

UL 1426

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Electrical Cables for Boats

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

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Revisions: This Standard contains revisions through and including March 27, 2001.

Text that has been changed in any manner 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 revisions dated March 27, 2001 include a reprinted title page (page1) for this Standard.

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that have a future effective date are located after the Standard, and are preceded by a "SUPERSEDED REQUIREMENTS" notice.

New product submittals made prior to a specified future effective date will be judged under all of the requirements in this Standard including those requirements with a specified future effective date, unless the applicant specifically requests that the product be judged under the current requirements. However, if the applicant elects this option, it should be noted that compliance with all the requirements in this Standard will be required as a condition of continued Listing and Follow-Up Services after the effective date, and understanding of this should be signified in writing.

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This Standard consists of pages dated as shown in the following checklist:

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This edition of UL 1426, including all revisions, is approved as an American National Standard.

Approval of UL 1426 as an American National Standard is maintained using the continuous maintenance process. Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Written comments are to be sent to UL-Melville Standards Department, 1285 Walt Whitman Road, Melville, L.I., NY 11747.

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

Approved as ANSI/UL 1426–1987, October 19, 1987 Approved as ANSI/UL 1426–1995, August 24, 1995 Approved as ANSI/UL 1426–2001, February 14, 2001

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

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FOREWORD

A. This Standard contains basic requirements for products covered by Underwriters Laboratories Inc. (UL) under its Follow-Up Service for this category within the limitations given below and in the Scope section of this Standard. These requirements are based upon sound engineering principles, research, records of tests and field experience, and an appreciation of the problems of manufacture, installation, and use derived from consultation with and information obtained from manufacturers, users, inspection authorities, and others having specialized experience. They are subject to revision as further experience and investigation may show is necessary or desirable.

B. The observance of the requirements of this Standard by a manufacturer is one of the conditions of the continued coverage of the manufacturer's product.

C. A product which complies with the text of this Standard will not necessarily be judged to comply with the Standard if, when examined and tested, it is found to have other features which impair the level of safety contemplated by these requirements.

D. A product employing materials or having forms of construction which conflict with specific requirements of the Standard cannot be judged to comply with the Standard. A product employing materials or having forms of construction not addressed by this Standard may be examined and tested according to the intent of the requirements and, if found to meet the intent of this Standard, may be judged to comply with the Standard.

E. UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of UL represent its professional judgment given with due consideration to the necessary limitations of practical operation and state of the art at the time the Standard is processed. UL shall not be responsible to anyone for the use of or reliance upon this Standard by anyone. UL shall not incur any obligation or liability for damages, including consequential damages, arising

out of or in connection with the use, interpretation of, or reliance upon this Standard.

F. Many tests required by the Standards of UL are inherently hazardous and adequate safeguards for personnel and property shall be employed in conducting such tests.

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: 50 or 600 V; 60°C (140°F) or 75°C (167°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 are for use where exposed to oil at 60°C (140°F) and lower temperatures. Boat cables employ stranded copper conductors that are Nos. 18 – 4/0 AWG for multiple conductors and Nos. 16 – 4/0 AWG for single conductors.

1.2 The construction and performance details of single-conductor 50-volt cables are outlined in the Society of Automotive Engineers, Inc. Standard for Battery Cable (SAE J1127), Low-Tension Primary Cable (SAE J1128), and Recommended Practice for Marine-Engine Wiring (SAE J378). The cables covered in the Standard are in compliance with the American Boat and Yacht Council (ABYC) Standard for Direct-Current (D-C) Electrical Systems on Boats (ANSI/ABYC E-9–1993). The marking and optional jacket requirements for 50-volt cables, and the complete construction, performance, and marking requirements for single-and multiple-conductor boat cables rated 600 volts are stated in these requirements.

1.2 revised March 27, 2001

2. 1.3 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.

3. 1.4 A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements in this Standard, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements to determine that the level of safety as originally anticipated by the intent of this Standard is maintained. A product whose features, characteristics, components, materials, or systems conflict with specific requirements or provisions of this Standard shall not be judged to comply with this Standard. Where appropriate, revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this Standard.

1.4 revised April 29, 1999

2 Units of Measurement

2.1 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement. 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 various metric systems (practical SI and customary). 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 The reference to SAE standards is to the latest editions.

CONSTRUCTION