, Shape	Al-3.5Mg
22	22.3	ASTM/ASME	B or SB-221	5454	A95454	—	31/12 [215/83]	Bar, Rod, Shape	Al-2.7Mg-Mn
22	22.3	ASTM/ASME	B or SB-234	5052	A95052	—	25/10 [170/69]	Smls. Tube	Al-2.5Mg
22	22.3	ASTM/ASME	B or SB-234	5454	A95454	—	31/12 [215/83]	Smls. Tube	Al-2.7Mg-Mn
22	22.3	ASTM/ASME	B or SB-241	5052	A95052	—	25/10 [170/69]	Smls. Pipe, Tube	Al-2.5Mg
22	22.3	ASTM/ASME	B or SB-241	5454	A95454	—	31/12 [215/83]	Smls. Pipe, Tube	Al-2.7Mg-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
22	—	ASTM	B313	Alclad 3004	—	—	21/8 [145/55]	Welded Tube	Al-Mn-Mg
22	22.2	ASTM	B313	3004	A93004	—	22/8.5 [150/59]	Welded Tube	Al-Mn-Mg
22	22.2	ASTM	B313	3005	A93005	—	17/6.5 [115/45]	Welded Tube	Al-Mn-Mg
22	22.3	ASTM	B313	5052	A95052	—	25/9.5 [170/66]	Welded Tube	Al-2.5Mg
22	22.4	ASTM	B313	5154	A95154	—	30/11 [205/76]	Welded Tube	Al-3.5Mg
22	22.3	ASTM	B361	5154	A95154	—	30/11 [205/76]	Fitting	Al-3.5Mg
22	22.2	ASTM	B396	5005	A95005	—	15/5 [105/34]	Wire	Al-1.5Mg
22	22.2	ASTM	B483	5005	A95005	—	15/5 [105/34]	Tube	Al-1.5Mg
22	22.3	ASTM	B483	5052	A95052	—	25/9.5 [170/66]	Tube	Al-2.5Mg
22	—	ASTM	B547	Alclad 3004	—	—	21/8 [145/55]	Welded Tube	Al-Mn-Mg
22	22.2	ASTM	B547	3004	A93004	—	22/8.5 [150/59]	Welded Tube	Al-Mn-Mg
22	22.3	ASTM	B547	5052	A95052	—	25/9.5 [170/66]	Welded Tube	Al-2.5Mg
22	22.4	ASTM	B547	5154	A95154	—	30/11 [205/76]	Welded Tube	Al-3.5Mg
22	22.3	ASTM	B547	5454	A95454	—	31/12 [215/83]	Welded Tube	Al-2.7Mg-Mn
23	—	ASTM/ASME	B or SB-209	Alclad 6061	—	—	24/ [165/]	Plate, Sheet	Al-Mg-Si-Cu
23	—	ASTM/ASME	B or SB-209	Alclad 6061	A86061	< 0.5 [13]	23/ [160/]	Plate, Sheet	Al-Mg-Si-Cu
23	—	ASTM/ASME	B or SB-209	Alclad 6061	A86061	≥ 0.5 [13]	24/ [165/]	Plate, Sheet	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-209	6061	A96061	—	24/ [165/]	Plate, Sheet	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-210	6061	A96061	—	24/ [165/]	Smls. Tube	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-210	6063	A96063	—	17/ [115/]	Smls. Tube	Al-Mg-Si
23	23.1	ASTM/ASME	B or SB-211	6061	A96061	—	24/ [165/]	Bar, Rod, Wire	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-221	6005	A96005	—	24/ [165/]	Bar, Rod, Shape	Al-Si-Mg
23	23.1	ASTM/ASME	B or SB-221	6005A	A96005	—	24/ [165/]	Bar, Rod, Shape	Al-Si-Mg
23	23.1	ASTM/ASME	B or SB-221	6061	A96061	—	24/ [165/]	Bar, Rod, Shape	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-221	6063	A96063	—	17/ [115/]	Bar, Rod, Shape	Al-Mg-Si
23	23.1	ASTM/ASME	B or SB-221	6105	A96105	—	24/ [165/]	Bar, Rod, Shape	Al-Si-Mg
23	23.1	ASTM/ASME	B or SB-221	6162	A96162	—	24/ [165/]	Bar, Rod, Shape	Al-Si-Mg
23	23.1	ASTM/ASME	B or SB-221	6351	A96351	—	24/ [165/]	Bar, Rod, Shape	Al-Si-Mg-Mn
23	23.1	ASTM/ASME	B or SB-221	6463	A96463	—	17/ [115/]	Bar, Rod, Shape	Al-Si-Mg
23	23.1	ASTM/ASME	B or SB-234	6061	A96061	—	24/ [165/]	Smls. Tube	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-241	6061	A96061	—	24/ [165/]	Smls. Pipe, Tube	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-241	6063	A96063	—	17/ [115/]	Smls. Pipe, Tube	Al-Mg-Si
23	23.1	ASTM/ASME	B or SB-241	6162	A96162	—	24/ [165/]	Smls. Pipe, Tube	Al-Si-Mg
23	23.1	ASTM/ASME	B or SB-241	6351	A96351	—	24/ [165/]	Smls. Pipe, Tube	Al-Si-Mg-Mn
23	23.1	ASTM/ASME	B or SB-247	6061	A96061	—	24/ [165/]	Forging	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B or SB-247	6151	A96151	—	24/ [165/]	Forging	Al-Mg-Si-Cr
23	23.1	ASTM/ASME	B or SB-308	6061	A96061	—	24/ [165/]	Shape	Al-Mg-Si-Cu
23	23.1	ASTM	B313	6061	A96061	—	24/ [165/]	Welded Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B317	6101	A96101	—	11/ [76/]	Bar, Rod, Shape, Tube	Al-Mg-Si
23	23.1	ASTM	B345	6061	A96061	—	24/ [165/]	Smls. Pipe, Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B345	6063	A96063	—	17/ [115/]	Smls. Pipe, Tube	Al-Mg-Si
23	23.1	ASTM	B345	6351	A96351	—	24/ [165/]	Smls. Pipe, Tube	Al-Si-Mg-Mn
23	23.1	ASTM	B361	WP6061	A96061	—	24/ [165/]	Fitting	Al-Mg-Si-Cu
23	23.1	ASTM	B361	WP6063	A96063	—	17/ [115/]	Fitting	Al-Mg-Si
23	23.1	ASTM	B429	6061	A96061	—	24/ [165/]	Pipe, Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B429	6063	A96063	—	17/ [115/]	Pipe, Tube	Al-Mg-Si
23	23.1	ASTM	B483	6061	A96061	—	24/ [165/]	Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B483	6063	A96063	—	17/ [115/]	Tube	Al-Mg-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
23	23.1	ASTM	B491	6063	A96063	—	17/ [115/]	Extruded Tube	Al-Mg-Si
23	23.1	ASTM	B547	6061	A96061	—	24/ [165/]	Welded Tube	Al-Mg-Si-Cu
23	23.1	ISO	ISO 209	6082, T4, T6	A96082	—	24/ [165/]	Bar, Rod, Shape, Tube	Al-1Si-Mg-Mn
24	—	ASTM/ASME	B or SB-209	Alclad 2014	A82014	—	35/ [240/]	Plate, Sheet	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	—	ASTM/ASME	B or SB-209	Alclad 2219	A82219	—	35/ [240/]	Plate, Sheet	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B or SB-209	2014	A92014	—	35/ [240/]	Plate, Sheet	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B or SB-209	2219	A92219	—	35/ [240/]	Plate, Sheet	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM	B210	2014	A92014	—	35/ [240/]	Smls. Tube	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B or SB-211	2014	A92014	—	35/ [240/]	Bar, Rod, Wire	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B or SB-211	2219	A92219	—	35/ [240/]	Bar, Rod, Wire	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B or SB-221	2014	A92014	—	35/ [240/]	Bar, Rod, Shape	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B or SB-221	2219	A92219	—	35/ [240/]	Bar, Rod, Shape	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B or SB-241	2014	A92014	—	35/ [240/]	Smls. Pipe, Tube	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B or SB-241	2219	A92219	—	35/ [240/]	Smls. Pipe, Tube	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B or SB-247	2014	A92014	—	35/ [240/]	Forging	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B or SB-247	2219	A92219	—	35/ [240/]	Forging	Al-6Cu-0.3Mn-Ti-Zr
25	22.4	ASTM/ASME	B or SB-209	5083	A95083	> 7 [180] ≤ 8 [200]	36/14 [250/97]	Plate	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5083	A95083	> 5 [125] ≤ 7 [180]	37/15 [255/105]	Plate	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5083	A95083	> 3 [75] ≤ 5 [125]	38/16 [260/110]	Plate	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5083	A95083	> 1.5 [38] ≤ 3 [75]	39/17 [270/115]	Plate	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5083	A95083	> 0.05 [1.3] ≤ 1.5 [38]	40/18 [275/125]	Plate, Sheet	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5086	A95086	—	35/14 [240/97]	Plate, Sheet	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5456	A95456	> 7 [180] ≤ 8 [200]	38/15 [260/105]	Plate	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5456	A95456	> 5 [125] ≤ 7 [180]	39/16 [270/110]	Plate	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5456	A95456	> 3 [75] ≤ 5 [125]	40/17 [275/115]	Plate	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5456	A95456	> 1.5 [38] ≤ 3 [75]	41/18 [285/125]	Plate	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-209	5456	A95456	> 0.05 [1.3] ≤ 1.5 [38]	42/19 [290/130]	Plate, Sheet	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-210	5083	A95083	—	39/16 [270/110]	Smls. Tube	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-210	5086	A95086	—	35/14 [240/97]	Smls. Tube	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B or SB-210	5456	A95456	—	41/19 [285/130]	Smls. Tube	Al-5.1Mg-Mn
25	—	ASTM/ASME	B or SB-211	Alclad 5056	—	—	37/ [255/]	Bar, Rod, Wire	Al-5Mg-Mn-Cr
25	22.4	ASTM/ASME	B or SB-211	5056	A95056	—	38/ [260/]	Bar, Rod, Wire	Al-5Mg-Mn-Cr
25	22.4	ASTM/ASME	B or SB-221	5083	A95083	—	39/16 [270/110]	Bar, Rod, Shape	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-221	5086	A95086	—	35/14 [240/97]	Bar, Rod, Shape	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B or SB-221	5456	A95456	—	41/19 [285/130]	Bar, Rod, Shape	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-241	5083	A95083	—	39/16 [270/110]	Smls. Pipe, Tube	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-241	5086	A95086	—	35/14 [240/97]	Smls. Pipe, Tube	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B or SB-241	5456	A95456	—	41/19 [285/130]	Smls. Pipe, Tube	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B or SB-247	5083	A95083	—	38/16 [260/110]	Forging	Al-4.4Mg-Mn
25	22.4	ASTM	B313	5086	A95086	—	35/14 [240/97]	Welded Tube	Al-4.0Mg-Mn
25	22.4	ASTM	B345	5083	A95083	—	39/16 [270/110]	Smls. Pipe, Tube	Al-4.4Mg-Mn
25	22.4	ASTM	B345	5086	A95086	—	35/14 [240/97]	Smls. Pipe, Tube	Al-4.0Mg-Mn
25	22.4	ASTM	B361	5083	A95083	—	39/16 [270/110]	Fitting	Al-4.4Mg-Mn
25	22.4	ASTM	B547	5083	A95083	—	40/18 [275/125]	Welded Tube	Al-4.4Mg-Mn
25	22.4	ASTM	B547	5086	A95086	—	35/14 [240/97]	Welded Tube	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B or SB-928	5083	A95083	> 1.5 [38] ≤ 3 [75]	39/16 [270/110]	Plate	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B or SB-928	5086	A95086	> 0.05 [1.3] ≤ 2 [50]	35/14 [240/97]	Plate, Sheet	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B or SB-928	5456	A95456	> 1.5 [38] ≤ 3 [75]	41/19 [285/130]	Plate	Al-5.1Mg-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
26	25	ASTM/ASME	B or SB-26	208.0	A02080	—	19/12 [130/83]	Casting	Al-3Si-4Cu
26	—	ASTM/ASME	B or SB-26	222.0, O	A02220	—	23/ [160/]	Casting	Al-Cu-Mg
26	—	ASTM/ASME	B or SB-26	222.0, T61	A02220	—	30/ [205/]	Casting	Al-Cu-Mg
26	25	ASTM/ASME	B or SB-26	319.0, F	A03190	—	23/13 [160/90]	Casting	Al-6Si-3Cu
26	25	ASTM/ASME	B or SB-26	319.0, T5	A03190	—	23/13 [160/90]	Casting	Al-6Si-3Cu
26	25	ASTM/ASME	B or SB-26	319.0, T6	A03190	—	31/20 [215/140]	Casting	Al-6Si-3Cu
26	25	ASTM/ASME	B or SB-26	328.0, F	A03280	—	25/14 [170/97]	Casting	Al-8Si-1Cu-Mn-Mg
26	25	ASTM/ASME	B or SB-26	328.0, T6	A03280	—	34/21 [235/145]	Casting	Al-8Si-1Cu-Mn-Mg
26	24.2	ASTM/ASME	B or SB-26	356.0, F	A03560	—	19/9.5 [130/66]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-26	356.0, T6	A03560	—	30/20 [205/140]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-26	356.0, T7	A03560	—	31/ [215/]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-26	356.0, T51	A03560	—	23/16 [160/110]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-26	356.0, T71	A03560	—	25/18 [170/125]	Casting	Al-Si-Mg
26	24.1	ASTM/ASME	B or SB-26	443.0	A04430	—	17/7 [115/48]	Casting	Al-Si
26	23.1	ASTM/ASME	B or SB-26	512.0	A05120	—	17/10 [115/69]	Casting	Al-4Mg-2Si
26	23.1	ASTM/ASME	B or SB-26	514.0	A05140	—	22/9 [150/62]	Casting	Al-4Mg-Si
26	—	ASTM/ASME	B or SB-26	535.0	A05350	—	35/18 [240/125]	Casting	Al-7Mg-Mn
26	23.2	ASTM/ASME	B or SB-26	705.0, T5	A07050	—	30/17 [205/115]	Casting	Al-3Zn-Mg-Mn-Cr
26	23.2	ASTM/ASME	B or SB-26	710.0, T5	A07100	—	32/20 [220/140]	Casting	Al-6Zn-Mg
26	24.2	ASTM/ASME	B or SB-26	A356.0, T6	A13560	—	34/24 [235/165]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-26	A356.0, T61	A13560	—	35/26 [240/180]	Casting	Al-Si-Mg
26	24.1	ASTM/ASME	B or SB-26	B443.0	A24430	—	17/6 [115/41]	Casting	Al-Si
26	25	ASTM/ASME	B or SB-108	308.0	A03080	—	24/ [165/]	Casting	Al-5.5Si-4.5Cu
26	25	ASTM/ASME	B or SB-108	319.0	A03190	—	27/14 [185/97]	Casting	Al-6Si-3Cu
26	25	ASTM/ASME	B or SB-108	333.0, F	A03330	—	28/ [195/]	Casting	Al-9Si-3.5Cu-Mg
26	25	ASTM/ASME	B or SB-108	333.0, T5	A03330	—	28/ [195/]	Casting	Al-9Si-3.5Cu-Mg
26	25	ASTM/ASME	B or SB-108	333.0, T6	A03330	—	28/ [195/]	Casting	Al-9Si-3.5Cu-Mg
26	25	ASTM/ASME	B or SB-108	333.0, T7	A03330	—	28/ [195/]	Casting	Al-9Si-3.5Cu-Mg
26	24.2	ASTM/ASME	B or SB-108	356.0, F	A03560	—	21/10 [145/69]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-108	356.0, T6	A03560	—	33/22 [230/150]	Casting	Al-Si-Mg
26	24.2	ASTM/ASME	B or SB-108	356.0, T71	A03560	—	23/ [160/]	Casting	Al-Si-Mg
26	24.1	ASTM/ASME	B or SB-108	443.0	A04430	—	21/7 [145/48]	Casting	Al-Si
26	23.2	ASTM/ASME	B or SB-108	513.0	A05130	—	22/12 [150/83]	Casting	Al-4Mg-Zn
26	—	ASTM/ASME	B or SB-108	535.0	A05350	—	35/18 [240/125]	Casting	Al-7Mg-Mn
26	24.2	ASTM/ASME	B or SB-108	A356.0	A13560	—	28/26 [195/180]	Casting	Al-Si-Mg
26	24.1	ASTM/ASME	B or SB-108	A444.0	A14440	—	17/ [115/]	Casting	Al-7Si
26	24.1	ASTM/ASME	B or SB-108	B443.0	A24430	—	21/6 [145/41]	Casting	Al-Si
26	25	ASTM	B618	208.0	A02080	—	19/12 [130/83]	Casting	Al-3Si-4Cu
26	25	ASTM	B618	319.0	A03190	—	23/13 [160/90]	Casting	Al-6Si-3Cu
26	25	ASTM	B618	328.0	A03280	—	25/14 [170/97]	Casting	Al-8Si-1Cu-Mn-Mg
26	24.2	ASTM	B618	356.0	A03560	—	19/ [130/]	Casting	Al-Si-Mg
26	24.1	ASTM	B618	443.0	A04430	—	17/7 [115/48]	Casting	Al-Si
26	23.1	ASTM	B618	514.0	A05140	—	22/9 [150/62]	Casting	Al-4Mg-Si
26	—	ASTM	B618	535.0	A05350	—	35/18 [240/125]	Casting	Al-7Mg-Mn
26	24.2	ASTM	B618	A356.0	A13560	—	34/24 [235/165]	Casting	Al-Si-Mg
26	24.1	ASTM	B618	B443.0	A24430	—	17/6 [115/41]	Casting	Al-Si
26	24.2	ASTM	B686	A356.0	A13560	—	23/ [160/]	Casting	Al-Si-Mg
27	23.2	ASTM/ASME	B or SB-221	7005	A97005	—	—	Bar, Rod, Shape	Al-Zn-Mg-Mn-Cr-Ti
27	23.2	ISO	ISO 209	7020, T5	A97020	—	40/ [275/]	Bar, Rod, Shape, Tube	Al-4.5Zn-1.2Mg-Mn-Cr-Zr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
31	31	ASTM/ASME	B or SB-42	—	C10200	—	30/9 [205/62]	Smls. Pipe	99.95Cu-P
31	31	ASTM/ASME	B or SB-42	—	C10300	—	30/9 [205/62]	Smls. Pipe	99.95Cu-P
31	31	ASTM/ASME	B or SB-42	—	C10800	—	30/9 [205/62]	Smls. Pipe	99.95Cu-P
31	31	ASTM/ASME	B or SB-42	—	C12000	—	30/9 [205/62]	Smls. Pipe	99.9Cu-P
31	31	ASTM/ASME	B or SB-42	—	C12200	—	30/9 [205/62]	Smls. Pipe	99.9Cu-P
31	31	ASTM	B68	—	C10200	—	30/9 [205/62]	Tube	99.95Cu-P
31	31	ASTM	B68	—	C10300	—	30/9 [205/62]	Tube	99.95Cu-P
31	31	ASTM	B68	—	C10800	—	30/9 [205/62]	Tube	99.95Cu-P
31	31	ASTM	B68	—	C12000	—	30/9 [205/62]	Tube	99.9Cu-P
31	31	ASTM	B68	—	C12200	—	30/9 [205/62]	Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-75	—	C10100	—	30/9 [205/62]	Smls. Tube	99.99Cu-P
31	31	ASTM/ASME	B or SB-75	—	C10200	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-75	—	C10300	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-75	—	C10800	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-75	—	C12000	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-75	—	C12200	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-75	—	C14200	—	30/9 [205/62]	Smls. Tube	99.40Cu-P
31	31	ASTM	B88	—	C10200	—	30/ [205/]	Tube	99.95Cu-P
31	31	ASTM	B88	—	C12000	—	30/ [205/]	Tube	99.9Cu-P
31	31	ASTM	B88	—	C12200	—	30/ [205/]	Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-111	—	C10100	—	30/9 [205/62]	Smls. Tube	99.99Cu-P
31	31	ASTM/ASME	B or SB-111	—	C10200	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-111	—	C10300	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-111	—	C10800	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-111	—	C12000	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-111	—	C12200	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-111	—	C14200	—	30/9 [205/62]	Smls. Tube	99.4Cu-As-P
31	31	ASTM/ASME	B or SB-111	—	C19200	—	38/12 [260/83]	Smls. Tube	99.7Cu-Fe-P
31	31	ASTM/ASME	B or SB-152	—	C10100	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.99Cu-P
31	31	ASTM/ASME	B or SB-152	—	C10200	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.95Cu-P
31	31	ASTM/ASME	B or SB-152	—	C10300	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.95Cu-P
31	31	ASTM/ASME	B or SB-152	—	C10400	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.95Cu + Ag
31	31	ASTM/ASME	B or SB-152	—	C10500	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.95Cu + Ag
31	31	ASTM/ASME	B or SB-152	—	C10700	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.95Cu + Ag
31	31	ASTM/ASME	B or SB-152	—	C10800	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.95Cu-P
31	31	ASTM/ASME	B or SB-152	—	C11000	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.90Cu
31	31	ASTM/ASME	B or SB-152	—	C12000	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.9Cu-P
31	31	ASTM/ASME	B or SB-152	—	C12200	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.9Cu-P
31	31	ASTM/ASME	B or SB-152	—	C12300	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.9Cu-P
31	31	ASTM/ASME	B or SB-152	—	C14200	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.4Cu-As-P
31	31	ASTM/ASME	B or SB-152	—	C14420	—	30/9 [205/62]	Plate, Sheet, Strip, Bar	99.99Cu-Sn-Te
31	31	ASTM	B170	1	C10100	—	30/9 [205/62]	Shape	99.99Cu-P
31	31	ASTM	B170	2	C10200	—	30/9 [205/62]	Shape	99.95Cu-P
31	31	ASTM/ASME	B or SB-187	—	C10100	—	28/8 [195/55]	Rod, Bar	99.99Cu-P
31	31	ASTM/ASME	B or SB-187	—	C10200	—	28/8 [195/55]	Rod, Bar	99.95Cu-P
31	31	ASTM/ASME	B or SB-187	—	C10300	—	28/8 [195/55]	Rod, Bar	99.95Cu-P
31	31	ASTM/ASME	B or SB-187	—	C10400	—	28/8 [195/55]	Rod, Bar	99.95Cu + Ag
31	31	ASTM/ASME	B or SB-187	—	C10700	—	28/8 [195/55]	Rod, Bar	99.95Cu + Ag

