

§ 160.050-1

the laboratory that performed the approval testing.

[CGD 93-055, 61 FR 13930, Mar. 28, 1996]

Subpart 160.050—Specification for a Buoy, Life Ring, Unicellular Plastic

§ 160.050-1 Incorporation by reference.

(a) *Standard.* This subpart makes reference to Federal Standard No. 595-Colors in § 160.050-3.

(b) *Copies on file.* The Federal Standard may be obtained from the Business Service Center, General Services Administration, Washington, DC 20407.

[USCG-1999-6216, 64 FR 53228, Oct. 1, 1999]

§ 160.050-2 Types and sizes.

(a) *Type.* Life buoys shall be of the annular ring type as described in this subpart, but alternate arrangements meeting the performance requirements set forth will be given special consideration.

(b) *Sizes.* Ring life buoys shall be of the sizes set forth in Table 160.050-2(b). A tolerance of a plus or minus 5 percent will be allowable on the dimensions indicated in Table 160.050-2(b).

TABLE 160.050-2(b)—SIZES AND DIMENSIONS OF RING LIFE BUOYS

Size	Dimensions (inches) Finished ring
30-inch	30
24-inch	24
20-inch	20

[CGFR 54-46, 19 FR 8707, Dec. 18, 1954, as amended by CGFR 62-17, 27 FR 9045, Sept. 11, 1962]

§ 160.050-3 Materials.

(a) *General.* All exposed materials must be resistant to oil or oil products, salt water and anticipated weather conditions encountered at sea. All components used in construction of buoys and life rings must meet the applicable requirements of subpart 164.019 of this chapter.

(b) *Unicellular plastic.* The unicellular plastic material used in fabrication of the buoy body shall meet the requirements of subpart 164.015 of this subchapter for Type C material. The

buoy's body shall be finished with two coats of vinyl base paint. The ring life buoys shall be either international orange (Color No. 12197 of Federal Standard 595) or white in color and the colorfastness shall be rated "good" when tested in accordance with Federal Test Method Standard No. 191 Methods 5610, 5630, 5650, and 5660.

NOTE: On vessels on an international voyage, all ring life buoys shall be international orange in color.)

(c) *Grab line.* The grab line shall be 3/8-inch diameter polyethylene, polypropylene, or other suitable buoyant type synthetic material having a minimum breaking strength of 1,350 pounds.

(d) *Beckets.* The beackets for securing the grab line shall be 2-inch polyethylene, polypropylene, nylon, saran or other suitable synthetic material having a minimum breaking strength of 585 pounds. In addition, polyethylene and polypropylene shall be weather-resistant type which is stabilized as to heat, oxidation, and ultraviolet light degradation.

(e) *Thread.* Each thread must meet the requirements of subpart 164.023 of this chapter. Only one kind of thread may be used in each seam.

[CGFR 65-9, 30 FR 11477, Sept. 8, 1965, as amended by CGFR 65-64, 31 FR 562, Jan. 18, 1966; CGD 78-012, 43 FR 27154, June 22, 1978; CGD 84-068, 58 FR 29493, May 20, 1993]

§ 160.050-4 Construction and workmanship.

(a) *General.* This specification covers ring life buoys which provide buoyancy to aid in keeping persons afloat in the water. Each buoy consists of a body constructed in the shape of an annular ring, with an approximately elliptical body cross section and which is fitted with a grab line around the outside periphery. The outside and inside diameters of the ring and the length and width of the cross section of the body shall be uniform throughout.

(b) *Body.* The body shall be made in either one or two pieces. If of two pieces, the pieces shall be equal in size and shall be adhesive bonded along a center line through an axis passing through the flat area dimension of the body. The adhesive shall be a liquid

cold setting, polymerizable, nonsolvent, containing material of the phenolepichlorhydrin type or equivalent having good strength retention under outdoor weathering conditions.

(c) *Grab line.* The finished length of the grab line shall be four times the outside diameter of the buoy. The ends of the grab line shall be securely and neatly spliced together, or shall be hand whipped with a needle and both ends securely and smoothly seized together. The grab line shall encircle the buoy and shall be held in place by the beackets. The spliced or seized ends of the grab line shall be placed in the center of the width of one of the beackets.

