

§ 160.049-2

MIL-C-43006—Cloth, Laminated, Vinyl-Nylon, High Strength, Flexible.

(b) *Plan.* The following plan, of the issue in effect on the date unicellular plastic foam buoyant cushions are manufactured, form a part of this subpart:

(1) Coast Guard Dwg. No. 160.049-1.

(c) *Copies on file.* Copies of the specifications and plan referred to in this section shall be kept on file by the manufacturer, together with the approved plans and certificate of approval. The Coast Guard specifications and plan may be obtained upon request from the Commandant, U.S. Coast Guard, 2100 Second Street SW., Washington, DC 20593-0001, or recognized laboratory. The Federal Specifications and the Federal Standard may be purchased from the Business Service Center, General Services Administration, Washington, DC 20407.

[CGFR 65-37, 30 FR 11586, Sept. 10, 1965, as amended by CGFR 70-143, 35 FR 19964, Dec. 30, 1970; CGD 72-163R, 38 FR 8119, Mar. 28, 1973; CGD 78-012, 43 FR 27153, 27154, June 22, 1978; CGD 88-070, 53 FR 34535, Sept. 7, 1988; USCG-1999-6216, 64 FR 53228, Oct. 1, 1999]

§ 160.049-2 Types and sizes.

(a) *Type.* Buoyant cushions shall be of the box type, i.e., have top, bottom, and gusset. Pillow type cushions without a gusset are not acceptable.

(b) *Sizes.* Buoyant cushions shall have not less than 225 square inches of top surface area, shall contain not less than 630 cubic inches of buoyant material, shall not be less than 2 inches thick, and shall have width no less than 12 inches and length no less than 15 inches, respectively.

[CGFR 65-37, 30 FR 11586, Sept. 10, 1965, as amended by USCG-1998-4442, 63 FR 52191, Sept. 30, 1998]

§ 160.049-3 Materials.

(a) *General.* All components used in the construction of buoyant cushions must meet the applicable requirements of subpart 164.019.

(b) *Unicellular plastic foam.* The unicellular plastic foam shall be all new material complying with the requirements of Specification subpart 164.015 for Type A or B foam.

(c) *Cover.* Cotton fabrics and coated upholstery cloth meeting the minimum

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requirements set forth in paragraphs (c) (1) and (2) of this section, are acceptable for use as covers for buoyant cushions. Vinyl-dip coating meeting the requirements set forth in paragraph (c)(3) of this section will also be acceptable. Alternate materials will be given special consideration. Pro rata widths of like construction will be acceptable.

(1) *Cotton fabrics.* Cotton fabrics shall comply with the requirements of Federal Specification CCC-C-426 for Type I, Class 3 material.

(2) *Coated upholstery cloth.* Coated upholstery cloth shall comply with the requirements of Federal Specification CCC-A-700.

(3) *Vinyl-dip.* The vinyl-dip coating shall comply with the coating requirements of §160.055-5(b)(2) except there are no color restrictions.

(4) *Adhesive.* The adhesive shall be an all-purpose waterproof vinyl type. Minnesota Mining and Manufacturing Co. EC-870 or EC-1070, United States Rubber Co. M6256, Herculite Protective Fabrics Corp. CVV, Pittsburgh Plate Glass Co. R.828, or equal, are acceptable.

(5) *Reinforcing fabric.* The reinforcing fabric shall be type II, class I, laminated vinyl-nylon high strength cloth in accordance with the requirements of Specification MIL-C-43006.

(d) *Grab Straps.* The grab straps shall be of materials permitted for the cover, or approved equivalent.

(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.

(f) *Welting.* The welting where used may be of any fiber or plastic material suitable for the purpose.

[CGFR 65-37, 30 FR 11586, Sept. 10, 1965, as amended by CGFR 70-143, 35 FR 19964, Dec. 30, 1970; CGD 78-012, 43 FR 27154, June 22, 1978; CGD 84-068, 58 FR 29493, May 20, 1993]

§ 160.049-4 Construction and workmanship.

