



UL 5A

STANDARD FOR SAFETY

Nonmetallic Surface Raceways and Fittings

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UL Standard for Safety for Nonmetallic Surface Raceways and Fittings, UL 5A

Fourth Edition, Dated June 26, 2015

Summary of Topics

New Fourth Edition of the Standard for Nonmetallic Surface Raceways and Fittings, UL 5A, which includes the following changes: clarification of “temperature equilibrium”, installation instructions referenced via the manufacturer’s website, and marking revisions.

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

The effective date for UL LLC is accessible on UL’s Industry File Review website: <https://ifs.ul.com/ifr/ifr.nsf>

The new requirements are substantially in accordance with Proposal(s) on this subject dated September 26, 2014, January 16, 2015, and March 27, 2015.

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CSA Group
CSA C22.2 No. 62.1-15
Second Edition



Underwriters Laboratories Inc.
UL 5A
Fourth Edition

Nonmetallic Surface Raceways and Fittings

June 26, 2015



ANSI/UL 5A-2015

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Commitment for Amendments

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This Standard is subject to review 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 to CSA Standards, please send the following information to inquires@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 Fourth Edition. The most recent designation of ANSI/UL 5A as an American National Standard (ANSI) occurred on June 26, 2015. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL’s On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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PREFACE

This is the harmonized CSA Group and UL standard for Nonmetallic Surface Raceways and Fittings. It is the second edition of CSA C22.2 No. 62.1, and the fourth edition of UL 5A. This edition of CSA C22.2 No. 62.1 supersedes the previous edition(s) published in 2003. This edition of UL 5A supersedes the previous edition(s) published on July 18, 2003.

This harmonized standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Subcommittee 23A SNR Working Group 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 Subcommittee ICCM05 – Surface Raceway Systems, 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 is published as an equivalent standard for 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 THSC determined the safe use of electrical surface raceway 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 electrical raceway and 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 surface raceway and fittings.

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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.

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

Information regarding the UL effective date is on the transmittal notice that accompanies the UL Standard.

Nonmetallic Surface Raceways and Fittings

1 Scope

1.1 These requirements cover nonmetallic raceways and fittings. These products are for use as surface wiring systems in accordance with the Rules of the Canadian Electrical Code, Part 1, and NFPA 70, National Electrical Code.

1.2 Raceways that are all nonmetallic and of any thickness are intended to enclose circuits operating at potentials not exceeding 600 V between conductors.

1.3 Nonmetallic raceways with metal covers are intended to enclose circuits operating at potentials in accordance with Table 1 or Table 1A.

1.4 These requirements do not cover surface metal raceways, cable trays, or wireways.

2 Definitions

2.1 For the purpose of this Standard, the following definitions apply:

ACCESSORY – a part that may be added to a raceway system for a special purpose (for example, guards, hangers, retainers).

FITTING, RACEWAY – a part used to connect, change direction, or terminate a surface raceway (for example, a transition coupler, an end cap, a corner, a tee, an adapter, or a box) or a system specific wiring device that completes the system.

FIXTURE BOX – a box used for the support of a lighting fixture, lampholder, or other equipment intended for similar installation.

GROUNDING/BONDING CONDUCTOR – a conductor that is defined in the National Electrical Code (NEC) as an Equipment Grounding Conductor, and a conductor that is defined in the Canadian Electrical Code (CE Code), Part I, as a Bonding Conductor.

NONMETALLIC – a polymeric part.

SURFACE NONMETALLIC RACEWAY – a raceway for surface or suspension mounting with a nonmetallic base and a nonmetallic or metal cover.

SURFACE RACEWAY SYSTEM – a system consisting of a surface raceway and associated fittings, which may include wiring devices and accessories.

WIRING DEVICE – a part of an electrical system intended to carry, provide a means of connection to, or provide control of electrical energy within a raceway system (for example, switches or receptacles).

3 General

3.1 General requirements

3.1.1 For products intended for use in Canada, general requirements are given in CSA Standard C22.2 No. 0, General Requirements – Canadian Electrical Code, Part II.

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3.2 Components

3.2.1 A component of a product covered by this Standard shall comply with the requirements for that component. A component need not comply with a specific requirement that:

- a) involves a feature or characteristic not needed in the application of that component in the product covered by this Standard, or
- b) is superseded by a requirement in this Standard.

3.2.2 A component shall be used in accordance with its rating established for the intended conditions of use.

3.2.3 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

3.3 Units of measurement

3.3.1 The values given in SI (metric) units shall be normative. Any other values given shall be for information purposes only.

3.4 Reference publications

3.4.1 Where reference is made to other publications, such reference shall be considered to refer to the latest edition and all amendments published to that edition up to the time when this Standard was approved.

CSA Group Standards

C22.1-12

Canadian Electrical Code, Part I

C22.2 No. 0.15-01

Adhesive Labels

C22.2 No. 0.17-00

Evaluation of Properties of Polymeric Materials

C22.2 No. 42-10

General Use Receptacles, Attachment Plugs, and Similar Wiring Devices

C22.2 No. 62-93 (R2013)

Surface Raceway Systems

C22.2 No. 111-10

General Use Snap Switches

C22.2 No. 211.0

General Requirements and Methods of Testing for Nonmetallic Conduit

UL Standards

UL 5

Surface Metal Raceways and Fittings

UL 20

General-Use Snap Switches

UL 94

Tests for Flammability of Plastic Materials for Parts in Devices and Appliances

UL 498

Attachment Plugs and Receptacles

UL 746A

Polymeric Materials – Short Term Property Evaluations

UL 746C

Polymeric Materials – Use in Electrical Equipment Evaluations

UL 969

*Marking and Labeling Systems***ANSI/NFPA¹ Standards**

NFPA 70-2014

*National Electrical Code®***ASTM² Standards**

D 648-07

Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position

D 5025-12

Standard Specification for Laboratory Burner Used for Small-Scale Burning Tests on Plastic Materials

D 5207-09

*Standard Practice for Confirmation of 20-mm (50-W) and 125-mm 500-W Test Flames for Small-Scale Burning Tests on Plastic Materials***NRCC³ Publication***National Building Code of Canada, 2010*¹ American National Standards Institute / National Fire Protection Association² American Society for Testing and Materials³ National Research Council Canada

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