

ABYC H-28 July, 2016

Hull Division Standard

Hull Performance 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ABYC reviews each standard at least every five years at which time it may be reaffirmed, revised, or withdrawn.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 H-28

INFLATABLE BOATS



H-28 07/16

HULL PERFORMANCE PROJECT TECHNICAL COMMITTEE

James Getz, Chairman Fred Herrington, Vice Chairman

Richard Clark John Deurr Don Kueny Ralph Lambrecht Dale Larsen Robert MacNeill Robert Newsome Lou Novak Marc Nugent John Scherer Eric Skaggs G. Medford Smith Richard Snyder Augusto Villalon

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

NOTE: 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 was developed under procedures accredited as meeting the criteria for American National Standards. 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.

This standard, which is the result of extended and careful consideration of available knowledge and experience on the subject, is intended to provide minimum performance requirements.

ABYC's Project Technical Committee meetings are open to the public. All contact regarding standards activity, interpretations, or meeting attendance should be directed to the ABYC Technical Department at <u>comments@abycinc.org</u>.

ABYC and its committee's do not "approve", "certify", or "endorse" any item, construction, or proprietary device.

REQUEST FOR INTERPRETATIONS

Upon written request the Hull Performance 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 may be answered in a yes or no fashion.

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

H-28 7/16

H-28 INFLATABLE BOATS

Table of Contents

28.1	PURPOSE	. 1
28.2	SCOPE	. 1
28.3	REFERENCES	. 1
28.4	DEFINITIONS	1
28.5	GENERAL REQUIREMENTS	2
28.6	MATERIALS	2
28.7	FUNCTIONAL COMPONENTS	3
28.8	BOAT LOAD CAPACITY	4
28.9	MAXIMUM ENGINE POWER	4
28.10	STATIC STABILITY TEST	5
28.11	COMPARTMENTATION	6
28.12	AIR TIGHTNESS TEST OF THE BUOYANCY CHAMBERS	6
28.13	SUDDEN TOTAL LOSS OF PRESSURE	6
28.14	ROWING TEST	7
28.15	OPERATING INSTRUCTIONS AND WARNINGS	7
28.16	STANDARD EQUIPMENT	7
	FIGURE 1A - Static Stability Test	
	FIGURE 1B - Static Stability Test	8
	APPENDIX 1 - Testing of Buoyancy Chamber Material	8
	APPENDIX 2 - Determining Inherent Buoyancy 1	1
	TABLE 1 - Factors for Converting Various Boat Material from Dry to Submerged Weight 1	2
	ORIGIN AND DEVELOPMENT 1	3

H-28 7/16

H-28 INFLATABLE BOATS

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 boats, associated equipment, and systems manufactured and/or installed after July 31, 2017.

28.1 **PURPOSE**

This standard is a guide for the design, construction, material and testing of inflatable boats, including Rigid Inflatable Boats.

28.2 **SCOPE**

This standard applies to all inflatable boats, including Rigid Inflatable Boats, less than eight meters (26 feet) length overall capable of being mechanically powered.

- EXCEPTIONS:
- 1. Liferafts
- 2. River excursion rafts
- 3. Inflatables powered exclusively by manual or sailing means.

28.3 **REFERENCES**

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

28.3.1 ABYC - American Boat & Yacht Council, Inc., 613 Third Street, Suite 10, Annapolis, MD 21403. Phone: 410-990-4460. Fax: 410-990-4466. Website: <u>www.abycinc.org</u>

ABYC H-41, Reboarding Means, Ladders, Handholds, Rails and Lifelines ABYC H-26, Powering of Boats ABYC S-7, Boat Capacity Labels ABYC S-30, Outboard Engine and Related Equipment Weights ABYC T-5, Safety Signs and Labels ABYC T-24, Owners/Operator's Manuals

28.3.2 ASTM - American Society for Testing and Materials, ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Phone: 610-832-9585. Fax: 610-832-9555. Website: <u>www.astm.org</u>

ASTM D 471, Standard Test Method for Rubber Property - Effect of Liquids ASTM D 1171, Standard Test Method for Rubber Deterioration - Surface Ozone Cracking Outdoors or Chamber (Triangular Specimens) ASTM D 751, Standard Test Methods for Coated Fabrics

28.3.3 International Organization for Standardization (ISO), ISO Central Secretariat, 1 rue de Varembe, Case postale 56, CH-1211 Geneva 20, Switzerland. Website: <u>www.iso.ch</u>

ISO 1817, Rubber, vulcanized - Determination of the effect of liquids ISO 3011, Rubber or plastics coated fabrics - Determination of resistance to ozone cracking under static conditions ISO 4674, Fabrics coated with rubber or plastics - Determination of tear resistance ISO 2411, Rubber- or plastics-coated fabrics - Determination of coating adhesion

28.4 **DEFINITIONS**

For the purposes of this standard, the following definitions apply.