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
31	31	ASTM/ASME	B or SB-187	—	C10940	—	28/8 [195/55]	Rod, Bar	99.90Cu + Ag
31	31	ASTM/ASME	B or SB-187	—	C11000	—	28/8 [195/55]	Rod, Bar	99.9Cu
31	31	ASTM/ASME	B or SB-187	—	C14420	—	28/8 [195/55]	Rod, Bar	99.99Cu-Sn-Te
31	31	ASTM	B280	102	C10200	—	30/ [205/]	Smls. Tube	99.95Cu-P
31	31	ASTM	B280	120	C12000	—	30/ [205/]	Smls. Tube	99.9Cu-P
31	31	ASTM	B280	122	C12200	—	30/ [205/]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-283	Cu	C11000	—	33/11 [230/76]	Forging	99.9Cu
31	31	ASTM	B302	—	C12000	—	30/9 [205/62]	Pipe	99.9Cu-P
31	31	ASTM	B302	—	C12200	—	30/9 [205/62]	Pipe	99.9Cu-P
31	31	ASTM	B359	—	C10100	—	30/9 [205/62]	Smls. Tube	99.99Cu-P
31	31	ASTM	B359	—	C10200	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM	B359	—	C10300	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM	B359	—	C10800	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM	B359	—	C12000	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM	B359	—	C14200	—	30/9 [205/62]	Smls. Tube	99.40Cu-P
31	31	ASTM	B359	—	C19200	—	38/12 [260/83]	Smls. Tube	99.7Cu-Fe-P
31	31	ASTM/ASME	B or SB-359	—	C12200	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-395	—	C10200	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-395	—	C10300	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-395	—	C10800	—	30/9 [205/62]	Smls. Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-395	—	C12000	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-395	—	C12200	—	30/9 [205/62]	Smls. Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-395	—	C14200	—	30/9 [205/62]	Smls. Tube	99.4Cu-As-P
31	31	ASTM/ASME	B or SB-395	—	C19200	—	38/12 [260/83]	Smls. Tube	99.7Cu-Fe-P
31	31	ASTM/ASME	B or SB-543	—	C10800	—	30/9 [205/62]	Welded Tube	99.95Cu-P
31	31	ASTM/ASME	B or SB-543	—	C12200	—	30/9 [205/62]	Welded Tube	99.9Cu-P
31	31	ASTM/ASME	B or SB-543	—	C19400	—	45/15 [310/105]	Welded Tube	97.5Cu-P
32	32.2	ASTM	B21	—	C46400	> 2 [50]	50/20 [345/140]	Rod, Bar	60Cu-39Zn-Sn
32	32.2	ASTM	B21	—	C46400	> 1 [25] ≤ 2 [50]	52/20 [360/140]	Rod, Bar	60Cu-39Zn-Sn
32	32.2	ASTM	B21	—	C46400	—	52/20 [360/140]	Shape	60Cu-39Zn-Sn
32	32.2	ASTM	B21	—	C46400	≤ 1 [25]	54/20 [370/140]	Rod, Bar	60Cu-39Zn-Sn
32	32.1	ASTM/ASME	B or SB-43	—	C23000	—	40/12 [275/83]	Smls. Pipe	85Cu-15Zn
32	32.1	ASTM/ASME	B or SB-111	—	C23000	—	40/12 [275/83]	Smls. Tube	85Cu-15Zn
32	32.1	ASTM/ASME	B or SB-111	—	C28000	—	50/20 [345/140]	Smls. Tube	60Cu-40Zn
32	32.2	ASTM/ASME	B or SB-111	—	C44300	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B or SB-111	—	C44400	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B or SB-111	—	C44500	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B or SB-111	—	C68700	—	50/18 [345/125]	Smls. Tube	78Cu-20Zn-2Al
32	32.1	ASTM/ASME	B or SB-135	—	C22000	—	38/12 [260/83]	Smls. Tube	90Cu-10Zn
32	32.1	ASTM/ASME	B or SB-135	—	C23000	—	40/12 [275/83]	Smls. Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B or SB-171	—	C36500	> 3.5 [90] ≤ 5 [125]	40/12 [275/85]	Plate	60Cu-39Zn-Pb
32	32.2	ASTM/ASME	B or SB-171	—	C36500	> 2 [50] ≤ 3.5 [90]	45/15 [310/105]	Plate	60Cu-39Zn-Pb
32	32.2	ASTM/ASME	B or SB-171	—	C36500	≤ 2 [50]	50/20 [345/140]	Plate, Sheet	60Cu-39Zn-Pb
32	32.2	ASTM/ASME	B or SB-171	—	C44300	—	45/15 [310/105]	Plate, Sheet	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B or SB-171	—	C44400	—	45/15 [310/105]	Plate, Sheet	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B or SB-171	—	C44500	—	45/15 [310/105]	Plate, Sheet	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B or SB-171	—	C46400	—	50/18 [345/125]	Plate, Sheet	60Cu-39Zn-Sn
32	32.2	ASTM/ASME	B or SB-171	—	C46500	—	50/18 [345/125]	Plate, Sheet	60Cu-39Zn-As

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
32	32.2	ASTM/ASME	B or SB-283	Naval Brass	C46400	—	64/26 [440/180]	Forging	60Cu-39Zn-Sn
32	32.2	ASTM/ASME	B or SB-283	Mn Bronze	C67500	—	72/34 [495/235]	Forging	59Cu-39Zn-Fe-Sn
32	32.1	ASTM	B359	—	C23000	—	40/12 [275/83]	Smls. Tube	85Cu-15Zn
32	32.2	ASTM	B359	—	C68700	—	50/18 [345/125]	Smls. Tube	78Cu-20Zn-2Al
32	32.2	ASTM/ASME	B or SB-359	—	C44300	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B or SB-359	—	C44400	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B or SB-359	—	C44500	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06P
32	32.1	ASTM/ASME	B or SB-395	—	C23000	—	40/12 [275/83]	Smls. Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B or SB-395	—	C44300	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B or SB-395	—	C44400	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B or SB-395	—	C44500	—	45/15 [310/105]	Smls. Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B or SB-395	—	C68700	—	50/18 [345/125]	Smls. Tube	78Cu-20Zn-2Al
32	32.1	ASTM/ASME	B or SB-543	—	C23000	—	40/12 [275/83]	Welded Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B or SB-543	—	C44300	—	45/15 [310/105]	Welded Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B or SB-543	—	C44400	—	45/15 [310/105]	Welded Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B or SB-543	—	C44500	—	45/15 [310/105]	Welded Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B or SB-543	—	C68700	—	50/18 [345/125]	Welded Tube	78Cu-20Zn-2Al
33	37	ASTM/ASME	B or SB-96	—	C65100	—	38/ [260/]	Plate, Sheet, Strip, Bar	98.5Cu-1.5Si
33	37	ASTM/ASME	B or SB-96	—	C65400	—	65/ [450/]	Plate, Sheet, Strip, Bar	98.5Cu-3Si-1.5Sn-Cr
33	37	ASTM/ASME	B or SB-96	—	C65500	—	50/18 [345/125]	Plate, Sheet, Strip, Bar	97Cu-3Si
33	37	ASTM/ASME	B or SB-98	—	C65100	—	40/12 [275/83]	Rod, Bar, Shape	98.5Cu-1.5Si
33	37	ASTM/ASME	B or SB-98	—	C65500	—	52/15 [360/105]	Rod, Bar, Shape	97Cu-3Si
33	37	ASTM/ASME	B or SB-98	—	C66100	—	52/15 [360/105]	Rod, Bar, Shape	94Cu-3Si
33	31	ASTM/ASME	B or SB-283	—	C65500	—	50/15 [345/105]	Forging	97Cu-3Si
33	37	ASTM/ASME	B or SB-315	—	C65100	—	40/10 [275/69]	Smls. Pipe, Tube	98.5Cu-1.5Si
33	33	ASTM/ASME	B or SB-315	—	C65500	—	50/15 [345/105]	Smls. Pipe, Tube	97Cu-3Si
34	34	ASTM/ASME	B or SB-111	—	C70400	—	38/12 [260/83]	Smls. Tube	95Cu-5Ni
34	34	ASTM/ASME	B or SB-111	—	C70600	—	40/15 [275/105]	Smls. Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-111	—	C70620	—	40/15 [275/105]	Smls. Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-111	—	C71000	—	45/16 [310/110]	Smls. Tube	80Cu-20Ni
34	34	ASTM/ASME	B or SB-111	—	C71500	—	52/18 [360/125]	Smls. Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-111	—	C71520	—	52/18 [360/125]	Smls. Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-111	—	C71640	—	63/25 [435/170]	Smls. Tube	66Cu-30Ni-2Fe-2Mn
34	34	ASTM/ASME	B or SB-111	—	C72200	—	45/16 [310/110]	Smls. Tube	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B or SB-151	—	C70600	—	38/15 [260/105]	Rod, Bar	90Cu-10Ni
34	34	ASTM/ASME	B or SB-151	—	C70620	—	38/15 [260/105]	Rod, Bar	90Cu-10Ni
34	34	ASTM/ASME	B or SB-151	—	C71500	—	45/15 [310/105]	Bar (Rect.), Shape	70Cu-30Ni
34	34	ASTM/ASME	B or SB-151	—	C71500	> 1 [25]	45/18 [310/125]	Sq Bar, Rod (Rnd, Hex, Oct)	70Cu-30Ni
34	34	ASTM/ASME	B or SB-151	—	C71500	> 0.5 [13] ≤ 1 [25]	48/18 [330/125]	Sq Bar, Rod (Rnd, Hex, Oct)	70Cu-30Ni
34	34	ASTM/ASME	B or SB-151	—	C71500	≤ 0.5 [13]	52/18 [360/125]	Sq Bar, Rod (Rnd, Hex, Oct)	70Cu-30Ni
34	34	ASTM/ASME	B or SB-171	—	C70600	—	40/15 [275/105]	Plate, Sheet	90Cu-10Ni
34	34	ASTM/ASME	B or SB-171	—	C70620	—	40/15 [275/105]	Plate, Sheet	90Cu-10Ni
34	34	ASTM/ASME	B or SB-171	—	C71500	> 2.5 [65] ≤ 5 [125]	45/18 [310/125]	Plate	70Cu-30Ni
34	34	ASTM/ASME	B or SB-171	—	C71500	≤ 2.5 [65]	50/20 [345/140]	Plate, Sheet	70Cu-30Ni
34	34	ASTM/ASME	B or SB-171	—	C71520	> 2.5 [65] ≤ 5 [125]	45/18 [310/125]	Plate	70Cu-30Ni
34	34	ASTM/ASME	B or SB-171	—	C71520	≤ 2.5 [65]	50/20 [345/140]	Plate, Sheet	70Cu-30Ni
34	34	ASTM/ASME	B or SB-171	—	C72200	≤ 2.5 [64]	42/16 [290/110]	Plate, Sheet	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B or SB-283	—	C70620	> 6 [150]	40/15 [275/105]	Forging	90Cu-10Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
34	34	ASTM/ASME	B or SB-283	—	C70620	≤ 6 [150]	45/18 [310/125]	Forging	90Cu-10Ni
34	34	ASTM/ASME	B or SB-283	—	C71520	> 6 [150]	45/18 [310/125]	Forging	70Cu-30Ni
34	34	ASTM/ASME	B or SB-283	—	C71520	≤ 6 [150]	50/20 [345/140]	Forging	70Cu-30Ni
34	34	ASTM	B359	—	C70400	—	38/12 [260/83]	Smls. Tube	95Cu-5Ni
34	34	ASTM	B359	—	C72200	—	45/16 [310/110]	Smls. Tube	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B or SB-359	—	C70600	—	40/15 [275/105]	Smls. Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-359	—	C70620	—	40/15 [275/105]	Smls. Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-359	—	C71000	—	45/16 [310/110]	Smls. Tube	80Cu-20Ni
34	34	ASTM/ASME	B or SB-359	—	C71500	—	52/18 [360/125]	Smls. Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-359	—	C71520	—	52/18 [360/125]	Smls. Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-369	—	C96200	—	45/25 [310/170]	Casting	87.5Cu-10Ni-Fe-Mn
34	34	ASTM/ASME	B or SB-395	—	C70400	—	38/12 [260/83]	Smls. Tube	95Cu-5Ni
34	34	ASTM/ASME	B or SB-395	—	C70600	—	40/15 [275/105]	Smls. Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-395	—	C70620	—	40/15 [275/105]	Smls. Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-395	—	C71000	—	45/16 [310/110]	Smls. Tube	80Cu-20Ni
34	34	ASTM/ASME	B or SB-395	—	C71500	—	52/18 [360/125]	Smls. Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-395	—	C71520	—	52/18 [360/125]	Smls. Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-395	—	C72200	—	45/16 [310/110]	Smls. Tube	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B or SB-466	—	C70400	—	37/12 [255/83]	Smls. Pipe, Tube	95Cu-5Ni
34	34	ASTM/ASME	B or SB-466	—	C70600	—	38/13 [260/90]	Smls. Pipe, Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-466	—	C70620	—	38/13 [260/90]	Smls. Pipe, Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-466	—	C71000	—	45/16 [310/110]	Smls. Pipe, Tube	80Cu-20Ni
34	34	ASTM/ASME	B or SB-466	—	C71500	—	52/18 [360/125]	Smls. Pipe, Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-466	—	C71520	—	52/18 [360/125]	Smls. Pipe, Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-466	—	C72200	—	40/14 [275/97]	Smls. Pipe, Tube	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B or SB-467	—	C70600	> 4.5 [115] O.D.	38/13 [260/90]	Welded Pipe	90Cu-10Ni
34	34	ASTM/ASME	B or SB-467	—	C70600	≤ 4.5 [115] O.D.	40/15 [275/105]	Welded Pipe	90Cu-10Ni
34	34	ASTM/ASME	B or SB-467	—	C70620	> 4.5 [115] O.D.	38/13 [260/90]	Welded Pipe	90Cu-10Ni
34	34	ASTM/ASME	B or SB-467	—	C70620	≤ 4.5 [115] O.D.	40/15 [275/105]	Welded Pipe	90Cu-10Ni
34	34	ASTM/ASME	B or SB-467	—	C71500	> 4.5 [115] O.D.	45/15 [310/105]	Welded Pipe	70Cu-30Ni
34	34	ASTM/ASME	B or SB-467	—	C71500	≤ 4.5 [115] O.D.	50/20 [345/140]	Welded Pipe	70Cu-30Ni
34	34	ASTM/ASME	B or SB-467	—	C71520	> 4.5 [115] O.D.	45/15 [310/105]	Welded Pipe	70Cu-30Ni
34	34	ASTM/ASME	B or SB-467	—	C71520	≤ 4.5 [115] O.D.	50/20 [345/140]	Welded Pipe	70Cu-30Ni
34	34	ASTM	B543	—	C71000	—	45/16 [310/110]	Welded Tube	80Cu-20Ni
34	34	ASTM	B543	—	C72200	—	45/16 [310/110]	Welded Tube	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B or SB-543	—	C70400	—	38/12 [260/83]	Welded Tube	95Cu-5Ni
34	34	ASTM/ASME	B or SB-543	—	C70600	—	40/15 [275/105]	Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-543	—	C70620	—	40/15 [275/105]	Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-543	—	C71500	—	52/18 [360/125]	Welded Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-543	—	C71520	—	52/18 [360/125]	Welded Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-543	—	C71640	—	63/25 [435/170]	Welded Tube	66Cu-30Ni-2Fe-2Mn
34	34	ASTM	B608	—	C70620	—	40/ [275/]	Welded Pipe	87Cu-10Ni-1.4Fe
34	34	ASTM	B608	—	C71520	—	50/ [345/]	Welded Pipe	65Cu-31Ni-0.7Fe
34	34	ASTM/ASME	B or SB-956	—	C70600	—	40/15 [275/105]	Finned Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-956	—	C70620	—	40/15 [275/105]	Finned Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B or SB-956	—	C71500	—	52/18 [360/125]	Finned Welded Tube	70Cu-30Ni
34	34	ASTM/ASME	B or SB-956	—	C71520	—	52/18 [360/125]	Finned Welded Tube	70Cu-30Ni
35	35	ASTM/ASME	B or SB-111	—	C60800	—	50/19 [345/130]	Smls. Tube	95Cu-5Al

