§ 160.052–4

115 pounds for a child size for 10 minutes at ambient temperatures without breaking or distorting.

[CGD 73–130R, 39 FR 20684, June 13, 1974]

§ 160.052–4 Materials—nonstandard vests.

(a) General. All materials used in nonstandard buoyant vests must be equivalent to those specified in §160.052–3 and be obtained from a supplier who furnishes an affidavit in accordance with the requirement in §160.052–3(a).

(b) Cover. A vinyl-dip coating may be allowed for the covering of the vest instead of a fabric envelope if the coating meets the requirements in §160.055–5(b)(2) of this chapter except there is no color restriction.

(c) Reinforcing tape. When used, the reinforcing tape around the neck shall be 3/4″ cotton tape weighing not less than 0.18 ounces per linear yard having a minimum breaking strength of not less than 120 pounds.


§ 160.052–5 Construction—standard vests.

(a) General. This specification covers buoyant vests which essentially consist of a fabric envelope in which are enclosed inserts of buoyant material arranged and distributed so as to provide the flotation characteristics and buoyancy required to hold the wearer in an upright or slightly backward position with head and face out of water. The buoyant vests are also fitted with straps and hardware to provide for proper adjustment and close and comfortable fit to the bodies of various size wearers.

(b) Envelope. The envelope or cover shall be made of three pieces. Two pieces of fabric shall be cut to the pattern shown on Dwg. No. 160.052–1, Sheet 1 for adult size, and Sheets 2 and 3 for child sizes, and joined together with a third piece which forms a 2″ finished gusset strip all around. Reinforcing strips of the same material as the envelope shall be stitched to the inside of the front piece of the envelope in way of the strap attachments as shown by the drawings.

(c) Buoyant inserts. The unicellular plastic foam buoyant inserts shall be cut and formed as shown on Dwg. 160.052–1, Sheet 4.

(d) Tie tapes, body straps, and hardware. The tie tapes, body straps, and hardware shall be arranged as shown on the drawings and attached to the envelope with the seams and stitching indicated.

(e) Stitching. All stitching shall be short lock stitch conforming to Stitch Type 301 of Federal Standard No. 751, and there shall be not less than 7 nor more than 9 stitches to the inch.

(f) Workmanship. Buoyant vests shall be of first-class workmanship and shall be free from any defects materially affecting their appearance or serviceability.


§ 160.052–6 Construction—nonstandard vests.

(a) General. The construction methods used for nonstandard buoyant vests must be equivalent to those requirements in §160.052–5 for a standard vest and also meet the requirements in this section.

(b) Size. Each nonstandard vest must contain the following volume of plastic foam buoyant material, determined by the displacement method:

1. Five hundred cubic inches or more for an adult size;
2. Three hundred and fifty cubic inches or more for a child, medium size;
3. Two hundred and twenty-five cubic inches or more for a child, small size.

(c) Arrangement of buoyant material. The buoyant material in a nonstandard vest must:

1. Be arranged to hold the wearer in an upright or backward position with head and face out of water;
2. Have no tendency to turn a wearer face downward in the water; and
3. Be arranged so that 70 to 75 percent of the total is located in the front of the vest.

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(d) Neck opening. Each cloth-covered nonstandard vest must have at the neck opening:
(1) A gusset; or
(2) Reinforcing tape.

(e) Adjustment, fit, and donning. Each nonstandard vest must be made with adjustments to:
(1) Fit a range of wearers for the type designed; and
(2) Facilitate donning time for an uninitiated person.


§ 160.052–7 Inspections and tests—standard and nonstandard vests.¹

(a) General. Manufacturers of listed and labeled buoyant vests shall—
(1) Maintain quality control of the materials used, the manufacturing methods and workmanship, and the finished products to meet the requirements of this subpart by conducting sufficient inspections and tests of representative samples and components produced;
(2) Make available to the recognized laboratory inspector and the Coast Guard inspector, upon request, records of tests conducted by the manufacturer and records of materials used during production of the device, including affidavits by supplier; and
(3) Permit any examination, inspection, and test required by the recognized laboratory or the Coast Guard for a produced listed and labeled device, either at the place of manufacture or some other location.

(b) Lot size and sampling. (1) A lot consists of 500 buoyant vests or fewer.
(2) A new lot begins after any change or modification in materials used or manufacturing methods employed.
(3) The manufacturer of the buoyant vests shall notify the recognized laboratory or the Coast Guard for a produced listed and labeled device, either at the place of manufacture or some other location.

(c) Additional compliance tests. An inspector from the recognized laboratory or Coast Guard may conduct an examination, test and inspection of a buoyant device that is obtained from the manufacturer or through commercial channels to determine the suitability of the device for listing and labeling or to determine its conformance to applicable requirements.

(d) Test facilities. The manufacturer shall admit the laboratory inspector and the Coast Guard inspector to any part of the premises at the place of manufacture of a listed and labeled device to—
(1) Examine, inspect, or test a sample of a part or a material that is included in the construction of the device; and
(2) Conduct any necessary examination, inspection, or test in a suitable place and with appropriate apparatus provided by the manufacturer.

(e) Buoyancy—(1) Buoyancy test method. Remove the buoyant inserts from the vests. Securely attach the spring scale in a position directly over the test tank. Suspend the weighted wire basket from the scale in such a manner, and

TABLE 160.052–7(b)(4)—SAMPLE FOR BUOYANT VESTS

<table>
<thead>
<tr>
<th>Lot size</th>
<th>Number of vests in sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 and under</td>
<td>1</td>
</tr>
<tr>
<td>101 to 200</td>
<td>2</td>
</tr>
<tr>
<td>201 to 300</td>
<td>3</td>
</tr>
<tr>
<td>301 to 500</td>
<td>4</td>
</tr>
</tbody>
</table>

(5) The manufacturer shall test—
(i) At least one vest from each lot for buoyancy in accordance with procedures contained in paragraph (e) of this section; and
(ii) At least one vest in each 10 lots for strength of the body strap assembly in accordance with the procedures contained in paragraph (f) of this section.

(6) If a vest fails the buoyancy test, the sample from the next succeeding lot must consist of 10 specimen vests or more to be tested for buoyancy in accordance with paragraph (e) of this section.

(7) The manufacturer shall keep on file and make available to the laboratory inspector and Coast Guard inspector the records of inspections and tests, together with affidavits concerning the material.

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.