



UL 1653

STANDARD FOR SAFETY

Electrical Nonmetallic Tubing

UL Standard for Safety for Electrical Nonmetallic Tubing, UL 1653

Third Edition, Dated February 15, 2019

Summary of Topics

The revision of ANSI 1653 dated March 30, 2022 includes the following changes:

– **Resistance to Deflection Test Acceptance Criteria and Procedure; [5.3.1](#) and [7.5.3.1](#)**

– **Requirements for male threaded adapters or for transition couplings with internal threads; [2.1](#), [4.4.2](#), Clause [4.5](#), [Table 4](#) – [Table 6](#)**

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 new and revised requirements are substantially in accordance with Proposal(s) on this subject dated August 6, 2021.

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CSA Group
CSA C22.2 No. 227.1:19
Fifth Edition



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ANSI/UL 1653-2022



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This ANSI/UL Standard for Safety consists of the Third edition including revisions through March 30, 2022.

The most recent designation of ANSI/UL 1653 as an American National Standard (ANSI) occurred on March 30, 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 Electrical Nonmetallic Tubing. It is the First edition of NMX-J-851-ANCE, the fifth edition of CSA C22.2 No. 227.1 and the third edition of UL 1653. This edition of CSA C22.2 No. 227.1 supersedes the previous editions published in 1997 and 2006. This edition of UL 1653 supersedes the previous edition published in 2006. This harmonized standard has been jointly revised on March 30, 2022. For this purpose, CSA Group and UL are issuing revision pages dated March 30, 2022, and ANCE is issuing a new edition dated March 30, 2022.

This harmonized standard was prepared by the Association of Standardization and Certification, (ANCE), CSA Group and Underwriters Laboratories Inc. The efforts and support of the Technical Harmonization Committee 23A ENT Working Group 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 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 Subcommittee 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 Committee determined the safe use of electrical nonmetallic tubing and fittings is dependent on the design and performance of the raceway and cable 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 nonmetallic tubing and fittings with