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
35	35	ASTM/ASME	B or SB-111	—	C61300	—	70/30 [485/205]	Smls. Tube	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-111	—	C61400	—	70/30 [485/205]	Smls. Tube	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-148	—	C95200	—	65/25 [450/170]	Casting	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-148	—	C95300	—	65/25 [450/170]	Casting	89Cu-10Al-1Fe
35	35	ASTM/ASME	B or SB-148	—	C95400	—	75/30 [515/205]	Casting	85Cu-11Al-4Fe
35	35	ASTM/ASME	B or SB-148	—	C95410	—	75/30 [515/205]	Casting	84Cu-10Al-4Fe-2Ni
35	35	ASTM/ASME	B or SB-148	—	C95500	—	90/40 [620/275]	Casting	82Cu-11Al-4Fe-3Mn
35	35	ASTM/ASME	B or SB-148	—	C95600	—	60/28 [415/195]	Casting	90Cu-7Al-3Si
35	35	ASTM/ASME	B or SB-148	—	C95700	—	90/40 [620/275]	Casting	75Cu-8Al-3Fe-2-Ni-12Mn
35	35	ASTM/ASME	B or SB-148	—	C95800	—	85/35 [585/240]	Casting	81Cu-9Al-5Ni-4Fe-1Mn
35	35	ASTM/ASME	B or SB-148	—	C95800	—	85/35 [585/240]	Casting	81Cu-9Al-4.5Ni-4Fe-1.2Mn
35	35	ASTM/ASME	B or SB-148	—	C95820	—	94/39 [650/270]	Casting	81Cu-9Al-5Ni-5Fe-1Mn
35	35	ASTM/ASME	B or SB-150	—	C61300	> 2 [50] ≤ 3 [75]	70/35 [485/240]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61300	> 1 [25] ≤ 2 [50]	70/32 [485/220]	Bar, Rod (Hex, Oct)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61300	> 1 [25] ≤ 2 [50]	72/40 [495/275]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61300	> 0.5 [13] ≤ 1 [25]	75/35 [515/240]	Bar, Rod (Hex, Oct)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61300	> 0.5 [13] ≤ 1 [25]	75/45 [515/310]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61300	≤ 0.5 [13]	80/40 [550/275]	Bar, Rod (Hex, Oct)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61300	≤ 0.5 [13]	80/50 [550/345]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-150	—	C61400	> 2 [50] ≤ 3 [75]	70/30 [485/205]	Bar, Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C61400	> 1 [25] ≤ 2 [50]	70/32 [485/220]	Bar, Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C61400	> 0.5 [13] ≤ 1 [25]	75/35 [515/240]	Bar, Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C61400	≤ 0.5 [13]	80/40 [550/275]	Bar, Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C61900	—	75/30 [515/205]	Shape	87Cu-9Al-4Fe
35	35	ASTM/ASME	B or SB-150	—	C61900	> 3 [75]	75/30 [515/205]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B or SB-150	—	C61900	> 2 [50] ≤ 3 [75]	78/37 [540/255]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B or SB-150	—	C61900	> 1 [25] ≤ 2 [50]	85/40 [585/275]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B or SB-150	—	C61900	> 0.5 [13] ≤ 1 [25]	88/44 [605/305]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B or SB-150	—	C61900	≤ 0.5 [13]	90/50 [620/345]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	> 2 [50]	75/30 [515/205]	Bar, Rod (Hex, Oct)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	—	75/30 [515/205]	Shape	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	> 3 [75]	75/30 [515/205]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	> 2 [50] ≤ 3 [75]	76/37 [525/255]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	> 1 [25] ≤ 2 [50]	78/32 [540/220]	Bar, Rod (Hex, Oct)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	≤ 1 [25]	80/35 [550/240]	Bar, Rod (Hex, Oct)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	> 1 [25] ≤ 2 [50]	84/40 [580/275]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	> 0.5 [13] ≤ 1 [25]	88/44 [605/305]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62300	≤ 0.5 [13]	90/50 [620/345]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62400	> 0.5 [13] ≤ 5 [125]	90/35 [620/240]	Bar, Rod (Hex, Oct)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62400	> 3 [75] ≤ 5 [125]	90/35 [620/240]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62400	> 1 [25] ≤ 2 [50]	90/43 [620/295]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62400	—	90/35 [620/240]	Shape	87Cu-10Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62400	> 2 [50] ≤ 3 [75]	90/40 [620/275]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C62400	≤ 1 [25]	95/45 [655/310]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B or SB-150	—	C63000	> 4 [100]	80/40 [550/275]	Bar, Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-150	—	C63000	—	85/42.5 [585/295]	Shape	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-150	—	C63000	> 2 [50] ≤ 4 [100]	85/42.5 [585/295]	Bar, Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-150	—	C63000	> 1 [25] ≤ 2 [50]	90/45 [620/310]	Bar, Rod	81Cu-10Al-5Ni-3Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
35	35	ASTM/ASME	B or SB-150	—	C63000	≥ 0.5 [13] ≤ 1 [25]	100/50 [690/345]	Bar, Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-150	—	C63020	> 1 [25] ≤ 2 [50]	130/95 [895/655]	Bar, Rod	80Cu-10Al-5Ni-5Fe
35	35	ASTM/ASME	B or SB-150	—	C63020	> 2 [50] ≤ 4 [100]	130/90 [895/620]	Bar, Rod	80Cu-10Al-5Ni-5Fe
35	35	ASTM/ASME	B or SB-150	—	C63020	≤ 1 [25]	135/100 [930/690]	Bar, Rod	80Cu-10Al-5Ni-5Fe
35	35	ASTM/ASME	B or SB-150	—	C63200	—	90/40 [620/275]	Bar, Rod, Shape	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B or SB-150	—	C64200	—	70/30 [485/205]	Shape	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-150	—	C64200	> 3 [75] ≤ 4 [100]	70/30 [485/205]	Bar, Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-150	—	C64200	> 4 [100]	70/25 [485/170]	Bar, Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-150	—	C64200	> 2 [50] ≤ 3 [75]	75/35 [515/240]	Bar, Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-150	—	C64200	> 1 [25] ≤ 2 [50]	80/42 [550/290]	Bar, Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-150	—	C64200	> 0.5 [13] ≤ 1 [25]	85/45 [585/310]	Bar, Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-150	—	C64200	≤ 0.5 [13]	90/45 [620/310]	Bar, Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-169	—	C61300	> 2 [51] ≤ 5 [127]	65/28 [450/195]	Plate, Sheet, Strip,Bar	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-169	—	C61300	> 0.5 [13] ≤ 2 [51]	72/32 [495/220]	Plate, Sheet, Strip,Bar	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-169	—	C61300	≤ 0.5 [13]	75/36 [515/250]	Plate, Sheet, Strip,Bar	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-169	—	C61400	> 2 [50] ≤ 5 [125]	65/28 [450/195]	Plate, Bar	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-169	—	C61400	> 0.5 [13] ≤ 2 [50]	70/30 [485/205]	Plate, Bar	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-169	—	C61400	≤ 0.5 [13]	72/32 [495/220]	Plate, Sheet, Strip,Bar	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-171	—	C61300	> 3 [80] ≤ 5 [130]	65/28 [450/195]	Plate, Sheet	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-171	—	C61300	> 2 [50] ≤ 3 [80]	70/30 [485/205]	Plate, Sheet	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-171	—	C61300	≤ 2 [50]	75/37 [515/255]	Plate, Sheet	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-171	—	C61400	> 2 [50] ≤ 5 [125]	65/26 [450/180]	Plate	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-171	—	C61400	≤ 2 [50]	70/28 [485/195]	Plate, Sheet	90Cu-7Al-3Fe
35	35	ASTM/ASME	B or SB-171	—	C63000	> 3.5 [90] ≤ 5 [125]	80/30 [550/205]	Plate	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-171	—	C63000	> 2 [50] ≤ 3.5 [90]	85/33 [585/230]	Plate	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-171	—	C63000	≤ 2 [50]	90/36 [620/250]	Plate, Sheet	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B or SB-171	—	C63200	> 3.5 [89] ≤ 5 [127]	80/30 [550/205]	Plate, Sheet	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B or SB-171	—	C63200	> 2 [51] ≤ 3.5 [89]	85/33 [585/230]	Plate, Sheet	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B or SB-171	—	C63200	≤ 2 [51]	90/36 [620/250]	Plate, Sheet	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B or SB-271	—	C95200	—	65/25 [450/170]	Casting	88Cu-9Al-3Fe
35	35	ASTM/ASME	B or SB-271	—	C95300	—	65/25 [450/170]	Casting	89Cu-10Al-1Fe
35	35	ASTM/ASME	B or SB-271	—	C95400	—	75/30 [515/205]	Casting	85Cu-11Al-4Fe
35	35	ASTM/ASME	B or SB-271	—	C95410	—	75/30 [515/205]	Casting	84Cu-10Al-4Fe-2Ni
35	35	ASTM/ASME	B or SB-271	—	C95500	—	90/40 [620/275]	Casting	82Cu-11Al-4Fe-3Mn
35	35	ASTM/ASME	B or SB-283	—	C64200	> 1.5 [40]	68/23 [470/160]	Forging	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-283	—	C64200	≤ 1.5 [40]	70/25 [485/170]	Forging	91Cu-7Al-2Si
35	35	ASTM/ASME	B or SB-315	—	C61300	—	65/28 [450/195]	Smls. Pipe, Tube	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B or SB-315	—	C61400	—	65/28 [450/195]	Smls. Pipe, Tube	90Cu-7Al-3Fe
35	35	ASTM	B359	—	C60800	—	50/19 [345/130]	Smls. Tube	95Cu-5Al
35	35	ASTM/ASME	B or SB-395	—	C60800	—	50/19 [345/130]	Smls. Tube	95Cu-5Al
35	35	ASTM/ASME	B or SB-505	—	C95200	—	68/26 [470/180]	Casting	88Cu-9Al-3Fe
35	35	ASTM	B608	—	C61300	—	70/ [485/]	Welded Pipe	90Cu-7Al-2.5Fe-Sn
35	35	ASTM	B608	—	C61400	—	70/ [485/]	Welded Pipe	90Cu-7Al-3Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
41	41	ASTM/ASME	B or SB-160	—	N02200	—	55/15 [380/105]	Rod, Bar	99.0Ni
41	41	ASTM/ASME	B or SB-160	—	N02201	—	50/10 [345/69]	Rod, Bar	99.0Ni-Low C
41	41	ASTM/ASME	B or SB-161	—	N02200	—	55/12 [380/83]	Smls. Pipe, Tube	99.0Ni
41	41	ASTM/ASME	B or SB-161	—	N02201	—	50/10 [345/69]	Smls. Pipe, Tube	99.0Ni-Low C
41	41	ASTM/ASME	B or SB-162	—	N02200	—	55/15 [380/105]	Plate, Sheet, Strip	99.0Ni
41	41	ASTM/ASME	B or SB-162	—	N02201	—	50/12 [345/83]	Plate, Sheet, Strip	99.0Ni-Low C
41	41	ASTM/ASME	B or SB-163	—	N02200	—	55/15 [380/105]	Smls. Tube	99.0Ni
41	41	ASTM/ASME	B or SB-163	—	N02201	—	50/12 [345/83]	Smls. Tube	99.0Ni-Low C
41	41	ASTM/ASME	B or SB-366	—	N02200	—	55/15 [380/105]	Fitting	99.0Ni
41	41	ASTM/ASME	B or SB-366	—	N02201	—	50/10 [345/69]	Fitting	99.0Ni-Low C
41	41	ASTM/ASME	B or SB-564	—	N02200	—	55/15 [380/105]	Forging	99.0Ni
41	41	ASTM	B725	—	N02200	—	55/12 [380/83]	Welded Pipe	99.0Ni
41	41	ASTM	B725	—	N02201	—	50/12 [345/80]	Welded Pipe	99.0Ni-Low C
41	41	ASTM	B730	—	N02200	—	55/15 [380/105]	Welded Tube	99.0Ni
41	41	ASTM	B730	—	N02201	—	50/12 [345/80]	Welded Tube	99.0Ni-Low C
42	42	ASTM/ASME	A or SA-494	M35-2	N04020	—	65/30 [450/205]	Casting	67Ni-30Cu-Fe-Si
42	42	ASTM/ASME	A or SA-494	M30C	N24130	—	65/32.5 [450/225]	Casting	67Ni-30Cu-2Fe-Cb
42	42	ASTM/ASME	A or SA-494	M35-1	N24135	—	65/25 [450/170]	Casting	67Ni-30Cu-2Fe-Cb
42	42	ASTM/ASME	B or SB-127	—	N04400	—	70/28 [485/195]	Plate, Sheet, Strip	67Ni-30Cu
42	42	ASTM/ASME	B or SB-163	—	N04400	—	70/28 [485/195]	Smls. Tube	67Ni-30Cu
42	42	ASTM/ASME	B or SB-164	—	N04400	—	70/25 [485/170]	Rod, Bar, Wire	67Ni-30Cu
42	42	ASTM/ASME	B or SB-164	—	N04405	—	70/25 [485/170]	Rod, Bar, Wire	67Ni-30Cu
42	42	ASTM/ASME	B or SB-165	—	N04400	—	70/25 [485/170]	Smls. Pipe, Tube	67Ni-30Cu
42	42	ASTM/ASME	B or SB-366	—	N04400	—	70/25 [485/170]	Fitting	67Ni-30Cu
42	42	ASTM/ASME	B or SB-564	—	N04400	—	70/25 [485/170]	Forging	67Ni-30Cu
42	42	ASTM	B725	—	N04400	—	70/28 [485/195]	Welded Pipe	67Ni-30Cu
42	42	ASTM	B730	—	N04400	—	70/28 [485/195]	Welded Tube	67Ni-30Cu
43	43	ASTM/ASME	A or SA-494	CY40	N06040	—	70/28 [485/195]	Casting	72Ni-15Cr-8Fe-Si
43	43	ASTM/ASME	A or SA-494	CX2MW	N26022	—	80/45 [550/310]	Casting	59Ni-22Cr-14Mo-4Fe-3W
43	43	ASTM/ASME	A or SA-494	CW2M	N26455	—	72/40 [495/275]	Casting	66Ni-16Mo-16Cr-Fe-W
43	43	ASTM/ASME	A or SA-494	CW6MC	N26625	—	70/40 [485/275]	Casting	60Ni-21.5Cr-9Mo-4Cb-Fe
43	43	ASTM/ASME	B or SB-163	—	N06025	—	98/39 [675/270]	Smls. Tube	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-163	—	N06600	—	80/35 [550/240]	Smls. Tube	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-163	—	N06601	—	80/30 [550/205]	Smls. Tube	60Ni-23Cr-12Fe-Al
43	43	ASTM/ASME	B or SB-163	—	N06690	—	85/35 [585/240]	Smls. Tube	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B or SB-166	—	N06025	—	98/39 [675/270]	Rod, Bar, Wire	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-166	—	N06600	—	80/35 [550/240]	Rod, Bar, Wire	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-166	—	N06601	—	80/30 [550/205]	Rod, Bar, Wire	60Ni-23Cr-12Fe-Al
43	46	ASTM/ASME	B or SB-166	—	N06617	—	95/35 [655/240]	Rod, Bar, Wire	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B or SB-166	—	N06690	—	85/35 [585/240]	Rod, Bar, Wire	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B or SB-167	—	N06025	—	98/39 [675/270]	Smls. Pipe, Tube	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-167	—	N06600	—	75/25 [515/170]	Smls. Pipe, Tube	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-167	—	N06601	—	80/30 [550/205]	Smls. Pipe, Tube	60Ni-23Cr-12Fe-Al
43	46	ASTM/ASME	B or SB-167	—	N06617	—	95/35 [655/240]	Smls. Pipe, Tube	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B or SB-167	—	N06690	—	75/25 [515/175]	Smls. Pipe, Tube	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B or SB-168	—	N06025	—	98/39 [675/270]	Plate, Sheet, Strip	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-168	—	N06600	—	80/35 [550/240]	Plate, Sheet, Strip	72Ni-15Cr-8Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
43	43	ASTM/ASME	B or SB-168	—	N06601	—	80/30 [550/205]	Plate, Sheet, Strip	60Ni-23Cr-12Fe-Al
43	46	ASTM/ASME	B or SB-168	—	N06617	—	95/35 [655/240]	Plate, Sheet, Strip	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B or SB-168	—	N06690	—	85/35 [585/240]	Plate, Sheet, Strip	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B or SB-366	—	N06002	—	100/40 [690/275]	Fitting	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B or SB-366	—	N06022	—	100/45 [690/310]	Fitting	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-366	—	N06025	—	98/39 [675/270]	Fitting	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-366	—	N06035	—	85/35 [585/240]	Fitting	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-366	—	N06059	—	100/45 [690/310]	Fitting	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-366	—	N06200	—	100/45 [690/310]	Fitting	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-366	—	N06210	—	100/45 [690/310]	Fitting	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-366	—	N06230	—	110/45 [760/310]	Fitting	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-366	—	N06455	—	100/40 [690/275]	Fitting	61Ni-15Mo-16Cr
43	43	ASTM/ASME	B or SB-366	—	N06600	—	80/35 [550/240]	Fitting	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-366	—	N06603	—	94/43 [650/295]	Fitting	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	43	ASTM/ASME	B or SB-366	—	N06625	—	100/55 [690/380]	Fitting	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-366	—	N10276	—	100/41 [690/285]	Fitting	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-366	—	N10362	—	105/45 [725/310]	Fitting	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-435	—	N06002	—	95/35 [655/240]	Plate, Sheet, Strip	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B or SB-435	—	N06230	—	110/45 [760/310]	Plate, Sheet, Strip	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-443	1	N06625	—	110/55 [760/380]	Plate, Hot-Rolled Sheet	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-443	1	N06625	—	120/60 [825/415]	Cold-Rolled Sheet Strip	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-443	2	N06625	—	100/40 [690/275]	Plate, Sheet, Strip	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-444	1	N06625	—	120/60 [825/415]	Smls. Pipe, Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-444	2	N06625	—	100/40 [690/275]	Smls. Pipe, Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-446	1	N06625	≥ 4 [100] ≤ 10 [250] diam.	100/50 [690/345]	Rod, Bar	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-446	1	N06625	< 4 [100] diam.	120/60 [825/415]	Rod, Bar	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-446	2	N06625	—	100/40 [690/275]	Rod, Bar	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-462	—	N06022	—	100/45 [690/310]	Forging	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-462	—	N06035	—	85/35 [585/240]	Forging	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-462	—	N06059	—	100/45 [690/310]	Forging	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-462	—	N06200	—	100/45 [690/310]	Forging	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-462	—	N06686	—	100/45 [690/310]	Forging	58Ni-21Cr-16Mo-3.5N
43	43	ASTM/ASME	B or SB-462	—	N10276	—	100/41 [690/285]	Forging	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-462	—	N10362	—	105/45 [725/310]	Forging	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-516	—	N06025	—	98/39 [675/270]	Welded Tube	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-516	—	N06600	—	80/35 [550/240]	Welded Tube	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-516	—	N06603	—	94/43 [650/295]	Welded Tube	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	43	ASTM/ASME	B or SB-517	—	N06025	—	98/39 [675/270]	Welded Pipe	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-517	—	N06600	—	80/35 [550/240]	Welded Pipe	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-517	—	N06603	—	94/43 [650/295]	Welded Pipe	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	43	ASTM/ASME	B or SB-564	—	N06022	—	100/45 [690/310]	Forging	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-564	—	N06025	> 4 [100] ≤ 12 [300]	84/39 [580/270]	Forging	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-564	—	N06025	≤ 4 [100]	98/39 [675/270]	Forging	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B or SB-564	—	N06035	—	85/35 [585/240]	Forging	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-564	—	N06059	—	100/45 [690/310]	Forging	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-564	—	N06110	> 4 [102] ≤ 10 [254]	90/40 [620/275]	Forging	51Ni-30Cr-10Mo-W
43	43	ASTM/ASME	B or SB-564	—	N06110	≤ 4 [102]	95/45 [655/310]	Forging	51Ni-30Cr-10Mo-W

