



Designation: D 458 – 85 (Reapproved 1998)

Standard Specification for Soda Ash¹

This standard is issued under the fixed designation D 458; 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.

1. Scope

1.1 This specification covers material suitable for various washing, cleaning, and scouring processes, with or without soap as conditions demand, and where a moderately strong alkaline material is desired.

1.2 This material may be hazardous if not properly managed.

1.3 Precautionary information for the safe use, storage and disposal of this material should be preliminarily obtained from suppliers and others.

1.4 In case of personal accident with this material, apply appropriate first aid; telephone the nearest Poison Control Center for assistance, and get medical attention immediately.

2. Referenced Documents

2.1 *ASTM Standards:*

D 501 Test Methods of Sampling and Chemical Analysis of Alkaline Detergents²

3. Chemical Composition

3.1 Soda ash, after drying for 1 h at 155°C, shall conform to the following requirements as to chemical composition:

Total alkalinity, calculated as Na ₂ CO ₃ , min, %	99.26
Sodium bicarbonate (NaHCO ₃), max, %	0.5
Matter insoluble in water, max, %	0.25

4. Loss on Heating

4.1 At the place of manufacture the loss in weight on

heating 2 g of the material at 150 to 155°C for 1 h shall not exceed 1 %.

4.1.1 When the sample is taken at other than the place of manufacture, it shall be recognized that the soda ash is hygroscopic. Hence from the percentage loss in weight on heating, there shall be deducted the percentage gain in net weight of the package as sampled over the net shipping weight to arrive at the percentage loss in weight on heating at the place of manufacture.

5. Type

5.1 Soda ash shall be designated on the basis of the density as received, as shown in Table 1.

6. Ordering Information

6.1 Unless otherwise specified in the contract, soda ash shall be purchased by net weight as packed at the place of manufacture.

7. General Requirements

7.1 Soda ash shall be a high-grade anhydrous sodium carbonate in powdered form and shall be of the type specified by the purchaser.

NOTE 1—This specification covers the 58 % (Na₂O) grade of soda ash.

8. Sampling and Analysis

8.1 The material shall be sampled and analyzed in accordance with Test Methods D 501.

9. Packaging and Labeling

9.1 The material shall be packaged and labeled in conformity with local, state, and federal requirements.

¹ This specification is under the jurisdiction of ASTM Committee D-12 on Soaps and Other Detergents and is the direct responsibility of Subcommittee D12.14 on Specifications for Analysis of Inorganic Alkaline Detergents.

Current edition approved May 31, 1985. Published July 1985. Originally published as D 458 – 37 T. Last previous edition D 458 – 74 (1983).

² *Annual Book of ASTM Standards*, Vol 15.04.



TABLE 1 Type

	Apparent Volume of 30 g, mL		Apparent Density, lb/ft ³	
	min	max	min	max
Light	50	65	29	37

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

This standard is copyrighted by ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (<http://www.astm.org>).