UL 2515

STANDARD FOR SAFETY

Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

UL Standard for Safety for Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings, UL 2515

Second Edition, Dated February 5, 2019

Summary of Topics

The revision of ANSI/UL 2515 dated March 22, 2022 includes clarification on where to measure the minimum inside diameter of socket specified in Table 5 – Table 8.

As noted in the Commitment for Amendments statement located on the back side of the title page, UL, CSA, and ANCE are committed to updating this harmonized standard jointly.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated September 10, 2021.

No Text on This Page

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CSA C22.2 No. 2515:19
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Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

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Approved American National Standard

ANSI/UL 2515-2022

Commitment for Amendments

This standard is issued jointly by the Association of Standardization and Certification (ANCE), the Canadian Standards Association (operating as “CSA Group”), and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to ANCE, CSA Group, or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, CSA Group, and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue. ANCE will incorporate the same revisions into a new edition of the standard bearing the same date of issue as the CSA Group and UL pages.

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line: Standard designation (number); relevant clause, table, and/or figure number; wording of the proposed change; and rationale for the change.

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This ANSI/UL Standard for Safety consists of the Second Edition including revisions through March 22, 2022. The most recent designation of ANSI/UL 2515 as an American National Standard (ANSI) occurred on March 22, 2022. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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Preface

This is the harmonized ANCE, CSA Group, and UL standard for Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings. It is the first edition of NMX-J-765-ANCE, the second edition of CSA C22.2 No. 2515, and the second edition of UL 2515. This edition of NMX-J-765-ANCE is the first edition published. This edition of CSA C22.2 No. 2515 supersedes the previous edition(s) published on July 31, 2009. This edition of UL 2515 supersedes the previous edition(s) published on July 31, 2009. This harmonized standard has been jointly revised on March 22, 2022. For this purpose, CSA Group and UL are issuing revision pages dated March 22, 2022, and ANCE is issuing a new edition dated March 22, 2022.

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 the CT 23 Electrical Accessories (Wiring Devices) from the Comité de Normalización de la Asociación de Normalización y Certificación, A.C., CONANCE, with the collaboration of the electrical manufacturers and users.

This standard was reviewed by the CSA Integrated Committee on Nonmetallic Conduit, Tubing, and Fittings, 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 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 the IEC format but is not based on, nor is it considered equivalent to, 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.

Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

1 Scope

1.1 This Standard specifies the requirements for low-halogen aboveground (Type AG) reinforced thermosetting resin conduit (RTRC) and fittings for installation and use in accordance with CSA C22.1, Canadian Electrical Code (CEC), Part I, NFPA 70, National Electrical Code (NEC) and NOM-001-SEDE, Standard for Electrical Installations (Mexico), in non-hazardous locations.

1.2 The products specified in this Standard are intended for use at -40°C (-40°F) to 110°C (230°F). The products are for use above ground in exposed and concealed locations. The products are also suitable for use below ground by direct burial or by encasement in concrete.

1.3 Type AG conduit has not been evaluated for directional boring applications.

1.4 This Standard covers ID (dimensions based on inside diameters) and IPS (dimensions based on outside diameters of iron pipe sizes) conduit and fittings. Trade sizes (metric designators) are 1/2 (16) to 6 (155).

Note: The values in parenthesis are metric size designations of conduits and fittings and do not necessarily reflect metric trade sizes.

1.5 ID and IPS conduit are designated as SW (Standard Wall) or HW (Heavy Wall), which refer to specific wall thicknesses.

1.6 Fittings specified in this Standard include, but are not limited to, straight couplings, 5° angle couplings, adapters, and elbows with plain ends or integral belled ends at one or both ends, expansion joints, and conduit bodies.

Note: In Canada, conduit bodies are not evaluated as outlet boxes – they are fittings. Requirements in this standard for conduit bodies intended for use as outlet boxes do not apply in Canada. In Mexico and the United States, a conduit body may be used as an outlet box for the splicing of conductors.

1.7 For products intended for use in Canada, general requirements are given in CSA-C22.2 No. 0.

2 Definitions

2.1 The following definitions apply in this Standard:

2.2 Conduit body – a separate portion of a conduit system that provides access through a removable cover(s) to the interior of the system at a junction of two or more sections of the system or at a terminal point of the system.

2.3 Integral belled end – a belled end installed at the factory, either integrally wound or a permanently attached coupling.

2.4 Low-halogen – a material having not more than 0.2% by weight of total halogen content.

2.5 Type AG – conduit and associated fittings that have been evaluated for use in exposed or concealed locations and/or for direct burial with or without being encased in concrete.

Note: For other definitions, refer to the CE Code, Part 1, the NEC and/or NOM-001-SEDE.

3 Reference publications and units of measurement

3.1 Reference publications

3.1.1 Where reference is made to any Standards, such reference shall be considered to refer to the latest editions and revisions thereto available at the time of printing, unless otherwise specified.

Product Standardization and Certification Center (CNCP)

NMX-E-186-CNCP
Plastic industry – Conduit and fittings – IZOD impact resistance of rigid materials – Test method

SCFI Standard**

NMX-E-003-SCFI
Plastic industry – Determination of thickness of plastic films and sheets by mechanical scanning – Test method

NMX-J-70-SCFI
Plastic industry – Pipes and fittings – Deflection temperature under load – Test method

SEDE* Standard**

NOM-001-SEDE
Standard for Electrical Installations

ANCE Standards

NMX-J-451-ANCE
Wires and cables – Thermoset insulated wires and cables – Specifications

NMX-J-511-ANCE
Cable tray – Metallic cable tray – Specifications and test methods

NMX-J-192-ANCE
Wires and cables – Flame test on electrical cables – Test methods

NMX-J-553-ANCE
Wires and Cables – Weather Resistance of Insulation or Jacket of Electrical Conductors – Test Method

CSA Group Standards

C22.1
Canadian Electrical Code (CE_Code), Part I

CSA C22.2 No. 0
General Requirements – Canadian Electrical Code, Part 1

C22.2 No. 38
Thermoset Insulated Wires and Cables

C22.2 No. 126.1
Metal Cable Tray Systems