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
43	43	ASTM/ASME	B or SB-564	—	N06200	—	100/45 [690/310]	Forging	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-564	—	N06210	—	100/45 [690/310]	Forging	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-564	—	N06230	—	110/45 [760/310]	Forging	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-564	—	N06600	—	80/35 [550/240]	Forging	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B or SB-564	—	N06603	—	94/43 [650/295]	Forging	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	46	ASTM/ASME	B or SB-564	—	N06617	—	95/35 [655/240]	Forging	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B or SB-564	—	N06625	> 4 [100] ≤ 10 [250]	110/50 [760/345]	Forging	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-564	—	N06625	≤ 4 [100]	120/60 [825/415]	Forging	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-564	—	N06686	—	100/45 [690/310]	Forging	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B or SB-564	—	N06690	—	85/35 [585/240]	Forging	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B or SB-564	—	N10276	—	100/41 [690/285]	Forging	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-564	—	N10362	—	105/45 [725/310]	Forging	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-572	—	N06002	—	95/35 [655/240]	Rod	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B or SB-572	—	N06230	—	110/45 [760/310]	Rod	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-574	—	N06022	—	100/45 [690/310]	Rod	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-574	—	N06035	—	85/35 [585/240]	Rod	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-574	—	N06059	—	100/45 [690/310]	Rod	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-574	—	N06200	—	100/45 [690/310]	Rod	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-574	—	N06210	—	100/45 [690/310]	Rod	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-574	—	N06455	—	100/40 [690/275]	Rod	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B or SB-574	—	N06686	—	100/45 [690/310]	Rod	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B or SB-574	—	N10276	—	100/41 [690/285]	Rod	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-574	—	N10362	—	105/45 [725/310]	Rod	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-575	—	N06022	—	100/45 [690/310]	Plate, Sheet, Strip	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-575	—	N06035	—	85/35 [585/240]	Plate, Sheet, Strip	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-575	—	N06059	—	100/45 [690/310]	Plate, Sheet, Strip	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-575	—	N06200	—	100/45 [690/310]	Plate, Sheet, Strip	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-575	—	N06210	—	100/45 [690/310]	Plate, Sheet, Strip	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-575	—	N06455	—	100/40 [690/275]	Plate, Sheet, Strip	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B or SB-575	—	N06686	—	100/45 [690/310]	Plate, Sheet, Strip	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B or SB-575	—	N10276	—	100/41 [690/285]	Plate, Sheet, Strip	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-575	—	N10362	—	105/45 [725/310]	Plate, Sheet, Strip	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-619	—	N06002	—	100/40 [690/275]	Welded Pipe	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B or SB-619	—	N06022	—	100/45 [690/310]	Welded Pipe	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-619	—	N06035	—	85/35 [585/240]	Welded Pipe	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-619	—	N06059	—	100/45 [690/310]	Welded Pipe	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-619	—	N06200	—	100/45 [690/310]	Welded Pipe	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-619	—	N06210	—	100/45 [690/310]	Welded Pipe	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-619	—	N06230	—	110/45 [760/310]	Welded Pipe	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-619	—	N06455	—	100/40 [690/275]	Welded Pipe	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B or SB-619	—	N06686	—	100/45 [690/310]	Welded Pipe	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B or SB-619	—	N10276	—	100/41 [690/285]	Welded Pipe	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-619	—	N10362	—	105/45 [725/310]	Welded Pipe	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-622	—	N06002	—	100/40 [690/275]	Smls. Pipe, Tube	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B or SB-622	—	N06022	—	100/45 [690/310]	Smls. Pipe, Tube	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-622	—	N06035	—	85/35 [585/240]	Smls. Pipe, Tube	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-622	—	N06059	—	100/45 [690/310]	Smls. Pipe, Tube	59Ni-23Cr-16Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
43	43	ASTM/ASME	B or SB-622	—	N06060	—	90/35 [620/240]	Smls. Pipe, Tube	57Ni-21Cr-13Mo-6Fe-Cu-(Cb+Ta)
43	43	ASTM/ASME	B or SB-622	—	N06200	—	100/45 [690/310]	Smls. Pipe, Tube	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-622	—	N06210	—	100/45 [690/310]	Smls. Pipe, Tube	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-622	—	N06230	—	110/45 [760/310]	Smls. Pipe, Tube	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-622	—	N06250	—	90/35 [620/240]	Smls. Pipe, Tube	52Ni-21Cr-13Fe-11Mo-W-Cu
43	43	ASTM/ASME	B or SB-622	—	N06255	—	85/32 [585/220]	Smls. Pipe, Tube	50Ni-24Cr-17Fe-7Mo-W
43	43	ASTM/ASME	B or SB-622	—	N06455	—	100/40 [690/275]	Smls. Pipe, Tube	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B or SB-622	—	N06686	—	100/45 [690/310]	Smls. Pipe, Tube	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B or SB-622	—	N10276	—	100/41 [690/285]	Smls. Pipe, Tube	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-622	—	N10362	—	105/45 [725/310]	Smls. Pipe, Tube	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-626	—	N06002	—	100/40 [690/275]	Welded Tube	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B or SB-626	—	N06022	—	100/45 [690/310]	Welded Tube	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B or SB-626	—	N06035	—	85/35 [585/240]	Welded Tube	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B or SB-626	—	N06059	—	100/45 [690/310]	Welded Tube	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B or SB-626	—	N06200	—	100/45 [690/310]	Welded Tube	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B or SB-626	—	N06210	—	100/45 [690/310]	Welded Tube	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B or SB-626	—	N06230	—	110/45 [760/310]	Welded Tube	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B or SB-626	—	N06455	—	100/40 [690/275]	Welded Tube	61Ni-16Mo-16Cr
43	46	ASTM/ASME	B or SB-626	—	N06617	—	95/35 [655/240]	Welded Tube	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B or SB-626	—	N06686	—	100/45 [690/310]	Welded Tube	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B or SB-626	—	N10276	—	100/41 [690/285]	Welded Tube	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B or SB-626	—	N10362	—	105/45 [725/310]	Welded Tube	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B or SB-704	1	N06625	—	120/60 [825/415]	Welded Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-704	2	N06625	—	100/40 [690/275]	Welded Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-705	1	N06625	—	120/60 [825/415]	Welded Pipe	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B or SB-705	2	N06625	—	100/40 [690/275]	Welded Pipe	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM	B755	—	N06110	—	95/45 [655/310]	Plate, Sheet, Strip	51Ni-30Cr-10Mo-W
43	43	ASTM	B756	—	N06110	> 4 [102] ≤ 10 [254]	90/40 [620/275]	Rod, Bar	51Ni-30Cr-10Mo-W
43	43	ASTM	B756	—	N06110	≤ 4 [102]	95/45 [655/310]	Rod, Bar	51Ni-30Cr-10Mo-W
43	43	ASTM	B757	—	N06110	—	95/45 [655/310]	Welded Pipe	51Ni-30Cr-10Mo-W
43	43	ASTM	B758	—	N06110	—	95/45 [655/310]	Welded Tube	51Ni-30Cr-10Mo-W
43	43	ASTM	B759	—	N06110	—	95/45 [655/310]	Smls. Pipe, Tube	51Ni-30Cr-10Mo-W
44	43	AMS	AMS 5711	—	N06635	—	185/120 [1275/825]	Sheet	62Ni-16Cr-15Mo-3Fe-2Co-1W-Mn-Si-Al
44	44	ASTM/ASME	A or SA-494	N7M	N30007	—	76/40 [525/275]	Casting	65Ni-31.5Mo-1.5Fe-Cr
44	44	ASTM/ASME	A or SA-494	CW6M	N30107	—	72/40 [495/275]	Casting	56Ni-19Mo-18Cr-2Fe
44	44	ASTM/ASME	B or SB-333	—	N10001	≥ 0.187 [5] ≤ 2.5 [65]	100/45 [690/310]	Plate, Sheet, Strip	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-333	—	N10001	< 0.187 [5]	115/50 [795/345]	Sheet, Strip	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-333	—	N10624	—	104/46 [715/315]	Plate, Sheet, Strip	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B or SB-333	—	N10629	—	110/51 [760/350]	Plate, Sheet, Strip	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-333	—	N10665	—	110/51 [760/350]	Plate, Sheet, Strip	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-333	—	N10675	—	110/51 [760/350]	Plate, Sheet, Strip	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B or SB-335	—	N10001	> 1.5 [38] ≤ 3.5 [90]	100/46 [690/315]	Rod	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-335	—	N10001	≥ 0.3125 [8] ≤ 1.5 [38]	115/46 [795/315]	Rod	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-335	—	N10624	—	104/46 [715/315]	Rod	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B or SB-335	—	N10629	—	110/51 [760/350]	Rod	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-335	—	N10665	—	110/51 [760/350]	Rod	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-335	—	N10675	—	110/51 [760/350]	Rod	65Ni-29.5Mo-2Fe-2Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
44	44	ASTM/ASME	B or SB-366	—	N10001	—	100/45 [690/310]	Fitting	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-366	—	N10003	—	100/40 [690/275]	Fitting	70Ni-16Mo-7Cr-5Fe
44	44	ASTM/ASME	B or SB-366	—	N10242	—	105/45 [725/310]	Fitting	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-366	—	N10624	—	104/46 [715/315]	Fitting	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B or SB-366	—	N10629	—	110/51 [760/350]	Fitting	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-366	—	N10665	—	110/51 [760/350]	Fitting	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-366	—	N10675	—	110/51 [760/350]	Fitting	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B or SB-434	—	N10003	—	100/40 [690/275]	Plate, Sheet, Strip	70Ni-16Mo-7Cr-5Fe
44	44	ASTM/ASME	B or SB-434	—	N10242	—	105/45 [725/310]	Plate, Sheet, Strip	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-462	—	N10629	—	110/51 [760/350]	Forging	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-462	—	N10665	—	110/51 [760/350]	Forging	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-462	—	N10675	—	110/51 [760/350]	Forging	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B or SB-564	—	N10242	—	105/45 [725/310]	Forging	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-564	—	N10624	—	104/46 [715/315]	Forging	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B or SB-564	—	N10629	—	110/51 [760/350]	Forging	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-564	—	N10665	—	110/51 [760/350]	Forging	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-564	—	N10675	—	110/51 [760/350]	Forging	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B or SB-573	—	N10003	—	100/40 [690/275]	Rod	70Ni-16Mo-7Cr-5Fe
44	44	ASTM/ASME	B or SB-573	—	N10242	—	105/45 [725/310]	Rod	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-619	—	N10001	—	100/45 [690/310]	Welded Pipe	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-619	—	N10242	—	105/45 [725/310]	Welded Pipe	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-619	—	N10624	—	104/46 [715/315]	Welded Pipe	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B or SB-619	—	N10629	—	110/51 [760/350]	Welded Pipe	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-619	—	N10665	—	110/51 [760/350]	Welded Pipe	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-619	—	N10675	—	110/51 [760/350]	Welded Pipe	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B or SB-622	—	N10001	—	100/45 [690/310]	Smls. Pipe, Tube	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-622	—	N10242	—	105/45 [725/310]	Smls. Pipe, Tube	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-622	—	N10624	—	104/46 [715/315]	Smls. Pipe, Tube	60Ni-23Mo-8Cr-7Fe
44	44	ASTM/ASME	B or SB-622	—	N10629	—	110/51 [760/350]	Smls. Pipe, Tube	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-622	—	N10665	—	110/51 [760/350]	Smls. Pipe, Tube	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-622	—	N10675	—	110/51 [760/350]	Smls. Pipe, Tube	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B or SB-626	—	N10001	—	100/45 [690/310]	Welded Tube	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B or SB-626	—	N10242	—	105/45 [725/310]	Welded Tube	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B or SB-626	—	N10624	—	104/46 [715/315]	Welded Tube	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B or SB-626	—	N10629	—	110/51 [760/350]	Welded Tube	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B or SB-626	—	N10665	—	110/51 [760/350]	Welded Tube	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B or SB-626	—	N10675	—	110/51 [760/350]	Welded Tube	65Ni-29.5Mo-2Fe-2Cr
45	8.2	ASTM/ASME	A or SA-182	—	N08367	—	95/45 [655/310]	Forging	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-182	F904L	N08904	—	71/31 [490/215]	Forging	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A or SA-182	F58	S31266	—	109/61 [750/420]	Forging	24Cr-22Ni-6Mo-3Mn-Cu-W-N
45	8.2	ASTM/ASME	A or SA-240	—	N08367	≥ 0.187 [5]	95/45 [655/310]	Plate	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-240	—	N08367	< 0.187 [5]	100/45 [690/310]	Sheet, Strip	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-240	904L	N08904	—	71/31 [490/215]	Plate, Sheet, Strip	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A or SA-240	—	S31266	—	109/61 [750/420]	Plate, Sheet, Strip	24Cr-22Ni-6Mo-3Mn-Cu-W-N
45	8.2	ASTM/ASME	A or SA-240	S31277	S31277	—	112/52 [770/360]	Plate, Sheet, Strip	27Ni-22Cr-7Mo-Mn-Cu
45	8.2	ASTM/ASME	A or SA-249	—	N08367	> 0.187 [5]	95/45 [655/310]	Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-249	—	N08367	≤ 0.187 [5]	100/45 [690/310]	Welded Tube	46Fe-24Ni-21Cr-6Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
45	8.2	ASTM/ASME	A or SA-249	—	N08904	—	71/31 [490/215]	Welded Tube	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A or SA-312	N08367	N08367	> 0.187 [5]	95/45 [655/310]	Smls. & Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-312	N08367	N08367	≤ 0.187 [5]	100/45 [690/310]	Smls. & Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-312	—	N08904	—	71/31 [490/215]	Smls. & Welded Pipe	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A or SA-351	CN3MN	J94651	—	80/38 [550/260]	Casting	46Fe-24Ni-21Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	A or SA-351	CN7M	N08007	—	62/25 [425/170]	Casting	28Ni-19Cr-Cu-Mo
45	45	ASTM/ASME	A or SA-351	CT15C	N08151	—	63/25 [435/170]	Casting	32Ni-45Fe-20Cr-Cb
45	45	ASTM/ASME	A or SA-351	HT30	N08603	—	65/28 [450/195]	Casting	35Ni-15Cr-0.5Mo
45	8.2	ASTM/ASME	A or SA-358	N08367	N08367	≥ 0.187 [5]	95/45 [655/310]	Fusion Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-358	N08367	N08367	< 0.187 [5]	100/45 [690/310]	Fusion Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-358	—	S31266	—	109/61 [750/420]	Fusion Welded Pipe	24Cr-22Ni-6Mo-3Mn-Cu-W-N
45	8.2	ASTM	A403	—	N08367	—	95/45 [655/310]	Wrought Piping Fitting	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-403	—	N08904	—	71/31 [490/215]	Wrought Piping Fitting	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A or SA-479	—	N08367	—	95/45 [655/310]	Bar, Shape	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-479	904L	N08904	—	71/31 [490/215]	Bar, Shape	44Fe-25Ni-21Cr-Mo
45	45	ASTM/ASME	A or SA-494	CU5MCuC	N08826	—	75/35 [515/240]	Casting	42Ni-21.5Cr-3Mo-2.3Cu
45	8.2	ASTM/ASME	A or SA-813	N08367	N08367	> 0.187 [5]	95/45 [655/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-813	N08367	N08367	≤ 0.187 [5]	100/45 [690/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-814	N08367	N08367	> 0.187 [5]	95/45 [655/310]	Cold-Worked Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A or SA-814	N08367	N08367	≤ 0.187 [5]	100/45 [690/310]	Cold-Worked Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B or SB-163	—	N08120	—	90/40 [620/275]	Smls. Tube	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B or SB-163	—	N08800	—	75/30 [515/205]	Smls. Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-163	—	N08801	—	65/25 [450/170]	Smls. Tube	32Ni-45Fe-20.5Cr-Ti
45	45	ASTM/ASME	B or SB-163	—	N08810	—	65/25 [450/170]	Smls. Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-163	—	N08811	—	65/25 [450/170]	Smls. Tube	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-163	—	N08825	—	85/35 [585/240]	Smls. Tube	42Ni-21.5Cr-3Mo-2.3Cu
45	43	ASTM/ASME	B or SB-366	—	N06007	—	90/35 [620/240]	Fitting	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B or SB-366	—	N06030	—	85/35 [585/240]	Fitting	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-366	—	N06985	—	90/35 [620/240]	Fitting	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-366	—	N08020	—	80/35 [550/240]	Fitting	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B or SB-366	—	N08031	—	94/40 [650/275]	Fitting	31Ni-31Fe-27Cr-7Mo
45	45	ASTM/ASME	B or SB-366	—	N08120	—	90/40 [620/275]	Fitting	37Ni-33Fe-25Cr
45	8.2	ASTM/ASME	B or SB-366	—	N08367	> 0.187 [5]	95/45 [655/310]	Fitting	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-366	—	N08367	≤ 0.187 [5]	100/45 [690/310]	Fitting	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B or SB-366	—	N08800	—	75/30 [515/205]	Fitting	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-366	—	N08810	—	65/25 [450/170]	Fitting	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-366	—	N08811	—	65/25 [450/170]	Fitting	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-366	—	N08825	—	85/35 [585/240]	Fitting	42Ni-21.5Cr-3Mo-2.3Cu
45	8.2	ASTM/ASME	B or SB-366	—	N08904	—	71/31 [490/215]	Fitting	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B or SB-366	—	N08925	—	87/43 [600/295]	Fitting	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-366	—	N08926	—	94/43 [650/295]	Fitting	25Ni-20Cr-6Mo-Cu-N
45	45	ASTM/ASME	B or SB-366	—	R20033	—	109/55 [750/380]	Fitting	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-366	—	R30556	—	100/45 [690/310]	Fitting	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B or SB-407	—	N08120	—	90/40 [620/275]	Smls. Pipe, Tube	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B or SB-407	—	N08800	—	75/30 [515/205]	Smls. Pipe, Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-407	—	N08801	—	65/25 [450/170]	Smls. Pipe, Tube	32Ni-45Fe-20.5Cr-Ti
45	45	ASTM/ASME	B or SB-407	—	N08810	—	65/25 [450/170]	Smls. Pipe, Tube	33Ni-42Fe-21Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
45	45	ASTM/ASME	B or SB-407	—	N08811	—	65/25 [450/170]	Smls. Pipe, Tube	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-408	—	N08120	—	90/40 [620/275]	Rod, Bar	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B or SB-408	—	N08800	—	75/30 [515/205]	Rod, Bar	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-408	—	N08810	—	65/25 [450/170]	Rod, Bar	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-408	—	N08811	—	65/25 [450/170]	Rod, Bar	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-409	—	N08120	—	90/40 [620/275]	Plate, Sheet, Strip	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B or SB-409	—	N08800	—	75/30 [515/205]	Plate, Sheet, Strip	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-409	—	N08810	—	65/25 [450/170]	Plate, Sheet, Strip	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-409	—	N08811	—	65/25 [450/170]	Plate, Sheet, Strip	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-423	—	N08221	—	79/34 [545/235]	Smls. Pipe, Tube	42Ni-21Cr-6Mo-2.3Cu
45	45	ASTM/ASME	B or SB-423	—	N08825	—	75/25 [515/170]	Smls. Pipe, Tube	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B or SB-424	—	N08221	—	79/34 [545/235]	Plate, Sheet, Strip	42Ni-21Cr-6Mo-2.3Cu
45	45	ASTM/ASME	B or SB-424	—	N08825	—	85/35 [585/240]	Plate, Sheet, Strip	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B or SB-425	—	N08221	—	79/34 [545/235]	Rod, Bar	42Ni-21Cr-6Mo-2.3Cu
45	45	ASTM/ASME	B or SB-425	—	N08825	—	85/35 [585/240]	Rod, Bar	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B or SB-435	—	R30556	—	100/45 [690/310]	Plate, Sheet, Strip	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B or SB-462	—	N06030	—	85/35 [585/240]	Forging	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-462	—	N08020	—	80/35 [550/240]	Forging	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B or SB-462	—	N08024	—	80/35 [550/240]	Forging	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B or SB-462	—	N08026	—	80/35 [550/240]	Forging	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B or SB-462	—	N08031	—	94/40 [650/275]	Forging	31Ni-33Fe-22Cr-6.5Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-462	—	N08367	—	95/45 [655/310]	Forging	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B or SB-462	—	R20033	—	109/55 [750/380]	Forging	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-463	—	N08020	—	80/35 [550/240]	Plate, Sheet, Strip	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B or SB-463	—	N08024	—	80/35 [550/240]	Plate, Sheet, Strip	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B or SB-463	—	N08026	—	80/35 [550/240]	Plate, Sheet, Strip	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B or SB-464	—	N08020	—	80/35 [550/240]	Welded Pipe	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B or SB-464	—	N08024	—	80/35 [550/240]	Welded Pipe	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B or SB-464	—	N08026	—	80/35 [550/240]	Welded Pipe	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B or SB-468	—	N08020	—	80/35 [550/240]	Welded Tube	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B or SB-468	—	N08024	—	80/35 [550/240]	Welded Tube	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B or SB-468	—	N08026	—	80/35 [550/240]	Welded Tube	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B or SB-473	—	N08020	—	80/35 [550/240]	Bar	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B or SB-473	—	N08024	—	80/35 [550/240]	Bar	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B or SB-473	—	N08026	—	80/35 [550/240]	Bar	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B or SB-514	—	N08120	—	90/40 [620/275]	Welded Pipe	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B or SB-514	—	N08800	—	75/30 [515/205]	Welded Pipe	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-514	—	N08810	—	65/25 [450/170]	Welded Pipe	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-515	—	N08120	—	90/40 [620/275]	Welded Tube	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B or SB-515	—	N08800	—	75/30 [515/205]	Welded Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-515	—	N08810	—	65/25 [450/170]	Welded Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-515	—	N08811	—	65/25 [450/170]	Welded Tube	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-564	—	N08031	—	94/40 [650/275]	Forging	31Ni-31Fe-27Cr-7Mo
45	45	ASTM/ASME	B or SB-564	—	N08120	—	90/40 [620/275]	Forging	37Ni-33Fe-25Cr
45	8.2	ASTM/ASME	B or SB-564	—	N08367	—	95/45 [655/310]	Forging	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B or SB-564	—	N08800	—	75/30 [515/205]	Forging	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B or SB-564	—	N08810	—	65/25 [450/170]	Forging	33Ni-42Fe-21Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
45	44	ASTM/ASME	B or SB-564	—	N08811	—	65/25 [450/170]	Forging	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B or SB-564	—	N08825	—	85/35 [585/240]	Forging	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B or SB-564	—	R20033	—	109/55 [750/380]	Forging	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-572	—	R30556	—	100/45 [690/310]	Rod	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	43	ASTM/ASME	B or SB-581	—	N06007	> 0.75 [19] ≤ 3.5 [90] diam.	85/30 [585/205]	Rod	47Ni-22Cr-19Fe-6Mo
45	43	ASTM/ASME	B or SB-581	—	N06007	≥ 0.3125 [8] ≤ 0.75 [19] diam.	90/35 [620/240]	Rod	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B or SB-581	—	N06030	—	85/35 [585/240]	Rod	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-581	—	N06975	—	85/32 [585/220]	Rod	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B or SB-581	—	N06985	> 0.75 [19] ≤ 3.5 [90] diam.	85/30 [585/205]	Rod	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-581	—	N06985	≥ 0.3125 [8] ≤ 0.75 [19] diam.	90/35 [620/240]	Rod	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-581	—	N08031	—	94/40 [650/275]	Rod	31Ni-31Fe-27Cr-7Mo
45	43	ASTM/ASME	B or SB-582	—	N06007	> 0.75 [19] ≤ 2.5 [65]	85/30 [585/205]	Plate	47Ni-22Cr-19Fe-6Mo
45	43	ASTM/ASME	B or SB-582	—	N06007	≤ 0.75 [19]	90/35 [620/240]	Plate, Sheet, Strip	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B or SB-582	—	N06030	—	85/35 [585/240]	Plate, Sheet, Strip	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-582	—	N06975	—	85/32 [585/220]	Plate, Sheet, Strip	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B or SB-582	—	N06985	> 0.75 [19] ≤ 2.5 [65]	85/30 [585/205]	Plate	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-582	—	N06985	≤ 0.75 [19]	90/35 [620/240]	Plate, Sheet, Strip	47Ni-22Cr-20Fe-7Mo
45	8.2	ASTM/ASME	B or SB-599	—	N08700	—	80/35 [550/240]	Plate, Sheet, Strip	25Ni-47Fe-21Cr-5Mo
45	43	ASTM/ASME	B or SB-619	—	N06007	—	90/35 [620/240]	Welded Pipe	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B or SB-619	—	N06030	—	85/35 [585/240]	Welded Pipe	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-619	—	N06975	—	85/32 [585/220]	Welded Pipe	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B or SB-619	—	N06985	—	90/35 [620/240]	Welded Pipe	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-619	—	N08031	—	94/40 [650/275]	Welded Pipe	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B or SB-619	—	N08320	—	75/28 [515/195]	Welded Pipe	26Ni-22Cr-5Mo-Ti
45	45	ASTM/ASME	B or SB-619	—	R20033	—	109/55 [750/380]	Welded Pipe	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-619	—	R30556	—	100/45 [690/310]	Welded Pipe	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	8.2	ASTM/ASME	B or SB-620	—	N08320	—	75/28 [515/195]	Plate, Sheet, Strip	26Ni-22Cr-5Mo-Ti
45	8.2	ASTM/ASME	B or SB-621	—	N08320	—	75/28 [515/195]	Rod	26Ni-22Cr-5Mo-Ti
45	43	ASTM/ASME	B or SB-622	—	N06007	—	90/35 [620/240]	Smls. Pipe, Tube	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B or SB-622	—	N06030	—	85/35 [585/240]	Smls. Pipe, Tube	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-622	—	N06975	—	85/32 [585/220]	Smls. Pipe, Tube	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B or SB-622	—	N06985	—	90/35 [620/240]	Smls. Pipe, Tube	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-622	—	N08031	—	94/40 [650/275]	Smls. Pipe, Tube	31Ni-31Fe-27Cr-7Mo
45	45	ASTM/ASME	B or SB-622	—	N08135	—	73/31 [505/215]	Smls. Pipe, Tube	36Ni-35Fe-22Cr-5Mo-W
45	8.2	ASTM/ASME	B or SB-622	—	N08320	—	75/28 [515/195]	Smls. Pipe, Tube	26Ni-22Cr-5Mo-Ti
45	45	ASTM/ASME	B or SB-622	—	N08535	—	73/31 [505/215]	Smls. Pipe, Tube	37Fe-33Ni-26Cr-3Mo-Cu
45	45	ASTM/ASME	B or SB-622	—	R20033	—	109/55 [750/380]	Smls. Pipe, Tube	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-622	—	R30556	—	100/45 [690/310]	Smls. Pipe, Tube	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B or SB-625	—	N08031	—	94/40 [650/275]	Plate, Sheet, Strip	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B or SB-625	—	N08904	—	71/31 [490/215]	Plate, Sheet, Strip	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B or SB-625	—	N08925	—	87/43 [600/295]	Plate, Sheet, Strip	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-625	—	N08926	—	94/43 [650/295]	Plate, Sheet, Strip	25Ni-20Cr-6Mo-Co-N
45	8.2	ASTM/ASME	B or SB-625	—	N08932	—	87/44 [600/305]	Plate, Sheet, Strip	41Fe-25Ni-25Cr-5Mo-Cu-N
45	45	ASTM/ASME	B or SB-625	—	R20033	—	109/55 [750/380]	Plate, Sheet, Strip	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	43	ASTM/ASME	B or SB-626	—	N06007	—	90/35 [620/240]	Welded Tube	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B or SB-626	—	N06030	—	85/35 [585/240]	Welded Tube	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B or SB-626	—	N06975	—	85/32 [585/220]	Welded Tube	49Ni-25Cr-18Fe-6Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
45	45	ASTM/ASME	B or SB-626	—	N06985	—	90/35 [620/240]	Welded Tube	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B or SB-626	—	N08031	—	94/40 [650/275]	Welded Tube	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B or SB-626	—	N08320	—	75/28 [515/195]	Welded Tube	26Ni-22Cr-5Mo-Ti
45	45	ASTM/ASME	B or SB-626	—	R20033	—	109/55 [750/380]	Welded Tube	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-626	—	R30556	—	100/45 [690/310]	Welded Tube	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B or SB-649	—	N08031	—	94/40 [650/275]	Bar, Wire	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B or SB-649	—	N08904	—	71/31 [490/215]	Bar, Wire	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B or SB-649	—	N08925	—	87/43 [600/295]	Bar, Wire	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-649	—	N08926	—	94/43 [650/295]	Bar, Wire	25Ni-20Cr-6Mo-Cu-N
45	45	ASTM/ASME	B or SB-649	—	R20033	—	109/55 [750/380]	Bar, Wire	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B or SB-668	—	N08028	—	73/31 [505/215]	Smls. Tube	31Ni-31Fe-29Cr-Mo
45	8.2	ASTM/ASME	B or SB-672	—	N08700	—	80/35 [550/240]	Bar, Wire	25Ni-47Fe-21Cr-5Mo
45	8.2	ASTM/ASME	B or SB-673	—	N08904	—	71/31 [490/215]	Welded Pipe	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B or SB-673	—	N08925	—	87/43 [600/295]	Welded Pipe	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-673	—	N08926	—	94/43 [650/295]	Welded Pipe	25Ni-20Cr-6Mo-Cu-N
45	45	ASTM/ASME	B or SB-674	—	N08354	—	93/43 [640/295]	Welded Tube	35Ni-23Cr-7.5Mo-N
45	8.2	ASTM/ASME	B or SB-674	—	N08904	—	71/31 [490/215]	Welded Tube	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B or SB-674	—	N08925	—	87/43 [600/295]	Welded Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-674	—	N08926	—	94/43 [650/295]	Welded Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-675	—	N08367	> 0.187 [5]	95/45 [655/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-675	—	N08367	≤ 0.187 [5]	100/45 [690/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-676	—	N08367	> 0.187 [5]	95/45 [655/310]	Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-676	—	N08367	≤ 0.187 [5]	100/45 [690/310]	Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-677	—	N08904	—	71/31 [490/215]	Smls. Pipe, Tube	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B or SB-677	—	N08925	—	87/43 [600/295]	Smls. Pipe, Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-677	—	N08926	—	94/43 [650/295]	Smls. Pipe, Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B or SB-688	—	N08366	—	75/35 [515/240]	Plate, Sheet, Strip	46Fe-24Ni-21Cr-6Mo
45	8.2	ASTM/ASME	B or SB-688	—	N08367	> 0.187 [5]	95/45 [655/310]	Plate	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-688	—	N08367	≤ 0.187 [5]	100/45 [690/310]	Sheet, Strip	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-690	—	N08366	—	75/30 [515/205]	Smls. Pipe, Tube	46Fe-24Ni-21Cr-6Mo
45	8.2	ASTM/ASME	B or SB-690	—	N08367	> 0.187 [5]	95/45 [655/310]	Smls. Pipe, Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-690	—	N08367	≤ 0.187 [5]	100/45 [690/310]	Smls. Pipe, Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-691	—	N08366	—	75/30 [515/205]	Rod, Bar, Wire	46Fe-24Ni-21Cr-6Mo
45	8.2	ASTM/ASME	B or SB-691	—	N08367	—	95/45 [655/310]	Rod, Bar, Wire	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B or SB-704	—	N08825	—	85/35 [585/240]	Welded Tube	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B or SB-705	—	N08825	—	85/35 [585/240]	Welded Pipe	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B or SB-709	—	N08028	—	73/40 [505/275]	Plate, Sheet, Strip	31Ni-31Fe-29Cr-Mo
45	43	ASTM	B718	—	N06333	—	80/35 [550/240]	Plate, Sheet, Strip	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	43	ASTM	B719	—	N06333	—	80/35 [550/240]	Bar	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	—	ASTM	B720	—	N08310	—	—	Smls. Tube	Fe-Cr-Ni-Mo
45	43	ASTM	B722	—	N06333	—	80/35 [550/240]	Smls. Pipe, Tube	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	43	ASTM	B723	—	N06333	—	80/35 [550/240]	Welded Pipe	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	43	ASTM	B726	—	N06333	—	80/35 [550/240]	Welded Tube	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	45	ASTM/ASME	B or SB-729	—	N08020	—	80/35 [550/240]	Smls. Pipe, Tube	35Ni-35Fe-20Cr-Cb
45	8.2	ASTM/ASME	B or SB-804	—	N08367	> 0.1875 [5]	95/45 [655/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B or SB-804	—	N08367	≤ 0.1875 [5]	100/45 [690/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	43	ASTM	B814	—	N06920	—	95/35 [655/240]	Plate, Sheet, Strip	46Ni-22Cr-19Fe-9Mo-2W

