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Guidelines for Precautionary Labeling of Magnet Wire

NEMA

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION 1300 N. 17th Street, Rosslyn, VA 22209

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NEMA Standards Publication MW 800-1995

GUIDELINES FOR PRECAUTIONARY LABELING OF MAGNET WIRE

Published by

National Electrical Manufacturers Association
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TABLE OF CONTENTS

Foreword i
Purpose i

Section 1 GENERAL 1

Section 2 GUIDELINES FOR WORDING AND FORMAT FOR PRECAUTIONARY LABELING
General Requirements 3
Labeling Information for Magnet Wire Products 3
Descriptions 3

Section 3 REVIEW OF LABEL
Review of Label 5

Section 4 PRECAUTIONARY LABEL
Preface for Precautionary Label 7
Sample Precautionary Label 7

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FOREWORD

User needs have been considered throughout the development and revision of these guidelines. This entire NEMA Standards Publication is classified as Authorized Engineering Information.

This NEMA Standards Publication is intended to provide a basis of common understanding within the electrical and electronics industries. Copies were sent during the draft stage to members of the NEMA Joint Sections Committee on magnet wire for their review and comments. These parties have an interest in or responsibility for specifications, future application, use, or inspection of magnet wire products. Their comments, prior to final NEMA approval, provided vital user and general interest input. As future major revisions to this publication are proposed, NEMA intends to offer the same or similar individuals and organizations an opportunity to participate in such changes.

These recommendations will be reviewed periodically by the Magnet Wire Section for the purpose of updating. Proposed or recommended revisions should be submitted to:

Vice President, Engineering Department
National Electrical Manufacturers Association
1300 North 17th Street, Suite 1847
Rosslyn, Virginia 22209

PURPOSE

The purpose of this publication is to provide manufacturers and users of magnet wire products with a uniform system of guidelines for precautionary labeling regarding wording and format which should be used throughout the magnet wire industry. These guidelines should promote uniformity in the precautionary labeling practices of manufacturers.

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Section 1
GENERAL

1.1 Scope

This publication sets forth guidelines for the wording and format of precautionary labeling for use on magnet wire products.

Precautionary labeling, as used in this publication, is an informative marking attached to or marked on a product or its package, intended to be read at close range, which calls attention to immediate or potential hazards and their consequences to persons or property. It tells how such hazards may be avoided and may also list other sources of information should complete details make the labeling too wordy.

An important intent of this document is the inclusion of information required by government regulation in regard to compliance with OSHA (Occupational Safety and Health Administration) regulations.

1.2 Referenced Publications

The following publications are listed as reference documents in these guidelines.

American National Standards Institute
1430 Broadway
New York, New York 10018

ANSI Z535.1-1979 *Safety Color Code*

Dome Press, Inc.,
1169 Logar Avenue,
Elgin, Illinois 60120

E. Dale and J. O'Rourke, *The Living Word Vocabulary,* 1981

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Section 2
GUIDELINES FOR WORDING AND FORMAT FOR PRECAUTIONARY LABELING OF MAGNET WIRE

2.1 General Requirements

2.1.1 The effectiveness of precautionary labeling may be improved by uniformity of wording and format. Uniformity aids in rapid comprehension and minimizes confusion.

2.1.2 The wording should be as brief and as clear as possible. All information should be easily understood by the consumer. Use of the "Living Word Vocabulary" is recommended.

2.1.3 The precautionary information should be in a conspicuous place on the product or its package. If such space is not available, a reference note should appear in a conspicuous place identifying the location of the precautionary information.

2.1.4 Where possible, precautionary labeling should last as long as the hazard may exist.

2.1.5 The size and legibility of the labeling should be such that it is likely to be read and understood by users of the product before they are likely to encounter the hazards warned against.

2.2 Labeling Information For Magnet Wire Products

The elements to be considered in precautionary labeling and their suggested order of listing are the following:

a. product identification
b. signal word (DANGER, WARNING, and CAUTION)
c. statement of hazards and their consequences
d. precautionary measures, and
e. additional information

Precautionary labeling for a given product may not require all of the above elements. However, the labeling should warn and instruct the reader. The included elements should depend upon the product, the process, and the hazards.

2.3 Descriptions

The following are detailed descriptions for each labeling information element.

2.3.1 Product Identification

Product identification should be employed only in cases where the product is not otherwise identified.

2.3.2 Signal Word

A signal word is used to draw attention to the presence and degree of a hazard or hazards. There are three recognized signal words. In descending order of severity they are the following:

a. Danger—The signal word DANGER should be used to call attention to immediate or imminent hazards which if not avoided will result in immediate, serious, personal injury or loss of life.

b. Warning—The signal word WARNING should be used to call attention to potential hazards which could result in personal injury or loss of life.

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c. Caution—The signal word CAUTION should be used to call attention to hazards which could result in minor personal injury or damage to equipment.

The signal word should be printed so that it is the dominant word in the labeling and it should be in capital letters. Where one or more signal words could be used, because of multiple hazards, only the signal word corresponding the class of greatest hazard should be used.

