paragraph (c)(2)(i) of this section. Ignite specimen and let it burn about 15 seconds in air. Submerge the burning signal in water in a vertical position with head down. Obtain underwater smoke emission time by stop watch measurements from time of submergence until smoke emission ceases. The test specimen shall burn underwater not less than 10 seconds when subjected to this test.

(2) **Bending strength.** Place the specimen on supports 15 cm (6 in.) apart. Attach a weight of 35 kg (77 lb.) to a length of wire. Hang the weight from the supported signal by looping the wire around the signal approximately equidistant from the two points of support. Let the weight hang approximately 5 minutes. The test specimen shall not deflect more than 7 mm (1⁄4 in.), nor shall the joint between the casing and the handle fail when subjected to this test.

(3) **Tensile strength.** Place the specimen in a chuck firmly holding it about 13 mm (1⁄2 in.) below the cap. Attach a weight of 35 kg (77 lb.) to a length of wire. Hang the weight from the supported signal by looping the wire through a hole bored perpendicular to and through the axis of the handle. Let the weight hang approximately 5 minutes. The test specimen shall not show noticeable distortion, nor shall the joint between the casing and handle fail when subjected to this test.

(4) **Elevated temperature, humidity and storage.** Place specimen in a thermostatically controlled even-temperature oven held at 75 °C. with not less than 90 percent relative humidity for 72 hours. Remove specimen and store at room temperature (20° to 25 °C,) with approximately 65 percent relative humidity for 10 days. If for any reason it is not possible to operate the oven continuously for the 72-hour period, it may be operated at the required temperature and humidity for 8 hours out of each 24 during the 72-hour conditioning period. (Total of 24 hours on and 48 hours off.) The signal shall not ignite or decompose during this conditioning. The signal shall ignite and operate satisfactorily following this conditioning.

(5) **Spontaneous ignition.** Place the specimen in a thermostatically controlled even-temperature oven held at 75 °C, with not more than 10% relative humidity for 48 consecutive hours. The signal shall not ignite or undergo marked decomposition.

(6) **Susceptibility to explosion.** Remove smoke composition from signal and punch a small hole in the composition. Insert a No. 6 commercial blasting cap. Ignite the cap. The test specimen shall not explode or ignite.

(7) **Color of smoke.** Ignite specimen in the open air in daytime according to the directions printed on the signal, and determine the smoke color by direct visual comparison of the unshadowed portions of the smoke with a color chart held so as to receive the same daylight illumination as the unshadowed portions of the smoke. The color of the smoke must be orange as defined by Sections 13 and 14 of the “Color Names Dictionary” (colors 34–39 and 48–54).

(8) **Volume and density of smoke.** The test specimen shall show less than 70 percent transmission for not less than 30 seconds when measured with apparatus having a light path of 19 cm (71⁄2 in.), an optical system aperture of +3.7 degrees, and an entrance air flow of 18.4m³ per minute (650 cu. ft. per minute), such apparatus to be as described in National Bureau of Standards Report No. 4792.

§ 160.037–5 **Labeling and marking.**

(a) **Labeling.** Each hand orange smoke distress signal shall bear a label securely affixed thereto, showing in clear, indelible black lettering on an orange background, the following wording and information:

**HAND ORANGE SMOKE DISTRESS SIGNAL**

For daytime use—50 seconds burning time

USE ONLY WHEN AIRCRAFT OR VESSEL IS SIGHTED

DIRECTIONS: Pull tape over top of cap. Remove cap and ignite flare by rubbing scratch surface on top of cap sharply across igniter button on head of signal.

CAUTION: Stand with back to wind and point away from body when igniting or signal is burning.
§ 160.037–6 Container.

(a) General. The container for storing the signals on lifeboats and liferafts is not required to be of a special design or be approved by the Coast Guard. The container must meet the requirements in subpart 160.021 (§160.021–6) except that the wording on the container must be: “Hand Orange Smoke Distress Signals.”

(b) [Reserved]

§ 160.037–7 Procedure for approval.

(a) Signals are approved by the Coast Guard under the procedures in subpart 159.005 of this chapter.

(b) [Reserved]

Subpart 160.038—Magazine Chests, Portable, for Merchant Vessels

Source: CGFR 49–43, 15 FR 122 Jan. 11, 1950, unless otherwise noted.