



Association of Standardization and Certification
NMX-J-534-ANCE-2022
Third Edition



CSA Group
CSA C22.2 No. 45.1:22
Third Edition



Underwriters Laboratories Inc.
UL 6
Fifteenth Edition

Electrical Rigid Metal Conduit – Steel

November 28, 2022

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Standard for Safety for Electrical Rigid Metal Conduit – Steel

Third Edition, Dated November 28, 2022

Summary of Topics

This new edition dated November 28, 2022 includes the following:

- Updated references in Annex [A](#)***
- Correction of typo in the measurement for length in millimeters; [5.5.2](#)***
- Introduction of a range for specific gravity of copper sulfate solution; [6.2.2.1](#)***

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ISBN 978-1-4883-4326-1 © 2022 Canadian Standards Association

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This ANSI/UL Standard for Safety consists of the Fifteenth Edition. The most recent designation of ANSI/UL 6 as an American National Standard (ANSI) occurred on November 28, 2022. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

The Department of Defense (DoD) has adopted UL 6 on May 10, 1982. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

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Preface

This is the harmonized ANCE, CSA Group, and UL standard for Electrical Rigid Metal Conduit – Steel. It is the third edition of NMX-J-534-ANCE, the third edition of CSA C22.2 No. 45.1, and the fifteenth edition of UL 6. This edition of NMX-J-534-ANCE supersedes the previous edition published 2019. This edition of CSA C22.2 No. 45.1 supersedes the previous edition published 2007. This edition of UL 6 supersedes the previous edition published 2019.

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 conduit manufacturing industry and the Technical Harmonization Subcommittee for Conduit and Tubing of the Council of the Harmonization of Electrotechnical Standards for 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 CT Technical Committee 23 Electrical Accessories from the Comité de Normalización de la Asociación de Normalización y Certificación, A.C., CONANCE, with the collaboration of the metal conduit and tubing manufacturers and users.

This standard was reviewed by the CSA Subcommittee on Metal Conduit and Tubing, 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 developed in compliance with the Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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 an IEC format, but is not based on, nor is it to be considered an IEC standard.

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.

Reasons for differences from IEC

The Technical Harmonization Subcommittee identified several IEC standards that address electrical conduit and tubing included in the scope of this standard. The IEC standards for electrical conduit and tubing are recognized as being generally system-specific, containing the requirements for the relevant conduits and cables and associated fittings in several discrete IEC standards.

The THSC determined the safe use of electrical conduit and tubing is dependent on the design and performance of the conduit and tubing systems with which they are intended to be installed. Significant investigation is required to assess safety and system compatibility issues that may lead to harmonization of traditional North American electrical conduit and tubing and associated fittings with those presently addressed in the known IEC standards. The THSC agreed such future investigation might be facilitated by completion of harmonization of the North American standards for electrical conduit and tubing and their fittings.

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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