When red, orange and yellow are associated with the signal words DANGER, WARNING, and CAUTION respectively, the colors should conform to ANSI Z535.1.

2.3.3 Statement of Hazards and Their Consequences

This means to warn, in brief terms, of the specific hazard(s) and their consequences. The statement of hazard or hazard(s) should be so printed that it is the second most dominant wording and it should be in capital letters.

2.3.4 Precautionary Measures

Immediately following the statement of hazard and its consequences, understandable statement(s) that describes the precaution(s) to be taken should be given. In a case where multiple hazards are present, only the greatest hazard signal word should be used, but all of the statements of hazards, their consequences, and precautions should be included.

2.3.5 Additional Information

When complete details cannot be reasonably given on the label, sources of additional information should be listed.

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Section 3
REVIEW OF LABEL

3.1 Review Of Label

The object of the precautionary label should be to clearly convey the necessary information. Review the label; ask others to explain its meaning; and revise the label until it is easily understandable.

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Section 4
PRECAUTIONARY LABELING

4.1 Preface For Precautionary Labeling

As a minimum, the information shown in paragraph 4.2, or its equivalent, should be placed on magnet wire packaging to warn of hazardous fumes or dust that may be generated when soldering, etc.

First aid information may also be included as an optional item. It is generally recommended on products that present immediate and major health hazards. First aid information should follow the last precautionary measure.

The company name and address should appear on the label unless it is readily visible elsewhere on the product.

A label identification number should appear on the label.

4.2 Sample Precautionary Label

The following is a sample precautionary label:

WARNING

HAZARDOUS FUMES or DUST may be generated when soldering, welding, hot staking, burning, wire brushing, melting, or processing magnet wire. Excessive exposure to dust may cause irritation to eyes, skin, and/or respiratory systems.

- Wear proper protective eye, skin, and breathing equipment.
- Use adequate ventilation.
- Avoid breathing fumes.
- Please refer to the product Material Safety Data Sheet for further information.

DO NOT REMOVE THIS LABEL

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NEMA STANDARDIZATION BACKGROUND

The purpose of NEMA standards, their classification, and status are set forth in certain clauses of the NEMA *Standardization Policies and Procedures* manual and are referenced below:

Purpose of Standards

National Electrical Manufacturers Association Standards are adopted in the public interest and are designed to eliminate misunderstandings between the manufacturer and the purchaser and to assist the purchaser in selecting and obtaining the proper product for their particular needs. Existence of a National Electrical Manufacturers Association Standard does not in any respect preclude any member or nonmember from manufacturing or selling products not conforming to the standard.

Definition of a Standard

A standard of the National Electrical Manufacturers Association defines a product, process, or procedure with reference to one or more of the following: nomenclature, composition, dimensions, tolerances, safety, operating characteristics, performance, rating, testing, and the service for which they are designed.

(Standardization Policies and Procedures, p. 1)

Dimensions

Where dimensions are given for interchangeability purposes, alternate dimensions satisfying the other provisions of the Standards Publication may be capable of otherwise equivalent performance.

(Standardization Policies and Procedures, p. 6)

Categories of Standards

National Electrical Manufacturers Association Standards are of three classes, which have received the affirmative vote of at least two-thirds of the Subdivision votes cast in the affirmative or negative:

1. NEMA Standard, which relates to a product, process, or procedure commercially standardized and subject to repetitive manufacture.
2. Suggested Standard for Future Design, which may not have been regularly applied to a commercial product, but which suggests a sound engineering approach to future development.
3. Adoptive Standard, which is adopted in whole or in part from the standards of another organization, either domestic, regional, or international.

(Standardization Policies and Procedures, pp. 5)

Authorized Engineering Information

Authorized Engineering Information consists of explanatory data and other engineering information of an informative character not falling within the classification of NEMA Standard or Suggested Standard for Future Design, which standard has received the affirmative vote of at least two-thirds of the Subdivision votes cast in the affirmative or negative.

(Standardization Policies and Procedures, pp. 5)

Identification of Status

Standards in NEMA Standards Publications are identified as "NEMA Standard," "Suggested Standard for Future Design," or "Adoptive Standard." These indicate the status of the standard. A statement incorporating the auxiliary verb "shall" indicates that compliance with a requirement is mandatory for compliance with the standard. These classes of standards are identified in the foreword or throughout the text.

The material identified as "Authorized Engineering Information" is designated similarly. Statements incorporating other auxiliary verbs such as "should," "may," etc. refer to the authorized engineering information and not to procedures required for compliance with the standard.

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MAGNET WIRE SECTION
OF THE
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MEMBER COMPANIES

Alcatel Canada Wire, Inc.
La Grange, KY

American Wire Corporation
Sandy Hook, CT

The Bridgeport Insulated Wire Company
Bridgeport, CT

Elektrisola, Inc.
Boscawen, NH

Essex Group, Inc.
Fort Wayne, IN

MagneTek Lighting Products
Gallman, MS

Optec D D USA, Inc.
St. Louis, MO

Phelps Dodge Magnet Wire Company
Fort Wayne, IN

Rea Magnet Wire Company, Inc.
Fort Wayne, IN

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