

(3) *Averaging determinations.* The tensile strength in pounds per square inch and percent ultimate elongation of four determinations shall be averaged for each sample.

(i) *Water absorption*—(1) *Specimens.* Test specimens shall be 4"×4" square and approximately 1" in thickness. The specimen may have the natural skin on the top and bottom surfaces.

(2) *Procedure.* The specimens shall be weighed and submerged in water under a 10-foot head of water (equal to 4.35 psi) at room temperature (65°–95 °F.) for 48 hours. The specimens shall then be placed in a stream of air for the minimum time required to remove visible water from the surface, and reweighed. The results shall be calculated in terms of pounds of water gain per square foot of total exposed surface.

(j) *Flexibility*—(1) The size of the specimen shall be approximately 1'×8' with a thickness of  $\frac{1}{4}' \pm \frac{1}{16}"$ . The test specimens and equipment shall be conditioned for at least 4 hours at 0 °F.  $\pm 2$  °F., and bent 180° around a  $\frac{1}{2}"$  diameter steel mandril within 5 seconds at the test temperature. Care shall be taken to avoid warming the test specimens, particularly at or near the bend point, in performing the test.

(k) *Oil resistance*—(1) *Specimens.* The test specimens shall be a disk approximately 1" in diameter and 1" (approximately) in thickness.

(2) *Procedure.* The specimen shall be immersed in fuel oil conforming to Navy special grade of Specification MIL-F-859 for 70 hours. The specimen shall then be removed, dipped in alcohol and blotted with filter paper. The specimen shall then be compared to an untreated specimen of similar size for apparent softness and visible swelling.

(l) *Odor.* The odor of unicellular polyvinyl chloride foam shall be determined by sniffing.

[CGFR 65-37, 30 FR 11593, Sept. 10, 1965, as amended by CGFR 65-64, 31 FR 563, Jan. 18, 1966]

#### § 164.015-5 Procedure for acceptance.

(a) Unicellular plastic foam is not subject to formal approval, but will be accepted by the Coast Guard on the basis of this subpart for use in the

manufacture of lifesaving equipment utilizing it.

(b) Upon receipt of an application requesting acceptance, the Commander of the Coast Guard District will detail a marine inspector to the factory to observe the production facilities and manufacturing methods and to select from foam already manufactured sufficient sample material for testing for compliance with the requirements of this specification. A copy of the marine inspector's report, together with the sample material and one copy of an independent laboratory test report will be forwarded to the Commandant and if satisfactory notice of acceptance will be given to the manufacturer.

(c) Acceptance of unicellular plastic foam prior to being incorporated into finished products, or during the course of manufacture, shall in no case be construed as a guarantee of the acceptance of the finished products.

(d) The manufacturer of the foam shall provide the manufacturer of the lifesaving equipment with an affidavit certifying that the foam conforms to all of the requirements of this subpart.

### Subpart 164.018—Retroreflective Material for Lifesaving Equipment

SOURCE: CGD 76-028, 44 FR 38786, July 2, 1979, unless otherwise noted.

#### § 164.018-1 Scope.

This subpart prescribes design requirements, approval tests, and procedures for approving retroreflective material used on lifesaving equipment.

#### § 164.018-3 Classification.

The following types of retroreflective material are approved under this specification:

(a) Type I—Material used on flexible surfaces and rigid surfaces, except rigid surfaces that are continuously exposed.

(b) Type II—Weather resistant material used on continuously exposed rigid surfaces.

#### § 164.018-5 Specifications and standards incorporated by reference.

(a) The following federal and military specifications and standards are incorporated by reference into this subpart:

(1) Federal Specification L-P-375 C (April 23, 1970), entitled "Plastic Film, Flexible, Vinyl Chloride", as amended by Amendment 2 of December 2, 1976.

(2) Federal Specification L-S-300 B (July 12, 1974), entitled "Sheeting and Tape, Reflective; Nonexposed Lens, Adhesive Backing."

(3) Federal Specification CCC-C-426 D (August 12, 1970), entitled "Cloth, Drill, Cotton."

(4) Federal Specification CCC-C-443 E (December 2, 1974), entitled "Cloth, Duck, Cotton (Single and Plied Filling Yarns, Flat)."

(5) Federal Test Method Standard 141a (September 1, 1965), entitled "Paint, Varnish, Lacquer and Related Materials; Methods of Inspection, Sampling and Testing." (Method 6141 "Washability of Paints", and Method 6142 "Scrub Resistance" as amended May 1, 1974).

(6) Federal Test Method Standard 370 (March 1, 1977), entitled "Instrumental Photometric Measurements of Retroreflective Materials and Retroreflective Devices."

(7) Military Specification MIL-C-17415 E (April 16, 1964), entitled "Cloth, Coated, and Webbing, Inflatable Boat and Miscellaneous Use", as amended by Amendment 5 of April 26, 1976.

(8) Military Specification MIL-R-21607 D (August 5, 1976), entitled "Resins, Polyester, Low Pressure Laminating, Fire-retardant."

(9) Military Specification MIL-C-43006 E (March 24, 1978), entitled "Cloth and Strip Laminated, Vinyl Nylon High Strength, Flexible."

(b) Federal and military specifications and standards may be obtained from Customer Service, Naval Publications, Forms Center, 5801 Tabor Ave., Philadelphia, Pa. 19120. These materials are also on file in the Federal Register library.

(c) Approval to incorporate by reference the materials listed in this section was obtained from the Director of the Federal Register on June 14, 1979.

(d) When changes are made to a specification or standard incorporated by reference into this subpart, the effective date for its use will be the effective date set by the issuing authority unless otherwise determined by the Coast Guard.

#### § 164.018-7 Approval procedures.

(a) An application for approval of retroreflective material must be sent to the Commandant (CG-ENG), U.S. Coast Guard, 2100 2nd St., SW., Stop 7126, Washington, DC 20593-7126.

(b) Each application for approval must contain—(1) The name and address of the applicant;

(2) Two copies of plans or specifications of the material;

(3) A detailed description of the quality control procedures used in manufacturing the material; and

(4) A test report containing observations and results of approval testing conducted.

(c) The Commandant advises the applicant whether the retroreflective material is approved. If the material is approved, an approval certificate is sent to the applicant.

[CGD 76-028, 44 FR 38786, July 2, 1979, as amended by CGD 82-063b, 48 FR 4783, Feb. 3, 1983; CGD 88-070, 53 FR 34537, Sept. 7, 1988; CGD 95-072, 60 FR 50467, Sept. 29, 1995; CGD 96-041, 61 FR 50734, Sept. 27, 1996; USCG-2009-0702, 74 FR 49238, Sept. 25, 2009]

#### § 164.018-9 Design requirements.

(a) Type I retroreflective material must be capable of being attached to lifesaving equipment either by sewing it to the equipment or by means of an adhesive. Type II material must be capable of being attached to lifesaving equipment either by mechanical fasteners or by an adhesive.

(b) The following information must be stated on retroreflective material or on the package in which it is supplied to a user:

(1) Each surface to which the retroreflective material is designed to be attached.

(2) The instructions for attaching the material to each surface described in paragraph (b)(1) of this section.

(c) When retroreflective material designed for use with an adhesive is tested in accordance with the "adhesion" test method listed in §164.018-11, the material must not peel for a distance of more than 5 cm (2 in.).

(d) When dry material is tested in accordance with the "reflective intensity" test method listed in §164.018-11, the reflective intensity of the material must be equal to or greater than the