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Nickel and Nickel Base Alloys									
45	45	AWS/ASME	A or SFA-5.9	ER320	N08021	—	80/ [550/]	Weld Metal	34Ni-20Cr-Cu-Mo
45	45	AWS/ASME	A or SFA-5.9	ER320LR	N08022	—	75/ [515/]	Weld Metal	34Ni-20Cr-Cu-Mo
45	45	AWS/ASME	A or SFA-5.9	ER383	N08028	—	75/ [515/]	Weld Metal	35Ni-27Cr-Mo
45	8.2	AWS/ASME	A or SFA-5.9	ER385	N08904	—	75/ [515/]	Weld Metal	25Ni-21Cr-4Mo
45	45	AWS/ASME	A or SFA-5.9	ER33-31	R20033	—	105/ [725/]	Weld Metal	33Cr-31Ni-Fe-Mo
45	43	NACE	MR 01-75	100	N06950	—	110/102 [760/700]	Pipe	50Ni-20Cr-18Fe-9Mo
45	43	NACE	MR 01-75	110	N06950	—	115/110 [795/760]	Pipe	50Ni-20Cr-18Fe-9Mo
45	43	NACE	MR 01-75	125	N06950	—	131/125 [900/860]	Pipe	50Ni-20Cr-18Fe-9Mo
45	43	NACE	MR 01-75	140	N06950	—	145/140 [1000/965]	Pipe	50Ni-20Cr-18Fe-9Mo
46	45	ASTM/ASME	B or SB-163	—	N06045	—	90/35 [620/240]	Smls. Tube	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-166	—	N06045	—	90/35 [620/240]	Rod, Bar, Wire	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-167	—	N06045	—	90/35 [620/240]	Smls. Pipe, Tube	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-168	—	N06045	—	90/35 [620/240]	Plate, Sheet, Strip	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-366	—	N06045	—	90/35 [620/240]	Fitting	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-366	—	N08330	—	70/30 [485/205]	Fitting	35Ni-19Cr-1.25Si
46	46	ASTM/ASME	B or SB-366	—	N12160	—	90/35 [620/240]	Fitting	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B or SB-435	—	N12160	—	90/35 [620/240]	Plate, Sheet, Strip	37Ni-30Co-28Cr-2.7Si
46	45	ASTM/ASME	B or SB-462	—	N06045	—	90/35 [620/240]	Forging	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-511	—	N08330	—	70/30 [485/205]	Bar, Shape	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B or SB-511	—	N08332	—	67/27 [460/185]	Bar, Shape	35Ni-19Cr-1.25Si-C
46	45	ASTM	B512	—	N08330	—	70/30 [485/205]	Bar, Billet	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B or SB-516	—	N06045	—	90/35 [620/240]	Welded Tube	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-517	—	N06045	—	90/35 [620/240]	Welded Pipe	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B or SB-535	—	N08330	—	70/30 [485/205]	Smls. Pipe, Tube	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B or SB-535	—	N08332	—	67/27 [460/185]	Smls. Pipe, Tube	35Ni-19Cr-1.25Si-C
46	45	ASTM/ASME	B or SB-536	—	N08330	—	70/30 [485/205]	Plate, Sheet, Strip	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B or SB-536	—	N08332	—	67/27 [460/185]	Plate, Sheet, Strip	35Ni-19Cr-1.25Si-C
46	45	ASTM/ASME	B or SB-564	—	N06045	—	90/35 [620/240]	Forging	46Ni-27Cr-23Fe-2.75Si
46	46	ASTM/ASME	B or SB-564	—	N12160	—	90/35 [620/240]	Forging	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B or SB-572	—	N12160	—	90/35 [620/240]	Rod	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B or SB-619	—	N12160	—	90/35 [620/240]	Welded Pipe	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B or SB-622	—	N12160	—	90/35 [620/240]	Smls. Pipe, Tube	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B or SB-626	—	N12160	—	90/35 [620/240]	Welded Tube	37Ni-30Co-28Cr-2.7Si
46	45	ASTM/ASME	B or SB-710	—	N08330	—	70/30 [485/205]	Welded Pipe	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B or SB-710	—	N08332	—	67/27 [460/185]	Welded Pipe	35Ni-19Cr-1.25Si-C
46	45	AWS/ASME	A or SFA-5.9	ER330	N08331	—	75/ [515/]	Weld Metal	35Ni-16Cr
49	—	ASTM/ASME	B or SB-815	—	R31233	—	120/55 [825/380]	Rod	Co-26Cr-9Ni-5Mo-3Fe-2W
49	—	ASTM/ASME	B or SB-818	—	R31233	—	120/55 [825/380]	Plate, Sheet, Strip	Co-26Cr-9Ni-5Mo-3Fe-2W

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Titanium and Titanium Base Alloys									
51	51.1	ASTM/ASME	B or SB-265	1	R50250	—	35/20 [240/140]	Plate, Sheet, Strip	Ti
51	51.2	ASTM/ASME	B or SB-265	2	R50400	—	50/40 [345/275]	Plate, Sheet, Strip	Ti
51	51.2	ASTM/ASME	B or SB-265	2H	R50400	—	58/40 [400/275]	Plate, Sheet, Strip	Ti
51	52	ASTM/ASME	B or SB-265	11	R52250	—	35/20 [240/140]	Plate, Sheet, Strip	Ti-Pd
51	51.1	ASTM/ASME	B or SB-265	17	R52252	—	35/20 [240/140]	Plate, Sheet, Strip	Ti-Pd
51	51.1	ASTM/ASME	B or SB-265	27	R52254	—	35/20 [240/140]	Plate, Sheet, Strip	Ti-Ru
51	52	ASTM/ASME	B or SB-265	7	R52400	—	50/40 [345/275]	Plate, Sheet, Strip	Ti-Pd
51	52	ASTM/ASME	B or SB-265	7H	R52400	—	58/40 [400/275]	Plate, Sheet, Strip	Ti-Pd
51	51.2	ASTM/ASME	B or SB-265	16	R52402	—	50/40 [345/275]	Plate, Sheet, Strip	Ti-Pd
51	51.2	ASTM/ASME	B or SB-265	16H	R52402	—	58/40 [400/275]	Plate, Sheet, Strip	Ti-Pd
51	51.2	ASTM/ASME	B or SB-265	26	R52404	—	50/40 [345/275]	Plate, Sheet, Strip	Ti-Ru
51	51.2	ASTM/ASME	B or SB-265	26H	R52404	—	58/40 [400/275]	Plate, Sheet, Strip	Ti-Ru
51	52	ASTM/ASME	B or SB-265	13	R53413	—	40/25 [275/170]	Plate, Sheet, Strip	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B or SB-265	33	R53442	—	50/40 [345/275]	Plate, Sheet, Strip	Ti-Ni-Pd-Ru-Cr
51	52	ASTM/ASME	B or SB-265	30	R53530	—	50/40 [345/275]	Plate, Sheet, Strip	Ti-0.3Co-Pd
51	51	ASTM	B337	1	R50250	—	35/25 [240/170]	Smls. & Welded Pipe	Ti
51	51	ASTM	B337	2	R50400	—	50/40 [345/275]	Smls. & Welded Pipe	Ti
51	51	ASTM	B337	11	R52250	—	35/25 [240/170]	Smls. & Welded Pipe	Ti-Pd
51	51	ASTM	B337	7	R52400	—	50/40 [345/275]	Smls. & Welded Pipe	Ti-Pd
51	51.1	ASTM/ASME	B or SB-338	1	R50250	—	35/20 [240/140]	Smls. & Welded Tube	Ti
51	51.2	ASTM/ASME	B or SB-338	2	R50400	—	50/40 [345/275]	Smls. & Welded Tube	Ti
51	51.2	ASTM/ASME	B or SB-338	2H	R50400	—	58/40 [400/275]	Smls. & Welded Tube	Ti
51	51	ASTM/ASME	B or SB-338	11	R52250	—	35/20 [240/140]	Smls. & Welded Tube	Ti-Pd
51	51	ASTM/ASME	B or SB-338	17	R52252	—	35/20 [240/140]	Smls. & Welded Tube	Ti-Pd
51	51	ASTM/ASME	B or SB-338	27	R52254	—	35/20 [240/140]	Smls. & Welded Tube	Ti-Ru
51	52	ASTM/ASME	B or SB-338	7	R52400	—	50/40 [345/275]	Smls. & Welded Tube	Ti-Pd
51	52	ASTM/ASME	B or SB-338	7H	R52400	—	58/40 [400/275]	Smls. & Welded Tube	Ti-Pd
51	51.2	ASTM/ASME	B or SB-338	16	R52402	—	50/40 [345/275]	Smls. & Welded Tube	Ti-Pd
51	51.2	ASTM/ASME	B or SB-338	16H	R52402	—	58/40 [400/275]	Smls. & Welded Tube	Ti-Pd
51	51.2	ASTM/ASME	B or SB-338	26	R52404	—	50/40 [345/275]	Smls. & Welded Tube	Ti-Ru
51	51.2	ASTM/ASME	B or SB-338	26H	R52404	—	58/40 [400/275]	Smls. & Welded Tube	Ti-Ru
51	52	ASTM/ASME	B or SB-338	13	R53413	—	40/25 [275/170]	Smls. & Welded Tube	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B or SB-338	33	R53442	—	50/40 [345/275]	Smls. & Welded Tube	Ti-Ni-Pd-Ru-Cr
51	52	ASTM/ASME	B or SB-338	30	R53530	—	50/40 [345/275]	Smls. & Welded Tube	Ti-0.3Co-Pd
51	51.1	ASTM/ASME	B or SB-348	1	R50250	—	35/20 [240/140]	Bar, Billet	Ti
51	51.2	ASTM/ASME	B or SB-348	2	R50400	—	50/40 [345/275]	Bar, Billet	Ti
51	51.2	ASTM/ASME	B or SB-348	2H	R50400	—	58/40 [400/275]	Bar, Billet	Ti
51	51	ASTM/ASME	B or SB-348	11	R52250	—	35/20 [240/140]	Bar, Billet	Ti-Pd
51	51	ASTM/ASME	B or SB-348	17	R52252	—	35/20 [240/140]	Bar, Billet	Ti-Pd
51	52	ASTM/ASME	B or SB-348	7	R52400	—	50/40 [345/275]	Bar, Billet	Ti-Pd
51	52	ASTM/ASME	B or SB-348	7H	R52400	—	58/40 [400/275]	Bar, Billet	Ti-Pd
51	51.2	ASTM/ASME	B or SB-348	16	R52402	—	50/40 [345/275]	Bar, Billet	Ti-Pd
51	51.2	ASTM/ASME	B or SB-348	16H	R52402	—	58/40 [400/275]	Bar, Billet	Ti-Pd
51	51.2	ASTM/ASME	B or SB-348	26	R52404	—	50/40 [345/275]	Bar, Billet	Ti-Ru
51	51.2	ASTM/ASME	B or SB-348	26H	R52404	—	58/40 [400/275]	Bar, Billet	Ti-Ru
51	52	ASTM/ASME	B or SB-348	13	R53413	—	40/25 [275/170]	Bar, Billet	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B or SB-348	33	R53442	—	50/40 [345/275]	Bar, Billet	Ti-Ni-Pd-Ru-Cr
51	52	ASTM/ASME	B or SB-348	30	R53530	—	50/40 [345/275]	Bar, Billet	Ti-0.3Co-Pd

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Titanium and Titanium Base Alloys									
51	51.1	ASTM/ASME	B or SB-363	WPT 1	R50250	—	35/25 [240/170]	Smls. & Welded Fitting	Ti
51	51.2	ASTM/ASME	B or SB-363	WPT 2	R50400	—	50/40 [345/275]	Smls. & Welded Fitting	Ti
51	51	ASTM/ASME	B or SB-363	WPT 11	R52250	—	35/25 [240/170]	Smls. & Welded Fitting	Ti-Pd
51	51	ASTM/ASME	B or SB-363	WPT 17	R52252	—	35/25 [240/170]	Smls. & Welded Fitting	Ti-Pd
51	52	ASTM/ASME	B or SB-363	WPT 7	R52400	—	50/40 [345/275]	Smls. & Welded Fitting	Ti-Pd
51	52	ASTM/ASME	B or SB-363	WPT 7H	R52400	—	58/40 [400/275]	Smls. & Welded Fitting	Ti-Pd
51	51.2	ASTM/ASME	B or SB-363	WPT 16	R52402	—	50/40 [345/275]	Smls. & Welded Fitting	Ti-Pd
51	51.2	ASTM/ASME	B or SB-363	WPT 16H	R52402	—	58/40 [400/275]	Smls. & Welded Fitting	Ti-Pd
51	51.2	ASTM/ASME	B or SB-363	WPT 26	R52404	—	50/40 [345/275]	Smls. & Welded Fitting	Ti-Ru
51	51.2	ASTM/ASME	B or SB-363	WPT 26H	R52404	—	58/40 [400/275]	Smls. & Welded Fitting	Ti-Ru
51	52	ASTM/ASME	B or SB-363	WPT 13	R53413	—	40/25 [275/170]	Smls. & Welded Fitting	Ti-0.5Ni-Ru
51	52	ASTM/ASME	B or SB-363	WPT 30	R53530	—	50/40 [345/275]	Smls. & Welded Fitting	Ti-0.3Co-Pd
51	51	ASTM/ASME	B or SB-367	C-7	—	—	50/40 [345/275]	Casting	Ti-Pd
51	51	ASTM/ASME	B or SB-367	C-17	R52252	—	35/25 [240/170]	Casting	Ti-Pd
51	51	ASTM/ASME	B or SB-367	C-16	R52402	—	50/40 [345/275]	Casting	Ti-Pd
51	51.4	ASTM/ASME	B or SB-367	C-2	R52550	—	50/40 [345/275]	Casting	Ti
51	51.1	ASTM/ASME	B or SB-381	F-1	R50250	—	35/20 [240/140]	Forging	Ti
51	51.2	ASTM/ASME	B or SB-381	F-2	R50400	—	50/40 [345/275]	Forging	Ti
51	51.2	ASTM/ASME	B or SB-381	F-2H	R50400	—	58/40 [400/275]	Forging	Ti
51	51	ASTM/ASME	B or SB-381	F-11	R52250	—	35/20 [240/140]	Forging	Ti-Pd
51	51	ASTM/ASME	B or SB-381	F-17	R52252	—	35/20 [240/140]	Forging	Ti-Pd
51	52	ASTM/ASME	B or SB-381	F-7	R52400	—	50/40 [345/275]	Forging	Ti-Pd
51	52	ASTM/ASME	B or SB-381	F-7H	R52400	—	58/40 [400/275]	Forging	Ti-Pd
51	51.2	ASTM/ASME	B or SB-381	F-16	R52402	—	50/40 [345/275]	Forging	Ti-Pd
51	51.2	ASTM/ASME	B or SB-381	F-16H	R52402	—	58/40 [400/275]	Forging	Ti-Pd
51	51.2	ASTM/ASME	B or SB-381	F-26	R52404	—	50/40 [345/275]	Forging	Ti-Ru
51	51.2	ASTM/ASME	B or SB-381	F-26H	R52404	—	58/40 [400/275]	Forging	Ti-Ru
51	52	ASTM/ASME	B or SB-381	F-13	R53413	—	40/25 [275/170]	Forging	Ti-0.5Ni-Ru
51	52	ASTM/ASME	B or SB-381	F-30	R53530	—	50/40 [345/275]	Forging	Ti-0.3Co-Pd
51	51.1	ASTM/ASME	B or SB-861	1	R50250	—	35/20 [240/140]	Smls. Pipe	Ti
51	51.2	ASTM/ASME	B or SB-861	2	R50400	—	50/40 [345/275]	Smls. Pipe	Ti
51	51.2	ASTM/ASME	B or SB-861	2H	R50400	—	58/40 [400/275]	Smls. Pipe	Ti
51	51	ASTM/ASME	B or SB-861	11	R52250	—	35/20 [240/140]	Smls. Pipe	Ti-Pd
51	51	ASTM/ASME	B or SB-861	17	R52252	—	35/20 [240/140]	Smls. Pipe	Ti-Pd
51	52	ASTM/ASME	B or SB-861	7	R52400	—	50/40 [345/275]	Smls. Pipe	Ti-Pd
51	52	ASTM/ASME	B or SB-861	7H	R52400	—	58/40 [400/275]	Smls. Pipe	Ti-Pd
51	51.2	ASTM/ASME	B or SB-861	16	R52402	—	50/40 [345/275]	Smls. Pipe	Ti-Pd
51	51.2	ASTM/ASME	B or SB-861	16H	R52402	—	58/40 [400/275]	Smls. Pipe	Ti-Pd
51	51.2	ASTM/ASME	B or SB-861	26	R52404	—	50/40 [345/275]	Smls. Pipe	Ti-Ru
51	51.2	ASTM/ASME	B or SB-861	26H	R52404	—	58/40 [400/275]	Smls. Pipe	Ti-Ru
51	52	ASTM/ASME	B or SB-861	13	R53413	—	40/25 [275/170]	Smls. Pipe	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B or SB-861	33	R53442	—	50/40 [345/275]	Smls. Pipe	Ti-Ni-Pd-Ru-Cr
51	51.1	ASTM/ASME	B or SB-862	1	R50250	—	35/20 [240/140]	Welded Pipe	Ti
51	51.2	ASTM/ASME	B or SB-862	2	R50400	—	50/40 [345/275]	Welded Pipe	Ti
51	51.2	ASTM/ASME	B or SB-862	2H	R50400	—	58/40 [400/275]	Welded Pipe	Ti
51	51	ASTM/ASME	B or SB-862	11	R52250	—	35/20 [240/140]	Welded Pipe	Ti-Pd
51	51	ASTM/ASME	B or SB-862	17	R52252	—	35/20 [240/140]	Welded Pipe	Ti-Pd
51	51	ASTM/ASME	B or SB-862	27	R52254	—	35/20 [240/140]	Welded Pipe	Ti-Ru

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Titanium and Titanium Base Alloys									
51	52	ASTM/ASME	B or SB-862	7	R52400	—	50/40 [345/275]	Welded Pipe	Ti-Pd
51	52	ASTM/ASME	B or SB-862	7H	R52400	—	58/40 [400/275]	Welded Pipe	Ti-Pd
51	51.2	ASTM/ASME	B or SB-862	16	R52402	—	50/40 [345/275]	Welded Pipe	Ti-Pd
51	51.2	ASTM/ASME	B or SB-862	16H	R52402	—	58/40 [400/275]	Welded Pipe	Ti-Pd
51	51.2	ASTM/ASME	B or SB-862	26	R52404	—	50/40 [345/275]	Welded Pipe	Ti-Ru
51	51.2	ASTM/ASME	B or SB-862	26H	R52404	—	58/40 [400/275]	Welded Pipe	Ti-Ru
51	52	ASTM/ASME	B or SB-862	13	R53413	—	40/25 [275/170]	Welded Pipe	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B or SB-862	33	R53442	—	50/40 [345/275]	Welded Pipe	Ti-Ni-Pd-Ru-Cr
52	51.3	ASTM/ASME	B or SB-265	3	R50550	—	65/55 [450/380]	Plate, Sheet, Strip	Ti
52	52	ASTM/ASME	B or SB-265	12	R53400	—	70/50 [485/345]	Plate, Sheet, Strip	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-265	14	R53414	—	60/40 [415/275]	Plate, Sheet, Strip	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-265	15	R53415	—	70/55 [485/380]	Plate, Sheet, Strip	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B or SB-265	34	R53445	—	65/55 [450/380]	Plate, Sheet, Strip	Ti-Ni-Pd-Ru-Cr
52	52	ASTM/ASME	B or SB-265	31	R53532	—	65/55 [450/380]	Plate, Sheet, Strip	Ti-0.3Co-Pd
52	52	ASTM	B337	3	R50550	—	65/55 [450/380]	Smls. & Welded Pipe	Ti
52	52	ASTM	B337	12	R53400	—	70/50 [485/345]	Smls. & Welded Pipe	Ti-0.3Mo-0.8Ni
52	51.3	ASTM/ASME	B or SB-338	3	R50550	—	65/55 [450/380]	Smls. & Welded Tube	Ti
52	52	ASTM/ASME	B or SB-338	12	R53400	—	70/50 [485/345]	Smls. & Welded Tube	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-338	14	R53414	—	60/40 [415/275]	Smls. & Welded Tube	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-338	15	R53415	—	70/55 [485/380]	Smls. & Welded Tube	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B or SB-338	34	R53445	—	65/55 [450/380]	Smls. & Welded Tube	Ti-Ni-Pd-Ru-Cr
52	52	ASTM/ASME	B or SB-338	31	R53532	—	65/55 [450/380]	Smls. & Welded Tube	Ti-0.3Co-Pd
52	51.3	ASTM/ASME	B or SB-348	3	R50550	—	65/55 [450/380]	Bar, Billet	Ti
52	52	ASTM/ASME	B or SB-348	12	R53400	—	70/50 [485/345]	Bar, Billet	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-348	14	R53414	—	60/40 [415/275]	Bar, Billet	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-348	15	R53415	—	70/55 [485/380]	Bar, Billet	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B or SB-348	34	R53445	—	65/55 [450/380]	Bar, Billet	Ti-Ni-Pd-Ru-Cr
52	52	ASTM/ASME	B or SB-348	31	R53532	—	65/55 [450/380]	Bar, Billet	Ti-0.3Co-Pd
52	51.3	ASTM/ASME	B or SB-363	WPT 3	R50550	—	65/55 [450/380]	Smls. & Welded Fitting	Ti
52	52	ASTM/ASME	B or SB-363	WPT 12	R53400	—	70/50 [485/345]	Smls. & Welded Fitting	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-363	WPT 14	R53414	—	60/40 [415/275]	Smls. & Welded Fitting	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-363	WPT 15	R53415	—	65/55 [450/380]	Smls. & Welded Fitting	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-367	C-8	—	—	65/55 [450/380]	Casting	Ti-Pd
52	51.4	ASTM/ASME	B or SB-367	C-3	R52550	—	65/55 [450/380]	Casting	Ti
52	51.3	ASTM/ASME	B or SB-381	F-3	R50550	—	65/55 [450/380]	Forging	Ti
52	52	ASTM/ASME	B or SB-381	F-12	R53400	—	70/50 [485/345]	Forging	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-381	F-14	R53414	—	60/40 [415/275]	Forging	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-381	F-15	R53415	—	70/55 [485/380]	Forging	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-381	F-31	R53532	—	65/55 [450/380]	Forging	Ti-0.3Co-Pd
52	51.3	ASTM/ASME	B or SB-861	3	R50550	—	65/55 [450/380]	Smls. Pipe	Ti
52	52	ASTM/ASME	B or SB-861	12	R53400	—	70/50 [485/345]	Smls. Pipe	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-861	14	R53414	—	60/40 [415/275]	Smls. Pipe	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-861	15	R53415	—	70/55 [485/380]	Smls. Pipe	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B or SB-861	34	R53445	—	65/55 [450/380]	Smls. Pipe	Ti-Ni-Pd-Ru-Cr
52	51.3	ASTM/ASME	B or SB-862	3	R50550	—	65/55 [450/380]	Welded Pipe	Ti
52	52	ASTM/ASME	B or SB-862	12	R53400	—	70/50 [485/345]	Welded Pipe	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B or SB-862	14	R53414	—	60/40 [415/275]	Welded Pipe	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B or SB-862	15	R53415	—	70/55 [485/380]	Welded Pipe	Ti-0.5Ni-Ru