(a) *General.* This specification covers buoyant cushions of the box type filled with unicellular plastic foam buoyant material. Such cushions consist essentially of a buoyant insert contained in an outer cover fitted with grab straps. The primary purpose of such cushions

is to provide buoyancy to aid a person in keeping afloat in the water. Buoyant cushions providing less than 20 pounds buoyancy or less than 2 inches in thickness will not be acceptable.

(b) *Cover*. One piece of material each for the top and bottom shall be stitched together to form the cover except that piecing of the cover material will be allowed provided it is for decorative purposes only. Gusset or boxing materials shall be of not more than two pieces. If more than one piece of material is used for the top, bottom, boxing or gusset, they shall be attached by a double row of stitching of the type shown in Federal Standard No. 751, for Seam types SSw-2 or LSb-2. The top and bottom may be of any of the materials permitted for the cover, but the boxing or gusset shall be a cotton fabric as specified by §160.049-3(b)(1) or other equivalent material of a porous nature. Nonporous materials will not be permitted for the boxing or gusset, but coated upholstery cloth specified by §160.049-3(c)(2), perforated to permit adequate draining and drying will be acceptable.

(c) *Buoyant material*. A buoyant insert for a buoyant cushion must comply with the requirements in paragraph (c) (1) and (2) of this section and may be:

- (1) Molded in one piece; or
- (2) Built up from sheet material if it is formed from:
 - (i) Three pieces or less in each layer, cemented together with an all-purpose vinyl adhesive such as or equivalent to U.S. Rubber No. M-6256 or Minnesota Mining No. EC-870 and No. EC-1070;
 - (ii) Three layers or less that may be cemented; and
 - (iii) Staggered butts and seams of adjacent layers.
- (d) *Grab Straps*. Grab straps shall be attached as shown on Dwg. No. 160,049-1 and shall finish 20 inches long and 1 inch wide at opposite ends. The grab straps, if formed from cover material shall be folded and stitched together so as to produce a double thickness with raw edges turned under. Other means will be given special consideration.

(e) *Seams and stitching*. Seams shall be constructed with not less than a 3/8-inch border between the seam and the edge of the cover materials. All stitching

shall be a lock stitch, 7 to 9 stitches per inch, except as follows: Chain stitching 6 to 8 stitches per inch with 20/4 thread on top and 40/3 thread on the bottom, will be acceptable in constructing grab straps.

(f) *Workmanship*. All cushions shall be of first class workmanship and shall be free from defects materially affecting their appearance or serviceability. Cushions classified as "seconds" or "irregular" will not be acceptable under this specification.

[CGFR 65-37, 30 FR 11586, Sept. 10, 1965, as amended by CGD 72-163R, 38 FR 8119, Mar. 28, 1973]

§ 160.049-5 Inspections and tests.¹

(a) *General*. Manufacturers of listed and labeled buoyant cushions shall maintain quality control of the materials used, manufacturing methods and the finished product so as to meet the applicable requirements, and shall make sufficient inspections and tests of representative samples and components produced to maintain the quality of the finished product. Records of tests conducted by the manufacturer and records of materials, including affidavits by suppliers that applicable requirements are met, entering into construction shall be made available to the recognized laboratory inspector or the Coast Guard inspector, or both, for review upon request. Any examinations, inspections and tests which are required by the recognized laboratory for listed and labeled devices produced will be conducted by the laboratory inspector at the place of manufacture or other location at the option of the laboratory.

(b) *Lot size and sampling*. (1) A lot shall consist of not more than 1,000 buoyant cushions. A new lot shall be started with any change or modification in materials used or manufacturing methods employed. When a lot of buoyant cushions is ready for inspection, the manufacturer shall notify the recognized laboratory so that they

¹The manufacturer of a personal flotation device must meet 33 CFR 181.701 through 33 CFR 181.705 which require an instruction pamphlet for each device that is sold or offered for sale for use on recreational boats.