(d) *Beackets.* Each ring buoy shall be fitted with four beackets located at equidistant points about the body of the buoy. The beackets shall be passed around the body of the buoy with the free ends to the outside, and shall be securely cemented to the buoy with a suitable waterproof adhesive which is compatible with the unicellular plastic used in the buoy body. The ends of the beackets shall be turned under at least 1 inch, one end to go around the grab line, and the other to be laid flat against the first end. The beackets shall then be stitched to the grab line with not less than five hand stitches made with two parts of thread or machined stitched with not less than three stitches per inch. Alternate methods for rigging beackets and grab line will be given special consideration.

(e) *Weight.* The weight of the completely assembled buoy shall be not less than 2.5 pounds and not more than 4.25 pounds for the 20-inch size, not less than 3.0 pounds and not more than 5.5 pounds for the 24-inch size, and not less than 5.0 and not more than 7.5 pounds for the 30-inch size.

(f) *Workmanship.* Ring life buoys shall be of first class workmanship and free from any defects materially affecting their appearance or serviceability.

[CGFR 54-46, 19 FR 8707, Dec. 18, 1954, as amended by CGFR 62-17, 27 FR 9045, Sept. 11, 1962; CGFR 65-9, 30 FR 11477, Sept. 8, 1965]

§ 160.050-5 Sampling, tests, and inspection.

(a) *General.* Production tests and inspections must be conducted in accordance with this section, subpart 159.007

of this chapter, and if conducted by an independent laboratory, the independent laboratory's procedures for production inspections and tests as accepted by the Commandant. The Commandant may prescribe additional production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subchapter.

(b) *Oversight.* In addition to responsibilities set out in part 159 of this chapter and the accepted laboratory procedures for production inspections and tests, each manufacturer of a ring life buoy and each laboratory inspector shall comply with the following, as applicable:

(1) *Manufacturer.* Each manufacturer must—

(i) Perform all tests and examinations necessary to show compliance with this subpart and the subpart under which the ring life buoy is approved on each lot before any inspector's tests and inspection of the lot;

(ii) Follow established procedures for maintaining quality control of the materials used, manufacturing operations, and the finished product; and

(iii) Allow an inspector to take samples of completed units or of component materials for tests required by this subpart and for tests relating to the safety of the design.

(iv) Meet 33 CFR 181.701 through 33 CFR 181.705 which requires an instruction pamphlet for each device that is sold or offered for sale for use on recreational boats, and must make the pamphlet accessible prior to purchase.

(2) *Laboratory.* An inspector from the accepted laboratory shall oversee production in accordance with the laboratory's procedures for production inspections and tests accepted by the Commandant. During production oversight, the inspector shall not perform or supervise any production test or inspection unless—

(i) The manufacturer has a valid approval certificate; and

(ii) The inspector has first observed the manufacturer's production methods and any revisions to those methods.

(3) At least quarterly, the inspector shall check the manufacturer's compliance with the company's quality control procedures, examine the manufacturer's required records, and observe the manufacturer perform each of the required production tests.

(c) *Test facilities.* The manufacturer shall provide a suitable place and apparatus for conducting the tests and inspections necessary to determine compliance of ring life buoys with this subpart. The manufacturer shall provide means to secure any test that is not continuously observed, such as the 48 hour buoyancy test. The manufacturer must have the calibration of all test equipment checked in accordance with the test equipment manufacturer's recommendation and interval but not less than at least once every year.

(d) *Lots.* A lot may not consist of more than 1000 life buoys. A lot number must be assigned to each group of life buoys produced. Lots must be numbered serially. A new lot must be started whenever any change in materials or a revision to a production method is made, and whenever any substantial discontinuity in the production process occurs. The lot number assigned, along with the approval number, must enable the ring life buoy manufacturer to determine the supplier's identifying information for the component lot.

(e) *Samples.* (1) From each lot of ring life buoys, manufacturers shall randomly select a number of samples from completed units at least equal to the applicable number required by table 160.050-5(e) for buoyancy testing. Additional samples must be selected for any tests, examinations, and inspections required by the laboratory's production inspections and tests procedures.

