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*Standard for Nonshielded Cables Rated 2001-5000 Volts
for use in the Distribution of Electric Energy*

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NEMA STANDARDS PUBLICATION No. WC-71-1999
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**STANDARD FOR NONSHIELDED CABLES
RATED 2001-5000 VOLTS
FOR USE IN THE
DISTRIBUTION OF ELECTRIC ENERGY**

INSULATED CABLE ENGINEERS ASSOCIATION

April 2, 1998

FOREWORD

This Standards Publication for Nonshielded Cables Rated 2001-5000 Volts was developed by the Insulated Cable Engineers Association, Incorporated (ICEA) and was approved by the National Electrical Manufacturers Association (NEMA).

ICEA/NEMA Standards are adopted in the public interest and are designed to eliminate misunderstandings between the manufacturers and the user and to assist the user in selecting and obtaining the proper product for his or her particular need. The user of this Standards Publication is cautioned to observe any health or safety regulations and rules relative to the use of cable made in conformity with this Standard.

Requests for interpretation of this Standard must be submitted in writing to:

Insulated Cable Engineers Association, Inc.
P.O. Box 440
South Yarmouth, MA 02664

An official interpretation will be made by the Association.

Suggestions for improvement gained in the use of this publication will be welcomed by the Association.

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PART 1 GENERAL

1.0 SCOPE

This standard applies to materials, constructions, and testing of 2001 through 5000 volt nonshielded power cables having insulations of thermoplastic polyethylene, cross-linked polyethylene or crosslinked rubber, of the types shown in Part 4. The insulation shall be either covered with a discharge resistant jacket or shall be a discharge-resistant material without a jacket. Discharge resistant insulations and jackets shall comply with the applicable surface resistivity, U-bend discharge, and track-resistance requirements of Parts 4 and 5.

The nonshielded cables described in this standard are intended for use for the transmission and distribution of electrical energy in normal conditions of service in indoor, outdoor, aerial, underground, or submarine installations within the application limits shown in Table 4-4 and in 5.2.1. They are not intended for portable use applications.

1.1 GENERAL INFORMATION

This standard covers the requirements for conductors, insulations, jackets, and protective coverings as well as general construction and dimensional details common to most standard nonshielded types of wires and cables rated 2001-5000 volts. Insulation thicknesses are designated in terms of cable insulation levels defined in Part 4. See Part 7 for test procedures not elsewhere referenced. Requirements of a referenced ASTM standard shall be determined in accordance with the procedure or method designated in the referenced ASTM standard unless otherwise specified in this standard.

See Appendix A in Part 9 for complete titles and dates of ICEA publications, NEMA publications, and ASTM Standards to which reference is made in this publication.

In classifying jackets and sheaths in this standard, the term "jacket" refers to a continuous nonmetallic covering and "sheath" to a continuous smooth metallic covering.

In this standard, units are expressed in the English system. For information only, their approximate metric equivalents are included. Abbreviations and symbols used in the standard are defined in Appendix D.

1.2 INFORMATION TO BE SUPPLIED BY PURCHASER

When requesting proposals from cable manufacturers, the prospective purchaser should furnish the following information: