



ABYC C-1500 JULY 2019
Electrical Division Standard
Electrical Component Project
Technical Committee

The ABYC Standards and Technical Information Reports for Small Craft are the product of a consensus of representatives of government, industry and public sectors. It is intended solely as a guide to aid manufacturers and the marine community in the design, construction, equipage and maintenance of small craft.

ABYC reviews each standard at least every five years at which time it may be reaffirmed, revised, or withdrawn. ABYC welcomes any written comments on the standards and technical information reports.

ABYC C-1500

IGNITION PROTECTION FOR MARINE PRODUCTS



C-1500
7/19

Origin and Development

C-1500, Ignition Protection for Marine Products was first developed by Underwriters Laboratories (UL) as UL-1500, Ignition-Protection Test for Marine Products and published in 1977. This standard was revised in 1982 and 1997. ABYC officially adopted the standard as C-1500 in 2013 and published the first revision in 2014. The 2019 revision is the work of the Electrical Component Project Technical Committee.

Electrical Component Project Technical Committee

This list represents the membership at the time the Committee was balloted.

Denis Bonneau, *Chair*
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Membership on a committee shall not in and of itself constitute an endorsement of ABYC or any document developed by the committee on which the member serves.

This standard, which is the result of extended and careful consideration of available knowledge and experience on the subject, was developed under procedures accredited as meeting the criteria for American National Standards and is intended to provide minimum performance requirements. The Project Technical Committee that approved the standard was balanced to ensure that individuals from competent and concerned interests have had an opportunity to participate.

ABYC's Project Technical Committee (PTC) meetings are open to the public. All inquiries regarding standards activity, interpretations, or meeting attendance should be directed to the ABYC Technical Department at comments@abycinc.org.

ABYC and its committees do not "approve" or "endorse" any item, construction, or proprietary device.

Request for Interpretations

Upon written request the Electrical Component PTC will render an interpretation of any requirement of the standard. The request for interpretation should be clear and unambiguous. Requests should be presented to the PTC in a manner in which they may be answered in a "Yes" or "No" fashion.

The committee reserves the right to reconsider any interpretation when or if additional information that might affect it becomes available to the PTC. Persons aggrieved by an interpretation may appeal to the Committee for reinterpretation.

Summary of Revisions

This list indicates revisions to the standard when compared with the previously published version. It is not intended to be used independently of the standard. It should be used for informational purposes and as a guide to the official requirements contained in this standard. It is the responsibility of the user to read and understand the complete standard.

The main changes in C-1500, *Ignition Protection for Marine Products* in this revision as compared with the previous edition dated 7/14, are:

- Scope and Purpose were combined
- Units of Measure section was added

DISCLAIMER

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TABLE OF CONTENTS

1500.1	SCOPE	1
1500.2	UNITS OF MEASURE	1
1500.3	REFERENCES.....	1
1500.4	DEFINITIONS.....	2
1500.5	GENERAL REQUIREMENTS	2
1500.5.1	Ignition Protection.....	2
1500.5.2	Explosion Chamber	3
1500.5.3	Electrical Energy Test Apparatus	3
1500.5.4	Preconditioning.....	4
1500.5.5	Modification of Sample for Testing	4
1500.5.6	Test Setup	5
1500.5.7	Ignition of Internal Gas/Air Mixture	5
1500.5.8	Ignition by Temperature in Excess of 150°C (302°F).....	6
1500.5.9	Electrical Energy Test.....	7
1500.5.10	Hermetically Sealed Ignition Source	7
1500.5.11	Impact Sparks.....	7
1500.6	MARKING	8
	FIGURE 1 - Ignition Test Procedure Flow Chart	8
	FIGURE 2 - Ignition Protection Test Set-Up.....	9
	FIGURE 3 - Electrical Energy Test Apparatus	11
	FIGURE 4 - Typical Test Set-Up for Small DC Motor	12

C-1500 IGNITION PROTECTION FOR MARINE PRODUCTS

Based on ABYC's assessment of the existing technology, and the problems associated with achieving the goals of this standard, ABYC recommends compliance with this standard for all systems and associated equipment manufactured and/or installed after July 31, 2020.

1500.1 SCOPE

This standard applies to the test methods for determining ignition protection but is not to be considered a standard that will determine the acceptability of a product or component for use in marine service.

EXCEPTIONS: This standard does not cover:

1. *Explosion proof or intrinsically safe equipment as required by the US Coast Guard and applied to US Coast Guard inspected vessels or as defined in the National Electrical Code, ANSI/NFPA No. 70.*
2. *Ignition protection procedures for products or components that may operate in hydrogen and air mixtures.*
3. *Mechanisms of ignition from external sources, such as static electricity, lightning, or other factors not related to the apparatus under test.*
4. *Apparatus based on the use of high voltage electrostatic principles.*
5. *The deterioration of external wiring.*
6. *Connections installed in accordance with applicable installation standards.*

NOTES:

1. *Products and components classified as ignition protected are intended to be installed and used in accordance with the applicable requirements of the US Coast Guard, the American Boat and Yacht Council, Inc, and the Fire Protection Standard for Pleasure and Commercial Motor Craft, ANSI/NFPA No. 302.*
2. *Reference to EN ISO 8846:2017 is required for CE marking; SAE J1171 is an equivalent standard.*

1500.2 UNITS OF MEASURE

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

1500.3 REFERENCES

The following references form a part of this standard. Unless otherwise noted the latest version of referenced standards shall apply.

1500.3.1 ABYC - American Boat & Yacht Council, 613 Third Street, Suite 10, Annapolis, MD 21403. Phone: (410) 990-4460. Fax: (410) 990-4466. Website: www.abycinc.org

[ABYC E-11, AC & DC Electrical Systems on Boats](#)

1500.3.2 ASTM - ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. Phone: (610) 832-9500. Fax: (610) 832-9555. Website: www.astm.org

ASTM D471-96, *Standard Test Method for Rubber Property - Effect of Liquids*

1500.3.3 NFPA - National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Phone: (617) 770-3000. Fax: (617) 770-0700. Website: www.nfpa.org

NFPA 70, *National Electric Code*

NFPA 302, *Fire and Protection Standard for Pleasure and Commercial Motor Craft*

1500.3.4 ISO – International Organization for Standardization (ISO), 1, ch. De la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland. Phone: +41 22 749 01. 11 Fax: +41 22 733 34 30. Website: www.iso.org

EN ISO 8846:2017, *Small craft -- Electrical devices -- Protection against ignition of surrounding flammable gases*