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C22.2 No. 75-14

Thermoplastic insulated wires and cables

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Standards Update Service

C22.2 No. 75-14

March 2014

Title: *Thermoplastic insulated wires and cables*

Pagination: **86 pages**, each dated **March 2014**

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Association of Standardization and Certification
NMX-J-010-ANCE-2014
Fifth Edition



CSA Group
CSA C22.2 No. 75-14
Tenth Edition



Underwriters Laboratories Inc.
UL 83
Fifteenth Edition

Thermoplastic-Insulated Wires and Cables

March 28, 2014



ANSI/UL 83-2014

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PREFACE

This is the harmonized ANCE, CSA Group, and UL Standard for Thermoplastic-Insulated Wires and Cables. It is the Fifth edition of NMX-J-010-ANCE, the Tenth edition of CSA-C22.2 No. 75, and the Fifteenth edition of UL 83. This edition of NMX-J-010-ANCE supersedes the previous edition published in 2008. This edition of CSA-C22.2 No. 75 supersedes the previous edition published in 2008. This edition of UL 83 supersedes the previous edition published in 2008.

This harmonized standard was prepared by the Association of Standardization and Certification (ANCE), CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Committee for Electrical Wires and Cables, of the Council on the Harmonization of Electrotechnical Standards of the Nations of the Americas (CANENA), are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

The present Mexican Standard was developed by the CT 20 Conductores from the Comité de Normalización de la Asociación de Normalización y Certificación A.C., CONANCE, with the collaboration of the SC 20B Conductores para Baja Tensión.

This standard was reviewed by the CSA Integrated Committee on Fixed Installation Wires and Cable, under the jurisdiction of the CSA Technical Committee on Wiring Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee.

This standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of Harmonization

This standard uses the IEC format but is not based on, nor is it considered equivalent to, an IEC standard. This standard provides requirements for insulated wires and cables for use in accordance with the electrical installation codes of Canada, Mexico, and the United States. At present there is no IEC standard for wires and cables for use in accordance with these codes. Therefore, this standard does not employ any IEC standard for base requirements.

This standard is published as an equivalent standard for ANCE, CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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The effective date for ANCE will be announced through the Diario Oficial de la Federación (Official Gazette) and is indicated on the cover page.

CSA Group Effective Date

The effective date for CSA Group will be announced through a *CSA Informs* or *CSA Group Certification Notice*.

UL Effective Date

As of March 28, 2014 all products Listed or Recognized by UL must comply with the requirements in this standard.

A UL effective date is one established by Underwriters Laboratories Inc. and is not part of the ANSI approved standard.

Thermoplastic-Insulated Wires and Cables

1 Scope

1.1 This Standard specifies the requirements for 600 V, single-conductor, thermoplastic-insulated wires and cables, for use as follows:

- a) In Canada, in accordance with CSA C22.1, *Canadian Electrical Code (CEC), Part I*;
- b) In Mexico, in accordance with NOM-001-SEDE, *Standard for Electrical Installations*; and
- c) In the United States, in accordance with ANSI/NFPA 70, *National Electrical Code (NEC)*.

Note: See Annex A for the complete list of wire types covered by this Standard and the specific electrical codes for which they are intended.

1.2 This Standard also specifies the requirements for submersible-pump cables, with or without jackets (see Clause 7). No type-letter designations are assigned to these cables.

1.3 In Mexico, the requirements for multiple-conductor thermoplastic-insulated and -jacketed cables rated 600 V are specified in Annex B.

In Canada and the United States, requirements for multiple-conductor thermoplastic-insulated and -jacketed cables rated 600 V are covered in other standards.

1.4 Products for which this Standard provides requirements might have applications not described in the electrical codes listed in Clause 1.1.

2 General

2.1 Units of measure

The unit of measure shall be SI. If a value for measurement is followed by a value in other units in parentheses, the second value represents a direct conversion or an alternative value. Except for conductor size, the first stated value is the requirement.