TABLE 160.050-5(e)—SAMPLING FOR BUOYANCY TESTS

Lot size	Number of life buoys in sample
100 and under	1
101 to 200	2
201 to 300	3
301 to 500	4
501 to 750	6
751 to 1000	8

(2) For a lot next succeeding one from which any sample ring life buoy

failed the buoyancy or strength test, the sample shall consist of not less than ten specimen ring life buoys to be tested for buoyancy in accordance with paragraph (f) of this section.

(f) *Tests—(1) Strength test.* The buoy body shall be suspended by a 2-inch-wide strap. A similar strap shall be passed around the opposite side of the buoy and a 200-pound weight suspended by it from the buoy. After 30 minutes, the buoy body shall be examined, and there shall be no breaks, cracks or permanent deformation.

(2) *Resistance to damage test.* The buoy body shall be dropped three times from a height of 6 feet onto concrete, and there shall be no breaks or cracks in the body.

(3) *Buoyancy test.* To obtain the buoyancy of the buoy, proceed as follows:

(i) Weigh iron or other weight under water. The weight shall be more than sufficient to submerge the buoy.

(ii) Attach the iron or other weight to the buoy and submerge with the top of the buoy at least 2 inches below the surface for 48 hours.

(iii) After the 48-hour submergence period, weigh the buoy with the weight attached while both are still under water.

(iv) The buoyancy is computed as paragraph (f)(3)(i) minus paragraph (f)(3)(iii) of this section.

(4) *Buoyancy required.* The buoys shall provide a buoyancy of not less than 16.5 pounds for the 20-and 24-inch sizes, and not less than 32 pounds for the 30-inch size.

(g) *Lot inspection.* On each lot, the laboratory inspector shall perform a final lot inspection to be satisfied that the ring life buoys meet this subpart. Each lot must demonstrate—

- (1) First quality workmanship;
- (2) That the general arrangement and attachment of all components are as specified in the approved plans and specifications; and
- (3) Compliance with the marking requirements in the applicable approval subpart.

(h) *Lot acceptance.* When the independent laboratory has determined that the ring life buoys in the lot are of a type officially approved in the name of the company, and that such ring life buoys meet the requirements of this

subpart, they shall be plainly marked in waterproof ink with the independent laboratory's name or identifying mark.

(i) *Lot rejection.* Each nonconforming unit must be rejected. If three or more nonconforming units are rejected for the same kind of defect, lot inspection must be discontinued and the lot rejected. The inspector must discontinue lot inspection and reject the lot if examination of individual units or the records for the lot shows noncompliance with either this subchapter or the laboratory's or the manufacturer's quality control procedures. A rejected unit or lot may be resubmitted for testing and inspection if the manufacturer first removes and destroys each defective unit or, if authorized by the laboratory, reworks the unit or lot to correct the defect. A rejected lot or rejected unit may not be sold or offered for sale under the representation that it meets this subpart or that it is Coast Guard-approved.

[CGFR 65-9, 30 FR 11478, Sept. 8, 1965, as amended by CGD 95-028, 62 FR 51213, Sept. 30, 1997]

§ 160.050-6 Marking.

(a) Each ring buoy must have the following information in waterproof lettering:

Type IV Personal Flotation Device.
 Inspected and tested in accordance with U.S. Coast Guard regulations.
 (Name of buoyant material) buoyant material provides a minimum buoyant force of (32 lb. or 16½ lb.).
 Approved for use on recreational boats only as a throwable device.
 U.S. Coast Guard Approval No. 160.050/(assigned manufacturer's No.)/(Revision No.); (Model No.).
 (Name and address of manufacturer or distributor).
 (Size).
 USCG (Marine Inspection Office identification letters).
 (Lot No.).

(b) A method of marking that is different from the requirements of paragraph (a) of this section may be given consideration by the Coast Guard.

[CGD 72-163R, 38 FR 8120, Mar. 28, 1973, as amended by CGD 75-186, 41 FR 10437, Mar. 11, 1976; CGD 75-008, 43 FR 9771, Mar. 9, 1978; 43 FR 10913, Mar. 16, 1978; CGD 92-045, 58 FR 41608, Aug. 4, 1993; CGD 95-028, 62 FR 51214, Sept. 30, 1997]

§ 160.050-7 Procedure for approval.

(a) *General.* Designs of ring life buoys are approved only by the Commandant, U.S. Coast Guard. Manufacturers seeking approval of a ring life buoy design shall follow the procedures of this section and subpart 159.005 of this chapter.

