



GRAPHIC SYMBOLS FOR PRECAUTIONARY LABELS

INTRODUCTION

Existing standards, such as American National Standards Institute (ANSI) Z49.1, ANSI Z535.4, and National Electrical Manufacturer's Association (NEMA) EW6, thoroughly present guidelines for the minimum required information, method of presentation, signal words, color use, and label format.

DEFINITION

Graphic symbols are pictures sometimes called pictographs, pictograms, or pictorials used in place of, or as a supplement to, written words. These symbols provide non-verbal communication about the possible hazard. They represent or symbolize the hazard.

RATIONALE FOR GRAPHIC SYMBOLS

Pictures may convey information better than words. Graphic symbols can show the major welding or cutting hazards. The use of symbols on precautionary labels is optional and is recommended for the following reasons:

- Symbols may show and help to explain the hazards quickly – fast concept transfer – and use visual (not verbal) recognition.

- Symbols address nonreaders as well as readers.
- Symbols may be multilingual and usually translate directly into all languages.

RATIONALE FOR STANDARDIZED SYMBOLS

The welding and cutting industry needs standardized symbols and uniform methods of use to avoid user confusion and to supplement and reinforce the written message.

NEMA EW6 standard provides a list of symbols and minimum symbol size for labels along with complete information regarding their use and application.

HOW TO USE THE SYMBOLS

- Use the symbols to show the associated hazard.
- Take standard symbols from NEMA EW6.
- Follow a building block approach.
- Select a primary hazard symbol, often it is used alone, such as the fire symbol.

- Choose additional symbol element(s) to fully show the hazard.
- Combine the chosen symbol element(s), such as the covered electrode symbol, with the base symbol, such as fumes and gases.
- Follow the design methods and standard way of incorporating symbols onto the safety label according to EW6.

American Welding Society (AWS). Safety and Health Fact Sheets, published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33166; telephone 800-443-9353; Web site: www.aws.org.

INFORMATION SOURCES

National Electrical Manufacturer's Association (NEMA). Guidelines For Precautionary Labeling For Arc Welding And Cutting Products, Arc Welding Section (NEMA EW6). Published by the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1752, Rosslyn, Virginia 22209; telephone: (703) 841-3200; web site: www.nema.org.

American National Standards Institute (ANSI). Safety in Welding, Cutting, and Allied Processes (ANSI Z49.1), published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33166; telephone 800-443-9353; Web site: www.aws.org.

American National Standards Institute (ANSI). Criteria For Safety Symbols (ANSI Z535.3), available from ANSI, 25 West 43rd Street, New York, NY 10036 (telephone: 212-642-4900; web site: www.ansi.org).

American National Standards Institute (ANSI). Product Safety Signs and Labels (ANSI Z535.4), available from ANSI, 25 West 43rd Street, New York, NY 10036 (telephone: 212-642-4900; web site: www.ansi.org).

EXAMPLES FROM NEMA EW6

HAZARD	SOURCE OF HAZARD	SYMBOL
Electric Shock	Welding Electrode	
Electric Shock	Wiring	
Electric Shock	Welding Electrode and Wiring	
Fumes and Gases	Any Source	
Fumes and Gases	Welding Fumes and Gases	
Arc Rays	Welding Arc	
Fire	Engine Fuel	