

H-13-15

Designation: D 497 - 69 (Reapproved 1990)[†]AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Ordinary Laundry Bar Soap¹

This standard is issued under the fixed designation D 497; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

[†] NOTE—Section 7 was added and Sections 3 through 5 were renumbered in April 1990.

1. Scope

1.1 This specification covers ordinary bar soap suitable for use with moderately hard water for general cleaning and laundry purposes.

2. Referenced Document

2.1 ASTM Standard:

D 460 Test Methods for Sampling and Chemical Analysis of Soaps and Soap Products²

3. Ordering Information

3.1 Ordinary bar soap is subject to a possible gain or loss of weight, depending on atmospheric or storage conditions, or both, or on packaging, as a result of fluctuation in the moisture content. Changes in the moisture content result in a corresponding change in the percentage of total solids or anhydrous soap content, or both.

3.1.1 The material shall be purchased by net weight, provided the matter volatile at 105°C is neither above nor below 34 %.

3.1.2 Deliveries containing more than 36 % of matter volatile at 105°C shall be rejected without further test.

3.1.3 On deliveries containing less than 36 % of matter volatile at 105°C, settlement shall be made on the basis of a product containing 34 % moisture, that is, 0.66 lb of nonvolatile matter shall be considered 1 lb of soap.

3.1.4 When the material conforms to these specifications on a calculated 36 % moisture and volatile matter basis, the net weight of the material to be paid for shall be calculated as follows:

$$W = (R \times (100 - L)) / 66$$

where:

W = net weight of material to be paid for on 34 % moisture and volatile matter basis,

R = net weight of material as received, and

L = percentage of loss at 105°C.

4. General Requirements

4.1 Ordinary bar soap shall be a well-made, uniformly mixed bar soap, made from soda and fats or fatty acids, or both, with no excessive proportion of rosin and a moderate amount of matter insoluble in alcohol.

4.2 *Odor*—The odor shall not be objectionable in the soap as received nor in a hot solution of the soap in water. The material shall not leave objectionable odor on dishes or other objects after washing with a water solution of the soap and rinsing thoroughly with hot water. If desired, the odor of the material under the above conditions shall conform to the odor of a sample mutually agreed upon by the purchaser and the seller. The sample mutually agreed upon shall be kept in an airtight, closed container for comparison with samples from deliveries.

5. Chemical Composition

5.1 Ordinary bar soap shall conform to the following requirements as to chemical composition. The percentage of matter volatile at 105°C shall be calculated on the basis of the soap as received, but all other constituents shall be calculated on the basis of material containing 36 % of matter volatile at 105°C.

Moisture and matter volatile at 105°C, max, %	36.0 ⁴
Sum of free alkali or free acid, total matter insoluble in alcohol, and sodium chloride, %	2.0 to 11
Free alkali, calculated as NaOH, max, %	0.2
Free acid, calculated as oleic acid, max, %	0.5
Matter insoluble in water, max, %	1.0
Rosin acids, max, %	25.0
Chloride calculated as NaCl, max, %	1.0
Anhydrous soap content, min, %	52.0

⁴ Deliveries which yield more than 36 % volatile matter shall be rejected without further test.

6. Methods of Sampling and Analysis

6.1 The material shall be sampled and analyzed in accordance with Test Methods D 460. The purchaser reserves the right to use any additional available information to ascertain whether the material conforms to this specification.

7. Keyword

7.1 bar soap

¹ This specification is under the jurisdiction of ASTM Committee D-12 on Soaps and Other Detergents and is the direct responsibility of Subcommittee D12.22 on Specifications for Soaps and Synthetic Detergents.

Current edition approved Oct. 3, 1969. Published December 1969. Originally published as D 497 - 38. Last previous edition D 497 - 52.

² Annual Book of ASTM Standards, Vol 15.04.