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Titanium and Titanium Base Alloys									
52	54	ASTM/ASME	B or SB-862	34	R53445	—	65/55 [450/380]	Welded Pipe	Ti-Ni-Pd-Ru-Cr
53	54	AMS	AMS 4914	—	R58153	—	98/96 [675/660]	Sheet	Ti-15V-3Al-3Cr-3Sn
53	51.4	ASTM/ASME	B or SB-265	4	R50700	—	80/70 [550/485]	Plate, Sheet, Strip	Ti
53	52	ASTM/ASME	B or SB-265	32	R55111	—	100/85 [690/585]	Plate, Sheet, Strip	Ti-5Al-1Sn-1Zr-1V-Mo
53	53	ASTM/ASME	B or SB-265	9	R56320	—	90/70 [620/485]	Plate, Sheet, Strip	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-265	18	R56322	—	90/70 [620/485]	Plate, Sheet, Strip	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-265	28	R56323	—	90/70 [620/485]	Plate, Sheet, Strip	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B or SB-265	21	R58210	—	115/110 [795/760]	Plate, Sheet, Strip	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B or SB-265	19	R58640	—	115/110 [795/760]	Plate, Sheet, Strip	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B or SB-265	20	R58645	—	115/110 [795/760]	Plate, Sheet, Strip	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM	B337	9	R56320	—	90/70 [620/485]	Smls. & Welded Pipe	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-338	9	R56320	—	90/70 [620/485]	Smls. & Welded Tube	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-338	18	R56322	—	90/70 [620/485]	Smls. & Welded Tube	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-338	28	R56323	—	90/70 [620/485]	Smls. & Welded Tube	Ti-3Al-2.5V-0.1Ru
53	51.4	ASTM/ASME	B or SB-348	4	R50700	—	80/70 [550/485]	Bar, Billet	Ti
53	52	ASTM/ASME	B or SB-348	32	R55111	—	100/85 [690/585]	Bar, Billet	Ti-5Al-1Sn-1Zr-1V-Mo
53	53	ASTM/ASME	B or SB-348	9	R56320	—	90/70 [620/485]	Bar, Billet	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-348	18	R56322	—	90/70 [620/485]	Bar, Billet	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-348	28	R56323	—	90/70 [620/485]	Bar, Billet	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B or SB-348	21	R58210	—	115/110 [795/760]	Bar, Billet	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B or SB-348	19	R58640	—	115/110 [795/760]	Bar, Billet	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B or SB-348	20	R58645	—	115/110 [795/760]	Bar, Billet	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM/ASME	B or SB-363	WPT 9	R56320	—	90/70 [620/485]	Smls. & Welded Fitting	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-363	WPT 18	R56322	—	90/70 [620/485]	Smls. & Welded Fitting	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-363	WPT 28	R56323	—	90/70 [620/485]	Smls. & Welded Fitting	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B or SB-363	WPT 21	R58210	—	115/110 [795/760]	Smls. & Welded Fitting	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B or SB-363	WPT 19	R58640	—	115/110 [795/760]	Smls. & Welded Fitting	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B or SB-363	WPT 20	R58645	—	115/110 [795/760]	Smls. & Welded Fitting	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	51.4	ASTM/ASME	B or SB-381	F-4	R50700	—	80/70 [550/485]	Forging	Ti
53	53	ASTM/ASME	B or SB-381	F-9	R56320	—	90/70 [620/485]	Forging	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-381	F-18	R56322	—	90/70 [620/485]	Forging	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-381	F-28	R56323	—	90/70 [620/485]	Forging	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B or SB-381	F-21	R58210	—	115/110 [795/760]	Forging	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B or SB-381	F-19	R58640	—	115/110 [795/760]	Forging	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B or SB-381	F-20	R58645	—	115/110 [795/760]	Forging	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM/ASME	B or SB-861	9	R56320	—	90/70 [620/485]	Smls. Pipe	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-861	18	R56322	—	90/70 [620/485]	Smls. Pipe	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-861	28	R56323	—	90/70 [620/485]	Smls. Pipe	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B or SB-861	21	R58210	—	115/110 [795/760]	Smls. Pipe	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B or SB-861	19	R58640	—	115/110 [795/760]	Smls. Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B or SB-861	20	R58645	—	115/110 [795/760]	Smls. Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM/ASME	B or SB-862	9	R56320	—	90/70 [620/485]	Welded Pipe	Ti-3Al-2.5V
53	53	ASTM/ASME	B or SB-862	18	R56322	—	90/70 [620/485]	Welded Pipe	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B or SB-862	28	R56323	—	90/70 [620/485]	Welded Pipe	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B or SB-862	21	R58210	—	115/110 [795/760]	Welded Pipe	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B or SB-862	19	R58640	—	115/110 [795/760]	Welded Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B or SB-862	20	R58645	—	115/110 [795/760]	Welded Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
54	52	AMS	AMS 4915	—	R54810	> 2.5 [65] ≤ 4 [100]	120/110 [825/760]	Plate	Ti-8Al-1Mo-1V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Titanium and Titanium Base Alloys									
54	52	AMS	AMS 4915	—	R54810	> 1 [25] ≤ 2.5 [65]	130/120 [895/825]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	AMS 4915	—	R54810	> 0.5 [13] ≤ 1 [25]	140/130 [965/895]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	AMS 4915	—	R54810	≤ 0.187 [5]	145/135 [1000/930]	Sheet, Strip	Ti-8Al-1Mo-1V
54	52	AMS	AMS 4915	—	R54810	> 0.187 [5] ≤ 0.5 [13]	145/135 [1000/930]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	AMS 4919	—	R54620	—	135/125 [930/860]	Sheet	Ti-6Al-4Zr-2Mo-2Sn
54	52	AMS	AMS 4973	—	R54810	> 2.5 [65] ≤ 4 [100]	120/110 [825/760]	Forging	Ti-8Al-1Mo-1V
54	52	AMS	AMS 4973	—	R54810	≤ 2.5 [65]	130/120 [895/825]	Forging	Ti-8Al-1Mo-1V
54	52	AMS	AMS 4975	—	R54620	—	130/120 [895/825]	Bar	Ti-6Al-4Zr-2Mo-2Sn
54	52	AMS	AMS 4976	—	R54620	—	130/120 [895/825]	Forging	Ti-6Al-4Zr-2Mo-2Sn
54	53	ASTM/ASME	B or SB-265	38	R54250	—	130/115 [895/794]	Plate, Sheet, Strip	Ti-4Al-2.5V-1.5Fe
54	52	ASTM/ASME	B or SB-265	6	R54520	—	120/115 [825/795]	Plate, Sheet, Strip	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B or SB-265	35	R56340	—	130/120 [895/825]	Plate, Sheet, Strip	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B or SB-265	5	R56400	—	130/120 [895/825]	Plate, Sheet, Strip	Ti-6Al-4V
54	53	ASTM/ASME	B or SB-265	25	R56403	—	130/120 [895/825]	Plate, Sheet, Strip	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B or SB-265	29	R56404	—	120/110 [825/760]	Plate, Sheet, Strip	Ti-6Al-4V-Pd-ELI-Ru
54	53	ASTM/ASME	B or SB-265	24	R56405	—	130/120 [895/825]	Plate, Sheet, Strip	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B or SB-338	38	R54250	—	130/115 [895/794]	Smls. & Welded Tube	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B or SB-338	35	R56340	—	130/120 [895/825]	Smls. & Welded Tube	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B or SB-348	38	R54250	—	130/115 [895/794]	Bar, Billet	Ti-4Al-2.5V-1.5Fe
54	52	ASTM/ASME	B or SB-348	6	R54520	—	120/115 [825/795]	Bar, Billet	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B or SB-348	35	R56340	—	130/120 [895/825]	Bar, Billet	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B or SB-348	5	R56400	—	130/120 [895/825]	Bar, Billet	Ti-6Al-4V
54	53	ASTM/ASME	B or SB-348	25	R56403	—	130/120 [895/825]	Bar, Billet	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B or SB-348	24	R56405	—	130/120 [895/825]	Bar, Billet	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B or SB-348	23	R56407	—	120/110 [825/760]	Bar, Billet	Ti-6Al-4V-ELI
54	53	ASTM/ASME	B or SB-363	WPT 38	R54250	—	130/115 [895/794]	Smls. & Welded Fitting	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B or SB-363	WPT 25	R56403	—	130/120 [895/825]	Smls. & Welded Fitting	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B or SB-363	WPT 24	R56405	—	130/120 [895/825]	Smls. & Welded Fitting	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B or SB-363	WPT 23	R56407	—	120/110 [825/760]	Smls. & Welded Fitting	Ti-6Al-4V-ELI
54	52	ASTM/ASME	B or SB-367	C-6	R54520	—	115/105 [795/725]	Casting	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B or SB-367	C-5	R56400	—	130/120 [895/825]	Casting	Ti-6Al-4V
54	53	ASTM/ASME	B or SB-381	F-38	R54250	—	130/115 [895/794]	Forging	Ti-4Al-2.5V-1.5Fe
54	52	ASTM/ASME	B or SB-381	F-6	R54520	—	120/115 [825/795]	Forging	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B or SB-381	F-5	R56400	—	130/120 [895/825]	Forging	Ti-6Al-4V
54	53	ASTM/ASME	B or SB-381	F-25	R56403	—	130/120 [895/825]	Forging	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B or SB-381	F-24	R56405	—	130/120 [895/825]	Forging	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B or SB-381	F-23	R56407	—	120/110 [825/760]	Forging	Ti-6Al-4V-ELI
54	53	ASTM/ASME	B or SB-861	38	R54250	—	130/115 [895/794]	Smls. Pipe	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B or SB-861	35	R56340	—	130/120 [895/825]	Smls. Pipe	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B or SB-861	5	R56400	—	130/120 [895/825]	Smls. Pipe	Ti-6Al-4V
54	53	ASTM/ASME	B or SB-861	25	R56403	—	130/120 [895/825]	Smls. Pipe	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B or SB-861	29	R56404	—	120/110 [825/760]	Smls. Pipe	Ti-6Al-4V-Pd-ELI-Ru
54	53	ASTM/ASME	B or SB-861	24	R56405	—	130/120 [895/825]	Smls. Pipe	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B or SB-861	23	R56407	—	120/110 [825/760]	Smls. Pipe	Ti-6Al-4V-ELI
54	53	ASTM/ASME	B or SB-862	38	R54250	—	130/115 [895/794]	Welded Pipe	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B or SB-862	35	R56340	—	130/120 [895/825]	Welded Pipe	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B or SB-862	5	R56400	—	130/120 [895/825]	Welded Pipe	Ti-6Al-4V
54	53	ASTM/ASME	B or SB-862	25	R56403	—	130/120 [895/825]	Welded Pipe	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B or SB-862	29	R56404	—	120/110 [825/760]	Welded Pipe	Ti-6Al-4V-Pd-ELI-Ru
54	53	ASTM/ASME	B or SB-862	24	R56405	—	130/120 [895/825]	Welded Pipe	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B or SB-862	23	R56407	—	120/110 [825/760]	Welded Pipe	Ti-6Al-4V-ELI

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Zirconium and Zirconium Base Alloys									
61	61	ASTM	B351	R60001	R60001	—	42/20 [290/140]	Bar, Rod, Wire	99.9Zr
61	61	ASTM	B351	R60802	R60802	—	60/35 [415/240]	Bar, Rod, Wire	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
61	61	ASTM	B351	R60804	R60804	—	60/35 [415/240]	Bar, Rod, Wire	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM	B352	R60802	R60802	—	58/35 [400/240]	Plate, Sheet, Strip	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
61	61	ASTM	B352	R60804	R60804	—	56/35 [385/240]	Sheet, Strip	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM	B352	R60804	R60804	—	58/35 [400/240]	Plate	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM	B353	R60001	R60001	—	42/20 [290/140]	Smls. & Welded Tube	99.9Zr
61	61	ASTM	B353	R60001	R60001	—	42/20 [290/140]	Plate, Sheet, Strip	99.9Zr
61	61	ASTM	B353	R60802	R60802	—	60/35 [415/240]	Smls. & Welded Tube	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
61	61	ASTM	B353	R60804	R60804	—	60/35 [415/240]	Smls. & Welded Tube	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM/ASME	B or SB-493	R60702	R60702	—	55/30 [380/205]	Forging	99.2Zr
61	61	ASTM/ASME	B or SB-523	R60702	R60702	—	55/30 [380/205]	Smls. & Welded Tube	99.2Zr
61	61	ASTM/ASME	B or SB-550	R60702	R60702	—	55/30 [380/205]	Bar, Wire	99.2Zr
61	61	ASTM/ASME	B or SB-551	R60702	R60702	—	55/30 [380/205]	Plate, Sheet, Strip	99.2Zr
61	61	ASTM/ASME	B or SB-653	R60702	R60702	—	55/30 [380/205]	Smls. & Welded Fitting	99.2Zr
61	61	ASTM/ASME	B or SB-658	R60702	R60702	—	55/30 [380/205]	Smls. & Welded Pipe	99.2Zr
61	61	ASTM/ASME	B or SB-752	702C	R60702	—	55/40 [380/275]	Casting	99.2Zr
62	62	ASTM	B351	R60901	R60901	—	65/45 [450/310]	Bar, Rod, Wire	97.3Zr-2.6Cb
62	62	ASTM	B352	R60901	R60901	—	65/45 [450/310]	Plate, Sheet, Strip	97.3Zr-2.6Cb
62	62	ASTM	B353	R60901	R60901	—	65/45 [450/310]	Smls. & Welded Tube	97.3Zr-2.6Cb
62	62	ASTM	B353	R60904	R60904	—	65/45 [450/310]	Smls. & Welded Tube	97.35Zr-2.65Cb
62	62	ASTM/ASME	B or SB-493	R60704	R60704	—	60/35 [415/240]	Forging	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B or SB-493	R60705	R60705	—	70/55 [485/380]	Forging	95.5Zr+2.5Cb
62	62	ASTM/ASME	B or SB-523	R60704	R60704	—	60/35 [415/240]	Smls. & Welded Tube	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B or SB-523	R60705	R60705	—	80/55 [550/380]	Smls. & Welded Tube	95.5Zr+2.5Cb
62	62	ASTM/ASME	B or SB-550	R60704	R60704	—	60/35 [415/240]	Bar, Wire	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B or SB-550	R60705	R60705	—	80/55 [550/380]	Bar, Wire	95.5Zr+2.5Cb
62	62	ASTM/ASME	B or SB-551	R60704	R60704	—	60/35 [415/240]	Plate, Sheet, Strip	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B or SB-551	R60705	R60705	—	80/55 [550/380]	Plate, Sheet, Strip	95.5Zr+2.5Cb
62	62	ASTM/ASME	B or SB-551	R60706	R60706	—	74/50 [510/345]	Plate, Sheet, Strip	95.5Zr+2.5Cb
62	62	ASTM/ASME	B or SB-658	R60704	R60704	—	60/35 [415/240]	Smls. & Welded Pipe	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B or SB-658	R60705	R60705	—	80/55 [550/380]	Smls. & Welded Pipe	95.5Zr+2.5Cb
62	62	ASTM/ASME	B or SB-752	705C	R60705	—	70/50 [485/345]	Casting	95.5Zr+2.5Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, J2.2.1, and J3)

M-Number assignments listed in https://mnumbers.org but not printed in this table may also be used.

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Magnesium and Magnesium Base Alloys									
81	—	ASTM	B90	AZ31B	M11311	—	32/ [220/]	Plate, Sheet	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B90	AZ31C	M11312	≥ 0.016 [0.4] ≤ 0.06 [1.5]	32/18 [220/125]	Sheet	95.5Mg-3Al-Zn
81	—	ASTM	B90	AZ31C	M11312	≥ 0.06 [1.5] ≤ 3 [80]	32/15 [220/105]	Plate, Sheet	95.5Mg-3Al-Zn
81	—	ASTM	B90	HK31A	M13310	> 1 [25] ≤ 3 [80]	29/14 [200/97]	Plate	95.5Mg-3Al-Zn
81	—	ASTM	B90	HK31A	M13310	> 0.5 [13] ≤ 1 [25]	30/15 [205/105]	Plate	95.5Mg-3Al-Zn
81	—	ASTM	B90	HK31A	M13310	≥ 0.016 [0.4] ≤ 0.5 [13]	30/16 [205/110]	Plate, Sheet	95.5Mg-3Al-Zn
81	—	ASTM	B90	ZE10A	M16100	≥ 0.25 [6] ≤ 0.5 [13]	29/12 [200/83]	Plate	98Mg-1.25Zn-0.17Re
81	—	ASTM	B90	ZE10A	M16100	> 0.06 [1.5] ≤ 0.25 [6]	30/15 [205/105]	Sheet	98Mg-1.25Zn-0.17Re
81	—	ASTM	B90	ZE10A	M16100	≥ 0.016 [0.4] ≤ 0.06 [1.5]	30/18 [205/125]	Sheet	98Mg-1.25Zn-0.17Re
81	—	ASTM	B91	AZ31B	M11311	—	32/15 [220/105]	Forging	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B91	AZ61A	M11610	—	35/19 [240/130]	Forging	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ31B	M11311	≥ 2.5 [60] < 5 [130]	29/17 [200/115]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	—	29/13 [200/90]	Hollow Profile	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≥ 0.028 [1] ≤ 0.25 [6]	29/17 [200/115]	Tube	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	> 0.25 [6] ≤ 0.75 [20]	29/13 [200/90]	Tube	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≥ 1.5 [40] < 2.5 [60]	31/19 [215/130]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	< 0.25 [6]	32/18 [220/125]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≥ 0.25 [6] < 1.5 [40]	32/19 [220/130]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31C	M11312	> 0.25 [6] ≤ 0.75 [20]	29/13 [200/90]	Tube	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≥ 2.5 [60] < 5 [130]	29/17 [200/115]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	—	29/13 [200/90]	Hollow Profile	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≥ 0.028 [1] ≤ 0.25 [6]	29/17 [200/115]	Tube	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≥ 1.5 [40] < 2.5 [60]	31/19 [215/130]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	< 0.25 [6]	32/18 [220/125]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≥ 0.25 [6] < 1.5 [40]	32/19 [220/130]	Bar, Rod, Profile, Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ61A	M11610	≥ 0.028 [1] ≤ 0.75 [20]	33/13 [230/90]	Tube	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	—	33/13 [230/90]	Hollow Profile	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	< 0.25 [6]	35/18 [240/125]	Bar, Rod, Profile, Wire	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	≥ 2.5 [60] < 5 [130]	37/19 [255/130]	Bar, Rod, Profile, Wire	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	≥ 0.25 [6] < 2.5 [60]	37/21 [255/145]	Bar, Rod, Profile, Wire	92.5Mg-6Al-Zn
81	—	ASTM	B107	M1A	M15100	—	33/13 [230/90]	Hollow Profile	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	≥ 0.028 [1] ≤ 0.75 [20]	33/13 [230/90]	Tube	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	< 0.25 [6]	35/18 [240/125]	Bar, Rod, Profile, Wire	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	≥ 2.5 [60] < 5 [130]	37/19 [255/130]	Bar, Rod, Profile, Wire	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	≥ 0.25 [6] < 2.5 [60]	37/21 [255/145]	Bar, Rod, Profile, Wire	98Mg-Mn
83	—	ASTM	B80	AZ91C, F	M11914	—	21/10 [145/69]	Casting	90.5Mg-9Al-Zn-Mn
83	—	ASTM	B80	AZ92A, F	M11920	—	21/10 [145/69]	Casting	88.5Mg-9Al-2Zn-Mn
83	—	ASTM	B80	K1A	M18010	—	22/5 [150/34]	Casting	99.6Mg-Zr
83	—	ASTM	B199	AM100A	M10100	—	18/9 [125/62]	Casting	89.5Mg-10Al-Mn
83	—	ASTM	B199	AZ91C, F	M11914	—	21/10 [145/69]	Casting	90.5Mg-9Al-Zn-Mn
83	—	ASTM	B199	AZ92A, F	M11920	—	21/10 [145/69]	Casting	88.5Mg-9Al-2Zn-Mn
83	—	ASTM	B403	AM100A, F	M10100	—	18/9 [125/62]	Casting	89.5Mg-10Al-Mn
83	—	ASTM	B403	AZ91C, F	M11914	—	16/9 [110/62]	Casting	90.5Mg-9Al-Zn-Mn
83	—	ASTM	B403	AZ92A, F	M11920	—	18/9 [125/62]	Casting	88.5Mg-9Al-2Zn-Mn
83	—	ASTM	B403	K1A	M18010	—	22/5 [150/34]	Casting	99.6Mg-Zr

Note: For unlisted base materials, mechanical test requirements are per material specification.