(b) Each application for approval of a ring life buoy must contain the information specified in §159.005-5 of this chapter. The application and, except as provided in paragraphs (c) and (d)(2) of this section, a prototype ring life buoy must be submitted to the Commandant for preapproval review. If a similar design has already been approved, the Commandant may waive the preapproval review under §§159.005-5 and 159.005-7 of this chapter.

(c) If the ring life buoy is of a standard design, the application:

(1) Must include the following: A statement of any exceptions to the standard plans and specifications, including drawings, product description, construction specifications, and/or bill of materials.

(2) Need not include: The information specified in §159.005-5(a)(2).

(d) If the ring life buoy is of a non-standard design, the application must include the following:

(1) Plans and specifications containing the information required by §159.005-12 of this chapter, including drawings, product description, construction specifications, and bill of materials.

(2) The information specified in §159.005-5(a)(2) (i) through (iii) of this chapter, except that, if preapproval review has been waived, the manufacturer is not required to send a prototype ring life buoy sample to the Commandant.

(3) Performance testing results of the design performed by an independent laboratory that has a Memorandum of Understanding with the Coast Guard under §159.010-7 of this subchapter covering the in-water testing of personal flotation devices showing equivalence to the standard design's performance in all material respects.

(4) Buoyancy and other relevant tolerances to be complied with during production.

(5) The text of any optional marking to be included on the ring life buoy in

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addition to the markings required by the applicable approval subpart.

(6) For any conditionally approved ring life buoy, the intended approval condition(s).

(e) The description of quality control procedures required by §159.005-9 of this chapter may be omitted if the manufacturer's planned quality control procedures meet the requirements of those accepted by the Commandant for the independent laboratory performing production inspections and tests.

(f) *Waiver of tests.* A manufacturer may request that the Commandant waive any test prescribed for approval under the applicable subpart. To request a waiver, the manufacturer must submit to the Commandant and the laboratory described in §159.010, one of the following:

(1) Satisfactory test results on a ring life buoy of sufficiently similar design as determined by the Commandant.

(2) Engineering analysis demonstrating that the test for which a waiver is requested is not appropriate for the particular design submitted for approval or that, because of its design or construction, it is not possible for the ring life buoy to fail that test.

[CGD 95-028, 62 FR 51214, Sept. 30, 1997]

Subpart 160.051—Inflatable Liferrafts for Domestic Service

SOURCE: CGD 85-205, 62 FR 25546, May 9, 1997, unless otherwise noted.

§ 160.051-1 Scope.

(a) This subpart prescribes requirements for approval by the Coast Guard of A, B, and Coastal Service inflatable liferafts for use only in domestic service. These liferafts must comply with all of the requirements for SOLAS A and SOLAS B liferafts in subpart 160.151 except as specified in this subpart.

(b) This subpart does not apply to any A, B, and Coastal Service inflatable liferaft for use only in domestic service that has been approved by the Coast Guard before November 10, 2011, so long as the liferaft satisfies the an-

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nual servicing requirements set forth in 46 CFR 160.151-57.

[USCG-2010-0048, 76 FR 62975, Oct. 11, 2011, as amended by 76 FR 70062, Nov. 10, 2011]

§ 160.051-3 Definitions.

In this subpart, the term:

A or B liferaft means an inflatable liferaft that meets the requirements prescribed in subpart 160.151 for a SOLAS A or SOLAS B liferaft, respectively, except that the capacity is less than 6 persons and the liferaft cannot contain SOLAS markings.

Coastal Service liferaft means a liferaft that does not meet the all of the requirements prescribed in subpart 160.151 for a SOLAS A or SOLAS B liferaft, but that instead meets the requirements of this subpart and is approved for use on certain uninspected vessels under subchapter C of this chapter.

Commandant means Commandant (CG-ENG-4), Attn: Lifesaving and Fire Safety Division, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593-7509.

[CGD 85-205, 62 FR 25546, May 9, 1997, as amended by USCG-2010-0048, 76 FR 62975, Oct. 11, 2011; USCG-2013-0671, 78 FR 60157, Sept. 30, 2013]

§ 160.051-5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at Coast Guard Headquarters. Contact Commandant (CG-ENG-4), Attn: Lifesaving and Fire Safety Division, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593-7509. You may also inspect this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/