

PRODUCT IDENTIFICATION



Product Name: Soda Ash
CAS Number: 497-19-8
Molecular Formula: CNa_2O_3
Molecular Weight: 105.988 g/mol
Grade: Technical Grade
Purity / Concentration: 100%
Synonyms: Sodium Carbonate, Soda

PRODUCT OVERVIEW

Alliance Chemical's Technical Grade Soda Ash is a high-purity (98.8% assay) sodium carbonate, appearing as a white crystalline powder. It is primarily used as a flux in glass production to lower silica's melting point. This technical grade material is suitable for various industrial applications requiring a consistent and reliable source of Na_2CO_3 .

Grade Significance: Technical Grade Soda Ash is suitable for a wide range of industrial applications where high purity is required, but not to the stringent levels of food or pharmaceutical grades. This grade offers a cost-effective solution for applications such as water treatment, detergents, and glass manufacturing.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

| PARAMETER | UNIT | TYPICAL | MIN | MAX | TEST METHOD |
|---------------------------------------|------|---------|-----|-------|--------------------------------|
| Assay Na_2CO_3 Wt Pct | % | 98.8 | 98 | — | Titration |
| Bulk Density G MI | g/mL | 0.95 | — | — | Volumetric Measurement |
| Water Content | % | 0.3 | — | 0.5 | Karl Fischer Titration |
| Iron (Fe) | ppm | 2 | — | 10 | Atomic Absorption Spectroscopy |
| Chloride (Cl^-) | ppm | 15 | — | 50 | Ion Chromatography |
| Sulfate (SO_4^{2-}) | ppm | 20 | — | 100.0 | Turbidimetry |
| Insoluble Matter | % | 0.02 | — | 0.1 | Gravimetric Analysis |

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

| | | | |
|---------------------------------|--|--------------------------|--------------------------|
| Appearance | White crystalline powder | Odor | Odorless |
| Form | Solid | Boiling Point | 1600°C (2912°F) |
| Melting / Freezing Point | 851°C (1564°F) | Specific Gravity | 2.532 |
| Solubility | Soluble in water, insoluble in alcohol | Molecular Formula | CNa_2O_3 |
| Molecular Weight | 105.988 g/mol | Density (25°C) | 2.53 g/mL |

APPLICATIONS

1. **Glass Manufacturing** — Soda Ash acts as a flux, lowering the melting point of silica and other glass components, reducing energy consumption and improving the efficiency of glass production. Its consistent purity ensures uniform glass composition and quality.
2. **Water Treatment** — Used for pH adjustment and as a buffering agent in water treatment processes, Soda Ash helps maintain optimal water quality. It effectively neutralizes acidic water and prevents corrosion of pipes and equipment.
3. **Detergent Manufacturing** — As a builder in detergent formulations, Soda Ash enhances cleaning efficiency by softening water and improving the removal of dirt and grease. Its controlled composition ensures consistent performance in detergent products.
4. **Food Processing** — In food processing, Soda Ash serves as a pH regulator and stabilizer, ensuring the desired acidity levels and preventing spoilage. Its high purity is crucial for maintaining food safety and quality.
5. **Chemical Manufacturing** — Soda Ash is a fundamental building block in the synthesis of many other chemicals. Its consistent quality ensures predictable reaction outcomes and product purity in downstream processes.
6. **Textile Industry** — Used in textile processing for dyeing and scouring, Soda Ash helps to adjust the pH and remove impurities from fabrics. This ensures proper dye uptake and enhances the overall quality of the finished textiles.

STORAGE & HANDLING

Proper storage in a dry, well-ventilated area is crucial to prevent moisture absorption, which can lead to caking and reduced product effectiveness. While Soda Ash is not highly reactive, it can cause serious eye irritation, so avoiding dust generation and ensuring proper container sealing are important safety precautions.

- Store in a cool, dry place away from moisture.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Avoid contact with acids to prevent exothermic reactions.
- Ensure proper ventilation in storage areas to minimize dust accumulation.
- Compatible with HDPE containers for storage.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 50 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Warning**



Hazard Statements:

- H319: Causes serious eye irritation [Warning Serious eye damage/eye irritation]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.