



**CSA  
Group**

**C22.2 No. 2556-13**

# Wire and cable test methods



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Underwriters Laboratories Inc.  
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Third Edition

## Wire and Cable Test Methods

March 22, 2013



ANSI/UL 2556-2013

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## Preface

This is the common ANCE, CSA Group, and UL standard for Wire and Cable Test Methods. It is the third edition of NMX-J-556-ANCE, the third edition of CSA C22.2 No. 2556, and the third edition of UL 2556. This edition of CSA C22.2 No. 2556 supersedes the previous version published in 2007.

This common 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 Wire and Cable Test Methods, 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.

This standard was reviewed by the CSA Integrated Committee on Test Methods for Wires and Cables, 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.

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 shall it be 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

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.

**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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**CSA Group effective date**

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**UL effective date**

UL 2556 is effective immediately for reference by other standards.

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

# Wire and Cable Test Methods

## 1 Scope

1.1 This standard describes the apparatus, test methods, and formulas to be used in carrying out the tests and calculations required by wire and cable standards.

1.2 Specific acceptance requirements are found in individual product standards.

1.3 Where a test method indicates a “specified” test parameter or condition, the parameter or condition is found in the individual product standard.

## 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.

### 2.2 Normative references

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.

### ANCE (Association of Standardization and Certification)

NMX-E-034-SCFI

*Plastic Industry – Carbon Black Contents on Polyethylene Materials – Test Methods*

NMX-J-178-ANCE

*Electrical Products – Wires and Cables – Determination of Cross Sectional Area of Stranded Electrical Conductors Related to the Mass – Test Method*

NMX-J-192-ANCE

*Flame Test on Electrical Wires – Test Method*

NMX-J-417-ANCE

*Wires and Cables – Convection Laboratory Ovens for Evaluation of Electrical Insulation – Specifications and Test Methods*

NMX-J-437-ANCE

*Wires and Cables – Determination of Light Absorption Coefficient of Polyethylene Pigmented with Carbon Black – Test Methods*

NMX-J-474-ANCE

*Electrical Products – Wires and Cables – Determination of Specific Optical Density of Smoke Generated by Electrical Wires and Cables – Test Methods*

NMX-J-498-ANCE

*Vertical Tray – Flame Test – Test Method*