



UL 1426

Underwriters Laboratories Inc. Standard for Safety

Electrical Cables for Boats



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UL Standard for Safety for Electrical Cables for Boats, UL 1426

Fifth Edition, Dated December 6, 2010

Summary of Topics

This New Edition of ANSI/UL 1426 Contains the Following Changes in Requirements: a) Deletion of Cables Rated 50 V, b) Addition of Jacket Thickness Evaluation for Flat Conductor Assemblies, c) Addition of 60°C Ratings to the Insulation Resistance at Elevated Temperature Test, and d) Addition of Conductor Corrosion, VW-1 Flame Test, and Durability of Ink Printing Requirements No Longer Located in UL 1581

The new and/or revised requirements are substantially in accordance with Proposal(s) on this subject dated July 30, 2010.

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The requirements in this Standard are now in effect, except for those paragraphs, sections, tables, figures, and/or other elements of the Standard having future effective dates as indicated in the note following the affected item. The prior text for requirements that have been revised and that have a future effective date are located after the Standard, and are preceded by a "SUPERSEDED REQUIREMENTS" notice.

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Third Edition – April, 1999

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Fifth Edition

December 6, 2010

This ANSI/UL Standard for Safety consists of the Fifth Edition.

The most recent designation of ANSI/UL 1426 as an American National Standard (ANSI) occurred on December 6, 2010. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or effective date information.

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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INTRODUCTION

1 Scope

1.1 These requirements cover electrical cables for boats. The cables are intended for use in marine pleasure craft and consist of a single insulated conductor without a jacket or of two or more insulated conductors with or without an overall nonmetallic jacket. Each boat cable is rated as follows: 600 V; 60°C (140°F), 75°C (167°F), or 90°C (194°F) wet; and 60°C (140°F), 75°C (167°F), 90°C (194°F), or 105°C (221°F) dry. Boat cable dry-rated 125°C (257°F) or 200°C (392°F) may be investigated. A boat cable so marked has insulation (and jacket if a jacket is used) that is for use where exposed to oil at 60°C (140°F) and lower temperatures. Boat cables employ stranded copper conductors that are 18 - 4/0 AWG for multiple conductors and 16 - 4/0 AWG for single conductors.

1.2 The ampacity of a boat cable shall be as stated in the US Coast Guard regulations Title 33, Chapter I, Parts 183.430 and 183.435 of the CFR.

2 Units of Measurement

2.1 In addition to being stated in inch/pound units, each numerical requirement in this standard is also stated in units that make the requirement conveniently usable in the metric system (practical SI). Equivalent – although not necessarily exactly identical – results are to be expected from applying a requirement in inch/pound or metric terms. Equipment calibrated in metric units is to be used when a requirement is applied in metric terms.

3 References

3.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

CONSTRUCTION

4 Conductors

4.1 The conductors shall be of stranded soft-annealed copper that complies with the American Society for Testing and Materials Standard Specification for Soft or Annealed Copper Wire, ASTM B 3. Conductors shall be 18 – 4/0 AWG. The 18 AWG size is limited to a jacketed multiple-conductor cable and shall employ 16 or more strands. All other conductor sizes shall employ 19 or more strands. Conductors may be coated with tin or a tin/lead alloy. An 18 or 16 AWG conductor shall comply with the requirements for conductors in the Standard for Fixture Wire, UL 66. A 14 AWG or larger conductor shall comply with the requirements for copper conductors in the Standard for Thermoplastic-Insulated Wires and Cables, UL 83.