



UL 1673

Underwriters Laboratories Inc. Standard for Safety

Electric Space Heating Cables



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UL Standard for Safety for Electric Space Heating Cables, UL 1673

Third Edition, Dated September 13, 2010

SUMMARY OF TOPICS:

These revisions to UL 1673 are being issued to incorporate the addition and revision of requirements to relocate component Standard references from Appendix A into the body of the Standard as component requirements.

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. Changes in requirements are marked with a vertical line in the margin and are followed by an effective date note indicating the date of publication or the date on which the changed requirement becomes effective.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated July 29, 2011.

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UL 1673

Standard for Electric Space Heating Cables

First Edition – November, 1990
Second Edition – May, 1996

Third Edition

September 13, 2010

This UL Standard for Safety consists of the Third Edition including revisions through October 14, 2011.

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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APPENDIX A

INTRODUCTIONS

1 Scope

1.1 These requirements cover electric space heating cables intended for space heating purposes, rated for 480 V or less, for installation in unclassified locations in accordance with Article 424 Part V of the National Electrical Code (NEC), ANSI/NFPA 70.

1.1 revised October 14, 2011

1.2 These requirements apply to space heating cables intended for installation in ceilings of enclosed structures or within or beneath floors of enclosed structures where the floor is constructed of noncombustible material, concrete, or asphalt.

1.3 These requirements do not cover electric heating equipment or appliances that are covered by individual requirements that are separate from this Standard. Other related standards include:

- a) Electrical Resistance Heat Tracing for Commercial and Industrial Applications, UL 515;
- b) Movable and Wall- or Ceiling-Hung Electric Room Heaters, UL 1278;
- c) Outline of Investigation for Mobile Home Pipe Heating Cables, Subject 1462;
- d) Outline of Investigation for Roof and Gutter De-Icing Cable Units, Subject 1588;
- e) Electric Radiant Heating Panels and Heating Panel Sets, UL 1693;
- f) Outline of Investigation for Residential Pipe Heating Cables, Subject 2049;
- g) Fixed and Location-Dedicated Electric Room Heaters, UL 2021; and
- h) Electric Heating Appliances, UL 499.

1.3 revised October 14, 2011

1.4 These requirements do not cover the following:

- a) Heating cable intended to be installed in a dropped or suspended ceiling;
- b) Heating cable connected to the supply by use of a flexible cord with attachment plug;
- c) Heating cable equipment that is movable after installation;
- d) Heating equipment with integral means of producing air flow;
- e) Heating equipment manufactured and sold as an integral part of a floor covering materials such as heated floor tiles, heated carpet, and heated laminate floor;
- f) Heating equipment intended for installation on dry board or plaster, when heating equipment exceeds 2-3/4 W/ft (9 W/m) and/or with adjacent runs intended to be installed less than 1.5 inches (38 mm) on center;
- g) Constant wattage heating cable intended for installation in concrete or poured masonry floors with heating leads rated greater than 16-1/2 W/ft (54 W/m); and

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h) Heating panels and panel sets of Article Part IX of the National Electrical Code (NEC), ANSI/NFPA 70; and

i) Heating cables for installation directly below floor coverings in accordance with 424.99 of the National Electrical Code (NEC), ANSI/NFPA 70.

1.4 revised October 14, 2011

1.5 These requirements do not cover switches, transformers, power supplies, controls (e.g. temperature) or protective devices (e.g. ground fault protection) that are typically installed separate from the space heating cable but may be installed at the same time as part of the space heating system. Those devices are covered by individual requirements that are separate from this Standard.

1.5 revised October 14, 2011

2 Components

Section 2 deleted October 14, 2011

3 Units of Measurement

3.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

4 Glossary

4.1 For the purpose of this standard, the definitions in this Section apply.

4.1.1 COMPONENT – A device or fabricated part of the appliance covered by the scope of a safety standard dedicated to the purpose. When incorporated in an appliance, equipment otherwise typically field installed (e.g. outlet box) is considered to be a component. Unless otherwise specified, materials that compose a device or fabricated part, such as thermoplastic or copper, are not considered components.

4.1.1 added October 14, 2011

4.2 ELECTRICAL CIRCUITS

a) High Voltage Circuit – A circuit involving a potential of not more than 480 V, and having circuit characteristics in excess of those of a low voltage circuit.

b) Low Voltage Circuit – A circuit involving a potential of not more than 30 V rms (42.4 V peak or direct-current) and supplied by a primary battery or by a Class 2 transformer, or by a combination of an isolating transformer and fixed impedance that, as a unit, complies with all of the performance requirements for a Class 2 transformer specified in the Standard for Low Voltage Transformers - Part 1: General Requirements, UL 5085-1 and the Standard for Low Voltage Transformers – Part 3: Class 2 and Class 3 Transformers, UL 5085-3. A circuit derived from a source of supply classified as a line voltage circuit, using impedance in series with the supply circuit as a means of limiting the voltage and current, is not to be considered a low voltage circuit.

4.2 revised October 14, 2011

4.3 FIELD CONNECTION – Terminals or leads provided for connection of the space heating cable by an electrical installer to the branch circuit supply source.