Table C.3
Listing of Base Metal Specifications—Iron Castings

AWS D11.2 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Minimum As-Welded Tensile/Yield Strength, ksi [MPa]	Type of Base Metal	Nominal Composition
Iron Castings[a, b]							
A	ASTM	A48	Class 20	F11401	20/– [138/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 25	F11701	25/– [172/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 30	F12101	30/– [207/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 35	F12401	35/– [241/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 40	F12801	40/– [276/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 45	F13101	45/– [310/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 50	F13501	50/– [345/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 55	F13801	55/– [379/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 60	F14101	60/– [414/–]	Gray Cast Iron	Not Specified
A	ASTM	A74	Class A	—	21/– [145/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A126	Class A	F11501	21/– [145/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A126	Class B	F12102	31/– [214/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A126	Class C	F12103	41/– [283/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A159	Grade 1800	F10004	18/– [124/–]	Gray Cast Iron	0.55Si-0.65Mn; 4.35CE
A	ASTM	A159	Grade 2500	F10005	25/– [172/–]	Gray Cast Iron	2.2 Si-0.75Mn; 4.12CE
A	ASTM	A159	Grade 2500a	F10009	25/– [172/–]	Gray Cast Iron	1.85Si-0.75Mn; 4.12 CE
A	ASTM	A159	Grade 3000	F10006	30/– [207/–]	Gray Cast Iron	2.1Si-0/75Mn; 4.02CE
A	ASTM	A159	Grade 3500	F10007	35/– [241/–]	Gray Cast Iron	2.0Si-0.75Mn; 3.8CE
A	ASTM	A159	Grade 3500b	F10010	35/– [241/–]	Gray Cast Iron	1.55Si-0.75Mn; 3.8CE
A	ASTM	A159	Grade 3500c	F10011	35/– [241/–]	Gray Cast Iron	1.55Si-0.75Mn; 3.8CE
A	ASTM	A159	Grade 4000	F10008	40/– [276/–]	Gray Cast Iron	1.95Si-0.85Mn; 3.8CE
A	ASTM	A159	Grade 4000d	F10012	40/– [276/–]	Gray Cast Iron	1.95Si-0.85Mn; 3.8CE
A	ASTM	A319	Class I	F10001	25/– [172/–]	Gray Cast Iron	Not Specified
A	ASTM	A319	Class II	F10002	30/– [207/–]	Gray Cast Iron	Not Specified
A	ASTM	A319	Class III	F10003	40/– [276/–]	Gray Cast Iron	Not Specified
A	SAE	J431	G1800	F10004	18/– [124/–]	Gray Cast Iron	2.3SI-0.65Mn; 4.35CE
A	SAE	J431	G2500	F10005	25 [172]	Gray Cast Iron	2.3Si-0.75Mn; 4.12CE
A	SAE	J431	G3000	F10006	30 [207]	Gray Cast Iron	2.1Si-0.65Mn; 4.02CE
A	SAE	J431	G3500	F10007	35 [241]	Gray Cast Iron	2.0Si-0.75Mn; 3.8CE
A	SAE	J431	G4000	F10008	40 [276]	Gray Cast Iron	1.95Si-0.95Mn; 3.8CE
B	ASTM	A536	100-70-03	F34800	100/70 [689/483]	Ductile	Not Specified
B	ASTM	A536	120-90-02	F36200	120/90 [827/621]	Ductile	Not Specified
B	ASTM	A536	60-40-18	F32800	60/40 [414/276]	Ductile	Not Specified
B	ASTM	A536	65-45-12	F33100	65/42 [448/290]	Ductile	Not Specified
B	ASTM	A536	80-55-06	F33800	80/55 [552/379]	Ductile	Not Specified
B	ASTM	A716	60-42-10	F32900	60/– [414/–]	Ductile	Not Specified
B	ASTM	A746	60-42-10	—	60/– [414/–]	Ductile	Not Specified
B	ASTM	A874	—	—	45/30 [310/207]	Ductile	3.35C-1.75Si
B	ASTM	A897	125-80-10	—	125/80 [862/552]	Ductile	1.0Ni-0.5Cu-0.35Mn-0.015Mo

(Continued)

Table C.3 (Continued)
Listing of Base Metal Specifications—Iron Castings

AWS D11.2 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Minimum As-Welded Tensile/Yield Strength, ksi [MPa]	Type of Base Metal	Nominal Composition
Iron Castings[a, b]							
B	SAE	J434	D4018	F32800	60/– [414/–]	Ductile	Not Specified
B	SAE	J434	D4512	F33100	65/– [448/–]	Ductile	Not Specified
B	SAE	J434	D5506	F33800	80/– [552/–]	Ductile	Not Specified
B	SAE	J434	D7003	F34800	100/– [689/–]	Ductile	Not Specified
C	ASTM	A47	32510	F22200	50/– [345/–]	Malleable	Not Specified
C	ASTM	A47	35018	F22400	53/– [365/–]	Malleable	Not Specified
C	ASTM	A197	—	F22200	40/– [276/–]	Malleable	Not Specified
C	ASTM	A220	40010	F22830	60/– [414/–]	Malleable	Not Specified
C	ASTM	A220	45006	F23131	65/– [448/–]	Malleable	Not Specified
C	ASTM	A220	45008	F23130	65/– [448/–]	Malleable	Not Specified
C	ASTM	A220	50005	F23530	70/– [483/–]	Malleable	Not Specified
C	ASTM	A220	60004	F24130	80/– [552/–]	Malleable	Not Specified
C	ASTM	A220	70003	F24830	85/– [586/–]	Malleable	Not Specified
C	ASTM	A220	80002	F25530	95/– [655/–]	Malleable	Not Specified
C	ASTM	A220	90001	F26230	105/– [724/–]	Malleable	Not Specified
C	ASTM	A602	M3210	F20000	50/– [345/–]	Malleable	Not Specified
C	ASTM	A602	M4504	F20000	65/– [448/–]	Malleable	Not Specified
C	ASTM	A602	M5003	F20000	75/– [517/–]	Malleable	Not Specified
C	SAE	J158a	M3210	F20000	50/– [345/–]	Malleable	Not Specified
C	SAE	J158a	M4504	F20001	65/– [448/–]	Malleable	Not Specified

[a] In the absence of an M number to group the alloys, a separate procedure qualification is required for each group of the above materials.
[b] The groups are based on AWS D11.2.

Table C.4
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	AMS	AMS-QQ-S-763	S-8	304	S30400	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	304L	S30403	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	316	S31600	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	309	S30900	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	310	S31000	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	316L	S31603	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	321	S32100	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	347	S34700	Bars, Wire, Shapes & Forgings
TP248	ASTM	A27	S-1	Grade 60-30	J03000	Castings
TP248	ASTM	A27	S-1	Grade 65-35	J03001	Castings
TP248	ASTM	A27	S-1	Grade 70-36	J03501	Castings
TP248	ASTM	A36	S-1	—	—	Plate, Bars & Shapes
TP248	ASTM	A53	S-1	Grade A, Type E	K02504	Resistance Welded Pipe
TP248	ASTM	A53	S-1	Grade A, Type F	K03005	Furnace Welded Pipe
TP248	ASTM	A53	S-1	Grade A, Type S	K03005	Seamless Pipe
TP248	ASTM	A53	S-1	Grade B, Type E	K02504	Resistance Welded Pipe
TP248	ASTM	A53	S-1	Grade B, Type S	K03005	Seamless Pipe
TP248	ASTM	A105	S-1	A105	K03504	Flanges, Fittings & Valves
TP248	ASTM	A106	S-1	Grade A	K02501	Seamless Pipe
TP248	ASTM	A106	S-1	Grade B	K03006	Seamless Pipe
TP248	ASTM	A131	S-1	Grade A	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade B	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade D	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade AH-36	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade DH-36	—	Plate, Bars & Shapes
TP248	ASTM	A134	S-1	A283 Grade A	K01400	Welded Pipe
TP248	ASTM	A134	S-1	A283 Grade B	K01702	Welded Pipe
TP248	ASTM	A134	S-1	A283 Grade C	K02401	Welded Pipe

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	ASTM	A134	S-1	A283 Grade D	K02702	Welded Pipe
TP248	ASTM	A134	S-1	A285 Grade A	K01700	Welded Pipe
TP248	ASTM	A134	S-1	A285 Grade B	K02200	Welded Pipe
TP248	ASTM	A134	S-1	A285 Grade C	K02801	Welded Pipe
TP 248	ASTM	A178	S-1	Grade A	K01200	Electric Resistance Welded Tube
TP 248	ASTM	A178	S-1	Grade C	K03503	Electric Resistance Welded Tube
TP 248	ASTM	A178	S-1	Grade D	K03010	Electric Resistance Welded Tube
TP 248	ASTM	A179	S-1	—	K01200	Seamless Tube
TP 248	ASTM	A182	S-8	F304	S30400	Flanges, Fittings & Valves
TP 248	ASTM	A182	S-8	F304L	S30403	Flanges, Fittings & Valves
TP 248	ASTM	A182	S-8	F316	S31600	Flanges, Fittings & Valves
TP 248	ASTM	A182	S-8	F316L	S31603	Flanges, Fittings & Valves
TP 248	ASTM	A192	S-1	—	K01201	Seamless Tube
TP 248	ASTM	A210	S-1	Grade A-1	K03501	Seamless Tube
TP 248	ASTM	A213	S-8	TP 304	K02707	Seamless Tube
TP 248	ASTM	A213	S-8	TP 304L	S30403	Seamless Tube
TP 248	ASTM	A214	S-1	—	K01807	Electric Resistance Welded Tube
TP248	ASTM	A216	S-1	Grade WCA	J02502	Castings
TP248	ASTM	A216	S-1	Grade WCB	J03002	Castings
TP248	ASTM	A216	S-1	Grade WCC	J02503	Castings
TP248	ASTM	A234	S-1	WPB	K03006	Piping Fittings
TP248	ASTM	A234	S-1	WPC	K03501	Piping Fittings
TP248	ASTM	A240	S-8	Type 304	S30400	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 304L	S30403	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 309S	S30908	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 310S	S31008	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 316	S31600	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 316L	S31603	Plate, Sheet & Strip

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	ASTM	A240	S-8	Type 321	S32100	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 347	S34700	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 348	S34800	Plate, Sheet & Strip
TP 248	ASTM	A269	S-8	TP 304	S30400	Seamless Pipe
TP 248	ASTM	A269	S-8	TP 304L	S30403	Seamless Pipe
TP 248	ASTM	A269	S-8	TP 316	S31600	Seamless Pipe
TP 248	ASTM	A269	S-8	TP 316L	S31603	Seamless Pipe
TP 248	ASTM	A276	S-8	TP 304	S30400	Bar
TP 248	ASTM	A276	S-8	TP 304L	S30403	Bar
TP 248	ASTM	A276	S-8	TP 316	S31600	Bar
TP 248	ASTM	A276	S-8	TP 316L	S31603	Bar
TP 248	ASTM	A283	S-1	Grade A	K01400	Plate
TP 248	ASTM	A283	S-1	Grade B	K01702	Plate
TP 248	ASTM	A283	S-1	Grade C	K02401	Plate
TP 248	ASTM	A283	S-1	Grade D	K02702	Plate
TP 248	ASTM	A285	S-1	Grade A	K01700	Plate
TP 248	ASTM	A285	S-1	Grade B	K02200	Plate
TP 248	ASTM	A285	S-1	Grade C	K02801	Plate
TP 248	ASTM	A296	S-8	CF-8	J92600	Castings
TP248	ASTM	A312	S-8	Type 304	S30400	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 304L	S30403	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 316	S31600	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 316L	S31603	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 321	S32100	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 347	S34700	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 348	S34800	Seamless or Welded Pipe
TP 248	ASTM	A333	S-1	Grade 1	K03008	Seamless or Welded Pipe
TP 248	ASTM	A333	S-1	Grade 6	K03006	Seamless or Welded Pipe

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A334	S-1	Grade 1	K03008	Welded Tube
TP 248	ASTM	A334	S-1	Grade 6	K03006	Welded Tube
TP 248	ASTM	A350	S-1	Grade LF1	K03009	Forgings
TP 248	ASTM	A351	S-8	CF-3	J92500	Castings
TP 248	ASTM	A351	S-8	CF-3M	J92800	Castings
TP 248	ASTM	A351	S-8	CF-8	J92600	Castings
TP 248	ASTM	A351	S-8	CF-8M	J92900	Castings
TP 248	ASTM	A352	S-1	Grade LCA	J02504	Castings
TP 248	ASTM	A352	S-1	Grade LCB	J03003	Castings
TP 248	ASTM	A369	S-1	Grade FPA	K02501	Forged Pipe
TP 248	ASTM	A369	S-1	Grade FPB	K03006	Forged Pipe
TP 248	ASTM	A372	S-1	Grade A/Type I	K03002	Forging
TP 248	ASTM	A403	S-8	WP304	S30400	Wrought Fittings
TP 248	ASTM	A403	S-8	WP304L	S30403	Wrought Fittings
TP 248	ASTM	A403	S-8	WP316	S31600	Wrought Fittings
TP 248	ASTM	A403	S-8	WP316L	S31603	Wrought Fittings
TP 248	ASTM	A414	S-1	Grade A	K01501	Sheet
TP 248	ASTM	A414	S-1	Grade B	K02201	Sheet
TP 248	ASTM	A414	S-1	Grade C	K02503	Sheet
TP 248	ASTM	A414	S-1	Grade D	K02505	Sheet
TP 248	ASTM	A414	S-1	Grade E	K02704	Sheet
TP 248	ASTM	A414	S-1	Grade F	K-3102	Sheet
TP 248	ASTM	A414	S-1	Grade G	K03103	Sheet
TP 248	ASTM	A420	S-1	Grade WPL6	K03006	Piping Fittings
TP 248	ASTM	A473	S-8	316	S31600	Forging
TP 248	ASTM	A479	S-8	304	S30400	Bars & Shapes
TP 248	ASTM	A479	S-8	304L	S30403	Bars & Shapes
TP 248	ASTM	A479	S-8	316	S31600	Bars & Shapes

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A479	S-8	316L	S31603	Bars & Shapes
TP 248	ASTM	A479	S-8	321	S32100	Bars & Shapes
TP 248	ASTM	A479	S-8	347	S34700	Bars & Shapes
TP 248	ASTM	A479	S-8	348	S34800	Bars & Shapes
TP 248	ASTM	A500	S-1	Grade A	K03000	Welded or Seamless Tubing
TP 248	ASTM	A500	S-1	Grade B	K03000	Welded or Seamless Tubing
TP 248	ASTM	A500	S-1	Grade C	K02705	Welded or Seamless Tubing
TP 248	ASTM	A500	S-1	Grade D	K03000	Welded or Seamless Tubing
TP 248	ASTM	A501	S-1	Grade A	K03000	Welded or Seamless Tubing
TP 248	ASTM	A501	S-1	Grade B	K03000	Welded or Seamless Tubing
TP 248	ASTM	A511	S-8	304	S30400	Seamless Tubing
TP 248	ASTM	A511	S-8	304L	S30403	Seamless Tubing
TP 248	ASTM	A511	S-8	316	S31600	Seamless Tubing
TP 248	ASTM	A511	S-8	316L	S31603	Seamless Tubing
TP 248	ASTM	A512	S-1	Grade 1008	G10080	Tube
TP 248	ASTM	A512	S-1	Grade 1010	G10100	Tube
TP 248	ASTM	A512	S-1	Grade 1012	G10120	Tube
TP 248	ASTM	A512	S-1	Grade 1015	G10150	Tube
TP 248	ASTM	A512	S-1	Grade 1016	G10160	Tube
TP 248	ASTM	A512	S-1	Grade 1018	G10180	Tube
TP 248	ASTM	A512	S-1	Grade 1019	G10190	Tube
TP 248	ASTM	A512	S-1	Grade 1020	G10200	Tube
TP 248	ASTM	A512	S-1	Grade 1021	G10210	Tube
TP 248	ASTM	A512	S-1	Grade 1025	G10250	Tube
TP 248	ASTM	A513	S-1	Grade 1008	G10080	Tube
TP 248	ASTM	A513	S-1	Grade 1010	G10100	Tube
TP 248	ASTM	A513	S-1	Grade 1012	G10120	Tube
TP 248	ASTM	A513	S-1	Grade 1015	G10150	Tube

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A513	S-1	Grade 1016	G10160	Tube
TP 248	ASTM	A513	S-1	Grade 1018	G10180	Tube
TP 248	ASTM	A513	S-1	Grade 1019	G10190	Tube
TP 248	ASTM	A513	S-1	Grade 1020	G10200	Tube
TP 248	ASTM	A513	S-1	Grade 1021	G10210	Tube
TP 248	ASTM	A513	S-1	Grade 1025	G10250	Tube
TP248	ASTM	A515	S-1	Grade 55	K02001	Plate
TP248	ASTM	A515	S-1	Grade 60	K02401	Plate
TP248	ASTM	A515	S-1	Grade 65	K02800	Plate
TP248	ASTM	A515	S-1	Grade 70	K03101	Plate
TP248	ASTM	A516	S-1	Grade 55	K01800	Plate
TP248	ASTM	A516	S-1	Grade 60	K02100	Plate
TP248	ASTM	A516	S-1	Grade 65	K02403	Plate
TP248	ASTM	A516	S-1	Grade 70	K02700	Plate
TP 248	ASTM	A519	S-1	Grade 1008	G10080	Tube
TP 248	ASTM	A519	S-1	Grade 1010	G10100	Tube
TP 248	ASTM	A519	S-1	Grade 1012	G10120	Tube
TP 248	ASTM	A519	S-1	Grade 1015	G10150	Tube
TP 248	ASTM	A519	S-1	Grade 1016	G10160	Tube
TP 248	ASTM	A519	S-1	Grade 1018	G10180	Tube
TP 248	ASTM	A519	S-1	Grade 1019	G10190	Tube
TP 248	ASTM	A519	S-1	Grade 1020	G10200	Tube
TP 248	ASTM	A519	S-1	Grade 1021	G10210	Tube
TP 248	ASTM	A519	S-1	Grade 1025	G10250	Tube
TP 248	ASTM	A524	S-1	Grade I	K02104	Seamless Pipe
TP 248	ASTM	A524	S-1	Grade II	K02104	Seamless Pipe
TP 248	ASTM	A537	S-1	Class 1	K12437	Plate
TP 248	ASTM	A554	S-8	MT-304	S30400	Welded Tubing

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A554	S-8	MT-304L	S30403	Welded Tubing
TP 248	ASTM	A554	S-8	MT-316	S31600	Welded Tubing
TP 248	ASTM	A554	S-8	MT-316L	S31603	Welded Tubing
TP 248	ASTM	A554	S-8	MT-321	S32100	Welded Tubing
TP 248	ASTM	A554	S-8	MT-347	S34700	Welded Tubing
TP 248	ASTM	A556	S-1	Grade A2	K01807	Tube
TP 248	ASTM	A556	S-1	Grade B2	K02707	Tube
TP 248	ASTM	A557	S-1	Grade A2	K01807	Electric Resistance Welded Tube
TP 248	ASTM	A557	S-1	Grade B2	K03007	Electric Resistance Welded Tube
TP 248	ASTM	A562	S-1	—	K11224	Plate
TP 248	ASTM	A569	S-1	Grade A	K02502	Sheet & Strip
TP 248	ASTM	A569	S-1	Grade B	K02502	Sheet & Strip
TP 248	ASTM	A569	S-1	Grade C	K02502	Sheet & Strip
TP 248	ASTM	A570	S-1	Grade 36 Type 1	K02502	Sheet & Strip
TP 248	ASTM	A572	S-1	Grade 42	—	Plate, Bars & Shapes
TP 248	ASTM	A572	S-1	Grade 50	—	Plate, Bars & Shapes
TP 248	ASTM	A575	S-1	M1008	—	Bar
TP 248	ASTM	A575	S-1	M1010	—	Bar
TP 248	ASTM	A575	S-1	M1012	—	Bar
TP 248	ASTM	A575	S-1	M1015	—	Bar
TP 248	ASTM	A575	S-1	M1017	—	Bar
TP 248	ASTM	A575	S-1	M1020	—	Bar
TP 248	ASTM	A575	S-1	M1023	—	Bar
TP 248	ASTM	A575	S-1	M1025	—	Bar
TP 248	ASTM	A576	S-1	1008	G10080	Bar
TP 248	ASTM	A576	S-1	1010	G10100	Bar
TP 248	ASTM	A576	S-1	1012	G10120	Bar
TP 248	ASTM	A576	S-1	1015	G10150	Bar

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A576	S-1	1016	G10160	Bar
TP 248	ASTM	A576	S-1	1017	G10170	Bar
TP 248	ASTM	A576	S-1	1018	G10180	Bar
TP 248	ASTM	A576	S-1	1019	G10190	Bar
TP 248	ASTM	A576	S-1	1020	G10200	Bar
TP 248	ASTM	A576	S-1	1021	G10210	Bar
TP 248	ASTM	A576	S-1	1022	G10220	Bar
TP 248	ASTM	A576	S-1	1023	G10230	Bar
TP 248	ASTM	A576	S-1	1025	G10250	Bar
TP 248	ASTM	A587	S-1	—	K11500	Electric Resistance Welded Pipe
TP 248	ASTM	A606	S-1	Type 2, CR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 2, HR, A	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 2, HR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 2, HR, N	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, CR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, HR, A	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, HR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, HR, N	—	Sheet & Strip
TP 248	ASTM	A659	S-1	1015	G10150	Sheet & Strip
TP 248	ASTM	A659	S-1	1016	G10160	Sheet & Strip
TP 248	ASTM	A659	S-1	1017	G10170	Sheet & Strip
TP 248	ASTM	A659	S-1	1018	G10180	Sheet & Strip
TP 248	ASTM	A659	S-1	1020	G10200	Sheet & Strip
TP 248	ASTM	A659	S-1	1021	G10210	Sheet & Strip
TP 248	ASTM	A659	S-1	1023	G10230	Sheet & Strip
TP 248	ASTM	A660	S-1	WCA	J02504	Pipe
TP 248	ASTM	A662	S-1	Grade A	K01701	Plate
TP 248	ASTM	A662	S-1	Grade B	K02203	Plate

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A666	S-8	TP 304	S30400	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A666	S-8	TP 304L	S30403	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A666	S-8	TP 316	S31600	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A666	S-8	TP 316L	S31603	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A671	S-1	Grade CA55	K02801	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CB60	K02401	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CB65	K02800	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CC60	K02100	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CC65	K02403	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CE55	K02202	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CE60	K02402	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade A45	K01700	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade A50	K02200	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade A55	K02801	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade B55	K02001	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade B60	K02401	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade B65	K02800	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade C55	K01800	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade C60	K02100	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade C65	K02403	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade E55	K02202	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade E60	K02402	Fusion Welded Pipe
TP 248	ASTM	A709	S-1	Grade 50W	—	Plate, Bars & Shapes
TP 248	ASTM	A727	S-1	—	K02506	Forging
TP 248	ASTM	A743	S-8	CF3	J92500	Castings
TP 248	ASTM	A743	S-8	CF8	J92600	Castings
TP 248	ASTM	A743	S-8	CF8M	J92900	Castings
TP 248	ASTM	A743	S-8	CN7M	N08007	Castings

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A743	S-8	CN7MS	J94650	Castings
TP 248	ASTM	A744	S-8	CN7M	N08007	Castings
TP 248	ASTM	A744	S-8	CN7MS	J94650	Castings
TP 248	ASTM	A765	S-1	Grade I	K03046	Forging
TP 248	ASTM	A793	S-8	TP 304	S30400	Floor Plate
TP 248	ASTM	A793	S-8	TP 304L	S30403	Floor Plate
TP 248	ASTM	A793	S-8	TP 316	S31600	Floor Plate
TP 248	ASTM	A793	S-8	TP 316L	S31603	Floor Plate
TP 248	ASTM	A794	S-1	1015	G10150	Sheet
TP 248	ASTM	A794	S-1	1016	G10160	Sheet
TP 248	ASTM	A794	S-1	1017	G10170	Sheet
TP 248	ASTM	A794	S-1	1018	G10180	Sheet
TP 248	ASTM	A794	S-1	1020	G10200	Sheet
TP 248	ASTM	A794	S-1	1021	G10210	Sheet
TP 248	ASTM	A794	S-1	1023	G10230	Sheet
TP 248	ASTM	A813	S-8	TP304	S30400	Welded Pipe
TP 248	ASTM	A830	S-1	1006	G10060	Plate
TP 248	ASTM	A830	S-1	1008	G10080	Plate
TP 248	ASTM	A830	S-1	1009	G10090	Plate
TP 248	ASTM	A830	S-1	1010	G10100	Plate
TP 248	ASTM	A830	S-1	1012	G10120	Plate
TP 248	ASTM	A830	S-1	1015	G10150	Plate
TP 248	ASTM	A830	S-1	1016	G10160	Plate
TP 248	ASTM	A830	S-1	1017	G10170	Plate
TP 248	ASTM	A830	S-1	1018	G10180	Plate
TP 248	ASTM	A830	S-1	1019	G10190	Plate
TP 248	ASTM	A830	S-1	1020	G10200	Plate
TP 248	ASTM	A830	S-1	1021	G10210	Plate

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A830	S-1	1022	G10220	Plate
TP 248	ASTM	A830	S-1	1023	G10230	Plate
TP 248	ASTM	A830	S-1	1025	G10250	Plate
TP 248	ASTM	A1008	S-1	Grade CS Type A	—	Sheet
TP 248	ASTM	A1008	S-1	Grade CS Type B	—	Sheet
TP 248	ASTM	A1011	S-1	Grade 36 Type 1	—	Sheet & Strip
TP 248	ASTM	A1011	S-1	Grade 36 Type 2	—	Sheet & Strip
TP 248	ASTM	A1011	S-1	Grade CS Type B	—	Sheet & Strip
TP248	Federal Specification	QQ-S-763	S-8	304	S30400	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	304L	S30403	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	316	S31600	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	309	S30900	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	310	S31000	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	316L	S31603	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	321	S32100	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	347	S34700	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-766	S-8	304	S30400	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	304L	S30403	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	309S	S30908	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	310S	S31008	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	316	S31600	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	316L	S31603	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	321	S32100	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	347	S34700	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	348	S34800	Plate, Sheet & Strip
TP248	Military Specification	MIL-C-24707/3	S-8	ASTM A744 Grade CF-8	J92600	Castings
TP248	Military Specification	MIL-C-24707/3	S-8	ASTM A744 Grade CF-8C	J92710	Castings
TP248	Military Specification	MIL-C-24707/3	S-8	ASTM A744 Grade CF-8M	J92200	Castings

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	Military Specification	MIL-DTL-23194/MIL-S-23194	S-1	Composition C Type 1	K13502	Forging
TP248	Military Specification	MIL-DTL-23194/MIL-S-23194	S-1	Composition C Type 2	K13502	Forging
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	304	S30400	Bars & Forgings
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	304L	S30403	Bars & Forgings
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	347	S34700	Bars & Forgings
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	348	S34800	Bars & Forgings
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	304	S30400	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	304L	S30403	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	347	S34700	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	348	S34800	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	304	S30400	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	304L	S30403	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	347	S34700	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	348	S34800	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	304	S30400	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	304L	S30403	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	347	S34700	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	348	S34800	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A216 Grade WCA	J02502	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A216 Grade WCB	J03002	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A216 Grade WCC	J02503	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A757 Grade A1Q	—	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A757 Grade A2Q	—	Castings
TP248	Military Specification	MIL-F-20236	S-1	Type I Class 1	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20236	S-1	Type I Class 2	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20236	S-1	Type II Class 1	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20236	S-1	Type II Class 2	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20670	S-1	Type A	—	Pipe Flanges

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	Military Specification	MIL-F-20670	S-1	Type B	—	Pipe Flanges
TP248	Military Specification	MIL-F-20670	S-1	Type C	—	Pipe Flanges
TP248	Military Specification	MIL-F-20670	S-1	Type D	—	Pipe Flanges
TP248	Military Specification	MIL-P-24691/1	S-1	Grade A	K02501	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/1	S-1	Grade B	K03006	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	304	S30400	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	304L	S30403	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	316	S31600	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	316L	S31603	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	321	S32100	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	347	S34700	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-S-867	S-8	Class I	—	Castings
TP248	Military Specification	MIL-S-867	S-8	Class II	—	Castings
TP248	Military Specification	MIL-S-867	S-8	Class III	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade 65-35	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade 70-36	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade B	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade CW	—	Castings
TP248	Military Specification	MIL-S-17509	S-8	Class I	—	Castings
TP248	Military Specification	MIL-S-17509	S-8	Class II	—	Castings
TP248	Military Specification	MIL-S-17509	S-8	Class III	—	Castings
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade A	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade B	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade D	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade E	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	AH-36, 36Z, 36T, 36TZ	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	DH-36	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	EH-36, 36Z, 36T, 36TZ	—	Plate, Bars & Shapes

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	Military Specification	MIL-S-23193	S-8	Composition A (304). Formerly Class 1	S30400	Castings
TP248	Military Specification	MIL-S-23193	S-8	Composition B (348). Formerly Class II	S34800	Castings
TP248	Military Specification	MIL-S-23193	S-8	Composition C (316). Formerly Class III	S31600	Castings
TP248	Military Specification	MIL-S-23284	S-1	Class 3	—	Forging
TP248	Military Specification	MIL-S-23284	S-1	Class 4	—	Forging
TP248	Military Specification	MIL-S-24093	S-1	Class H, Type V	—	Forging
TP248	Military Specification	MIL-S-24238	S-1	Composition C	—	Plate
TP248	Military Specification	MIL-S-24412	S-1	Grade HT	—	Shape
TP248	Military Specification	MIL-T-16286	S-1	Class a	—	Seamless Tube
TP248	Military Specification	MIL-T-16286	S-8	Class c	—	Seamless Tube
TP248	Military Specification	MIL-T-16286	S-1	Class g	—	Seamless Tube
TP248	Military Specification	MIL-T-20157	S-1	Type E	—	Seamless Tube & Pipe
TP248	Military Specification	MIL-T-8504	S-8	304	S30400	Seamless & Welded Tubing
TP248	WW-P-404	WW-P-404	S-1	Type E Grade A Class A53A ERW	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade A Class A53A ERW XS	—	Electric-Resistance Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade A Class A53A ERW XXS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade B Class A53B ERW	—	Electric-Resistance Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade B Class A53B ERW XS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade B Class A53B ERW XXS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type F Class A53 BW	—	Furnace Butt Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type F Class A53 BW XS	—	Furnace Butt Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type F Class A53 BW XXS	—	Furnace Butt Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade A Class A53A S	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade A Class A53A S XS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade A Class A53A S XXS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade B Class A53B S	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade B Class A53B S XS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade B Class A53B S XXS	—	Seamless Pipe

This page is intentionally blank.

Annex I (Informative)
Requesting an Official Interpretation on an AWS Standard

This annex is not part of this standard but is included for informational purposes only.

I1. Introduction

The following procedures are here to assist standard users in submitting successful requests for official interpretations to AWS standards. Requests from the general public submitted to AWS staff or committee members that do not follow these rules may be returned to the sender unanswered. AWS reserves the right to decline answering specific requests; if AWS declines a request, AWS will provide the reason to the individual why the request was declined.

I2. Limitations

The activities of AWS technical committees regarding interpretations are limited strictly to the interpretation of provisions of standards prepared by the committees. Neither AWS staff nor the committees are in a position to offer interpretive or consulting services on (1) specific engineering problems, (2) requirements of standards applied to fabrications outside the scope of the document, or (3) points not specifically covered by the standard. In such cases, the inquirer should seek assistance from a competent engineer experienced in the particular field of interest.

I3. General Procedure for all Requests

I3.1 Submission. All requests shall be sent to the Director, Standards Committee Operations. For efficient handling, it is preferred that all requests should be submitted electronically through standards@aws.org. Alternatively, requests may be mailed to:

Director, Standards Committee Operations
American Welding Society
8669 NW 36 St, #130
Miami, FL 33166

I3.2 Contact Information. All inquiries shall contain the name, address, email, phone number, and employer of the inquirer.

I3.3 Scope. Each inquiry shall address one single provision of the standard unless the issue in question involves two or more interrelated provisions. The provision(s) shall be identified in the scope of the request along with the edition of the standard (e.g., D1.1:2006) that contains the provision(s) the inquirer is addressing.

I3.4 Question(s). All requests shall be stated in the form of a question that can be answered "yes" or "no". The request shall be concise, yet complete enough to enable the committee to understand the point of the issue in question. When the point is not clearly defined, the request will be returned for clarification. Sketches should be used whenever appropriate, and all paragraphs, figures, and tables (or annexes) that bear on the issue in question shall be cited.

I3.5 Proposed Answer(s). The inquirer shall provide proposed answer(s) to their own question(s).

I3.6 Background. Additional information on the topic may be provided but is not necessary. The question(s) and proposed answer(s) above shall stand on their own without the need for additional background information.

I4. AWS Policy on Interpretations

The American Welding Society (AWS) Board of Directors has adopted a policy whereby all official interpretations of AWS standards are handled in a formal manner. Under this policy, all official interpretations are approved by the technical committee that is responsible for the standard. Communication concerning an official interpretation is directed through the AWS staff member who works with that technical committee. The policy requires that all requests for an official interpretation be submitted in writing. Such requests will be handled as expeditiously as possible, but due to the procedures that must be followed, some requests for an official interpretation may take considerable time to complete.

I5. AWS Response to Requests

Upon approval by the committee, the interpretation is an official interpretation of the Society, and AWS shall transmit the response to the inquirer, publish it in the *Welding Journal*, and post it on the AWS website.

I6. Telephone Inquiries

Telephone inquiries to AWS Headquarters concerning AWS standards should be limited to questions of a general nature or to matters directly related to the use of the standard. The *AWS Board Policy Manual* requires that all AWS staff members respond to a telephone request for an official interpretation of any AWS standard with the information that such an interpretation can be obtained only through a written request. Headquarters staff cannot provide consulting services. However, the staff can refer a caller to any of those consultants whose names are on file at AWS Headquarters.

Annex J (Informative)
Guidelines for Requesting Adoption of New Materials Under the AWS B2.1 Standard

This annex is not part of this standard but is included for informational purposes only.

J1. Introduction

AWS policy requires all requests to adopt materials for inclusion to be handled in a formal manner. Official communication concerning requests for material adoption is through the AWS staff member who works with that committee. The policy requires that all requests be submitted in writing. Requests will be handled as expeditiously as possible, but due to the complexity of the work and the procedures that must be followed, some requests may require considerable time.

It is the policy of the AWS B2 Committee to adopt for inclusion in the standard only such specifications as have been adopted by recognized national or international organizations. The committee will consider requests to adopt new materials only from other codes and standards, or fabricators and other end users. In addition, such requests should be for materials for which there is a reasonable expectation of use in AWS standards.

J2. Procedure

All requests for the adoption of materials or for extended coverage of existing materials must be directed to:

Managing Director
Technical Services Division
American Welding Society
8669 NW 36 St, # 130
Miami, FL 33166

All requests must contain the name, address, and affiliation of the inquirer, and they must provide the necessary information for the committee to consider the request.

J2.1 Scope. The inquiry shall identify the material or materials for which consideration is being requested and the AWS codes and standards for which the material is considered applicable. The inquirer shall identify the general usage of the material and the temperature range of the application. The inquirer shall also identify all product forms, size ranges, and specifications for which incorporation is desired.

J2.2 Content of the Inquiry. The inquiry should be concise, yet complete, addressing mechanical properties, weldability, and other pertinent information.

J2.2.1 Mechanical Properties. Together with the specification for the material, the inquirer shall furnish the committee with adequate data for inclusion in the applicable tables. The data shall include values of ultimate tensile strength, yield strength, reduction of area, and elongation. Any heat treatment that is required to produce the mechanical properties should be fully described.

The inquirer shall submit a proposed entry for Table C.2 of the standard. Note that the minimum tensile and yield strength values specified in Table C.2 are minimum welded values.

Fracture toughness data shall be provided for materials for which fracture toughness rules would be expected to apply. The data shall include test results for the intended lowest service metal temperature and for the range of material thicknesses desired. The fracture toughness data shall include the results of fracture toughness tests of weld HAZ in the material.

J2.2.2 Weldability. The inquirer shall furnish complete data on the weldability of the proposed material, including data on procedure qualification tests made in accordance with the requirements of recognized national or international organizations. Welding tests shall cover the full range of thickness in which the material is to be used. Data may be provided from documented references, standards, or codes.

J2.2.3 Pertinent Information. The inquirer should provide any information that may affect the classification and use of the materials such as required heat treatments, susceptibility to air hardening, effect of welding procedure and HAZ and weld metal fracture toughness, and the amount of experience with welding the material. Information describing service experience will be useful to the committee.

J3. Material Inquiry Checklist

To assist inquirers desiring the adoption of new materials of the extended coverage of existing materials, the committee provides the following summary of items that must be addressed for each inquiry. The committee reserves the right to request additional information.

(1) Identification of the inquirer is required.

(2) The material must be covered by a specification issued by a recognized national or international organization and an English language version must be provided.

(3) The code or standard where the material is expected to be used shall be identified.

(4) The material shall be defined as ferrous or nonferrous and the application must be identified (product forms, size range, and specification).

(5) Mechanical property data must be submitted (ultimate tensile strength, yield strength, reduction of area, and elongation).

(6) A proposed entry for Table C.2 of the standard shall be submitted. Note that the minimum tensile and yield strength values specified in Table C.2 are minimum welded values.

(7) If applicable, appropriate fracture toughness data shall be submitted.

(8) Procedure qualification test data or other supporting documentation shall be submitted.

J4. Publication of Adopted Material

Materials that are officially adopted for inclusion in the standard will appear online at http://www.aws.org/w/a/technical.

J5. Telephone Inquiries

Telephone inquiries to AWS Headquarters concerning the adoption or extended coverage of existing materials should be limited to questions of a general nature or directly related to the submission all of the information required for the official inquiry. The Board of Directors' policy requires that all AWS staff members respond to a telephone request for an official interpretation of any AWS standard with the information that such an interpretation can be obtained only through a written request. The headquarters staff cannot provide consulting services. The staff can, however, refer a caller to any of these consultants whose names are on file at AWS Headquarters.

J6. The AWS Technical Committee

The activities of AWS technical committees in regard to interpretations are limited strictly to the interpretation of provisions of standards prepared by committee or to consideration of revision to existing provisions on the basis of new data or technology. Neither the committee nor the staff is in a position to offer interpretive or consulting services on (1) specific engineering problems, or (2) requirements of standards applied to fabrications outside the scope of the document or points not specifically covered by the standard. In such cases, the inquirer should seek assistance from a competent engineer experienced in the particular field of interest.

This page is intentionally blank.

List of AWS Documents on Procedure and Performance Qualification

Designation	Title
B2.1/B2.1M	*Specification for Welding Procedure and Performance Qualification*
B2.1/B2.1M-BMG	*Base Metal Grouping for Welding Procedure and Performance Qualification*
B2.1-1-001	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 3/16 inch [5 mm] through 3/4 inch [19 mm] Thick, E7016 and E7018, in the As-Welded Condition, Primarily Plate and Structural Applications*
B2.1-1-002	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 3/16 inch [5 mm] through 7/8 inch [22 mm] Thick, in the As-Welded Condition, Primarily Plate and Structural Applications*
B2.1-1-003	*Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Galvanized Steel (M-1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1-004	*Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Carbon Steel (M-1, Group 1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-8-005	*Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Austenitic Stainless Steel (M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1/8-006	*Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Carbon Steel to Austenitic Stainless Steel (M-1 to M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1-007	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Galvanized Steel (M-1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1-008	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1, P-1, or S-1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-8-009	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1/8-010	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1, P-1, or S-1 to M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1-011	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Galvanized Steel (M-1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-1-012	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1, P-1, or S-1 to M-1, P-1, or S-1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-8-013	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing*

B2.1-1/8-014	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1 to M-8/P-8/S-8, Group 1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing*
B2.1-22-015	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Aluminum (M/P-22 to M/P-22), 18 through 10 Gauge, ER4043 or R4043, in the As-Welded Condition, with or without Backing*
B2.1-1-016	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E7018, As-Welded or PWHT Condition*
B2.1-1-017	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010, As-Welded or PWHT Condition*
B2.1-1-018	*Standard Welding Procedure Specification (SWPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E71T-8, As-Welded Condition*
B2.1-1-019	*Standard Welding Procedure Specification (SWPS) for CO2 Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E70T-1 and E71T-1, As-Welded Condition*
B2.1-1-020	*Standard Welding Procedure Specification (SWPS) for 75% Ar/25% CO2 Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E70T-1 and E71T-1, As-Welded or PWHT Condition*
B2.1-1-021	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 11/2 inch Thick, ER70S-2 and E7018, As-Welded or PWHT Condition*
B2.1-1-022	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Uphill) Followed by E7018, As-Welded or PWHT Condition*
B2.1-8-023	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, As-Welded Condition*
B2.1-8-024	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/16 through 1-1/2 inch Thick, ER3XX, As-Welded Condition, Primarily Plate and Structural Applications*
B2.1-8-025	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, ER3XX and E3XX-XX, As-Welded Condition, Primarily Plate and Structural Applications*
B2.1-1-026	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Downhill) Followed by E7018, As-Welded or PWHT Condition*
B2.1-1-027	*Standard Welding Procedure Specification (SWPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1 or P-1, Groups 1 and 2), 1/8 inch [3 mm] through 1/2 inch [13 mm] Thick, E71T-11, As-Welded Condition, Primarily Plate and Structural Applications*
B2.1-23-028	*Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Spray Transfer Mode) of Aluminum (M-23/P-23), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, ER4043 or ER4943, in the As-Welded Condition, Primarily Plate and Structural Applications*

B2.1-1-201	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Uphill) Followed by E7018 (Vertical Uphill), As-Welded Condition, Primarily Pipe Applications*
B2.1-1-202	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Downhill) Followed by E7018 (Vertical Uphill), As-Welded Condition, Primarily Pipe Applications*
B2.1-1-203	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Uphill), As-Welded Condition, Primarily Pipe Applications*
B2.1-1-204	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Downhill Root with the Balance Vertical Uphill), As-Welded Condition, Primarily Pipe Applications*
B2.1-1-205	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Uphill) Followed by E7018 (Vertical Uphill), As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-206	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Downhill) Followed by E7018 (Vertical Uphill), As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-207	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, ER70S-2, As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-208	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E7018, As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-209	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 11/2 inch Thick, ER70S-2 and E7018, As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-210	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1 and ER70S-2, As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-211	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1, ER70S-2, and E7018, As-Welded Condition, Primarily Pipe Applications*
B2.1-8-212	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/16 through 1-1/2 inch Thick, ER3XX, As-Welded Condition, Primarily Pipe Applications*
B2.1-8-213	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, E3XX-XX, As-Welded Condition, Primarily Pipe Applications*
B2.1-8-214	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, ER3XX and E3XX-XX, As-Welded Condition, Primarily Pipe Applications*

B2.1-8-215	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 11/2 inch Thick, IN3XX and ER3XX, As-Welded Condition, Primarily Pipe Applications*
B2.1-8-216	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, IN3XX, ER3XX, and E3XX-XX, As-Welded Condition, Primarily Pipe Applications*
B2.1-4-217	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), ER80S-B2, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, Primarily Pipe Applications*
B2.1-4-218	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), E8018-B2, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, Primarily Pipe Applications*
B2.1-4-219	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, ER80S-B2 and E8018-B2, Primarily Pipe Applications*
B2.1-4-220	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), E8018-B2, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, IN515 and ER80S-B2, Primarily Pipe Applications*
B2.1-4-221	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, IN515, ER80S-B2, and E8018-B2, Primarily Pipe Applications*
B2.1-5A-222	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), ER90S-B3, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, Primarily Pipe Applications*
B2.1-5A-223	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), E9018-B3, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, Primarily Pipe Applications*
B2.1-5A-224	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, ER90S-B3 and E9018-B3, Primarily Pipe Applications*
B2.1-5A-225	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-5A/P-5A), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, IN521 and ER90S-B3, Primarily Pipe Applications*
B2.1-5A-226	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A/ P-5A), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, IN521, ER90S-B3, and E9018-B3 Primarily Pipe Applications*

B2.1-1/8-227	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1/P-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8, Group 1), 1/16 through 1-1/2 inch Thick, ER309 (L), As-Welded Condition, Primarily Pipe Applications*
B2.1-1/8-228	*Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, E309(L)-15, -16, or -17, As-Welded Condition, Primarily Pipe Applications*
B2.1-1/8-229	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8, Group 1), 1/8 through 1-1/2 inch Thick, ER309(L) and E309(L)-15, -16, or -17, As-Welded Condition, Primarily Pipe Applications*
B2.1-1/8-230	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root of Carbon Steel (M-1/P-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8, Group 1), 1/16 through 1-1/2 inch Thick, IN309 and ER309(L), As-Welded Condition, Primarily Pipe Applications*
B2.1-1/8-231	*Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, IN309, ER309(L), and E309(L)-XX, As-Welded Condition, Primarily Pipe Applications*
B2.1-1-232	*Standard Welding Procedure Specification (SWPS) for 75% Argon Plus 25% Carbon Dioxide Shielded Gas Metal Arc Welding (Short Circuiting Transfer Mode) followed by 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [38 mm] through 1-1/2 inch [38 mm] Thick, ER70S-3 and E7XT-X, in the As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-233	*Standard Welding Procedure Specification (SWPS) for 75% Argon Plus 25% Carbon Dioxide Shielded Gas Metal Arc Welding (Short Circuiting Transfer Mode) followed by 98% Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, ER70S-3, in the As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-234	*Standard Welding Procedure Specification (SWPS) for 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, E7XT-X, in the As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-235	*Standard Welding Procedure Specification (SWPS) for 98% Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, ER70S-3, in the As-Welded or PWHT Condition, Primarily Pipe Applications*
B2.1-1-301	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications*
B2.1-1-302	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications*
B2.1-1-303	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm]*

	through 1-1/2 inch [38 mm] Thick, MIL-70S-2 and MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications
B2.1-1-304	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1 /2 inch [38 mm] Thick, MIL-70T-1 and MIL-71T-1, in the As-Welded Condition, Primarily Plate and Structural Naval Applications*
B2.1-1-305	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70T-1 and MIL-71T-1, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications*
B2.1-8-308	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX, in the As-Welded Condition, Primarily Plate and Structural Naval Applications*
B2.1-8-309	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX-XX, in the As-Welded Condition, Primarily Plate and Structural Naval Applications*
B2.1-8-310	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX and MIL-3XX-XX, in the As-Welded Condition, Primarily Plate and Structural Naval Applications*
B2.1-1-311	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*
B2.1-1-312	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*
B2.1-1-313	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2 and MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*
B2.1-1-314	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-MS-1 and MIL-70S-2, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*
B2.1-1-315	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-MS-1 MIL-70S-2, and MIL-7018-M in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*
B2.1-1-316	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-3, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*
B2.1-1-317	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70T-1 and MIL-71T-1, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications*

B2.1-8-318	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-8-319	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-8-320	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX and MIL-3XX-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-8-321	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-8-322	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX and MIL-3XX-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-1/8-323	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Carbon Steel (S-1) to Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-309, ER309L, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-1/8-324	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Carbon Steel (S-1) to Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-309XX, MIL-309L-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.1-1/8-325	*Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (S-1) to Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-309/ER309L and MIL-309-XX/ MIL-309L-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications*
B2.2/B2.2M	*Specification for Brazing Procedure and Performance Qualification*
B2.3/B2.3M	*Specification for Soldering Procedure and Performance Qualification*
B2.4	*Specification for Welding Procedure and Performance Qualification for Thermoplastic*
B2.5/B2.5M	*Specification for Measurement of Welding Power Source Output for Calculation of Welding Procedure Heat Input*

This page is intentionally blank.