

# Dense Soda Ash

## Material Safety Data Sheet



Manufactured by:  
SEARLES VALLEY MINERALS  
13200 MAIN STREET  
P. O. BOX 367  
TRONA, CALIFORNIA 93592-

### 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: Dense Soda Ash  
MANUFACTURER:  
Searles Valley Minerals  
13200 Main Street  
Trona, CA 93562

EMERGENCY PHONE NUMBER:  
24 Hour Information Service: 760-372-2291  
CHEMREC: 800-424-9300  
PREPARATION/REVISION DATE: April 12, 2004  
Supersedes Nov. 1, 2003 & Sept. 8, 2000 & Mar. 9, 1999 & Feb. 15, 1999 versions

### 2 COMPOSITION/INFORMATION ON INGREDIENTS

Note: See Section 15 for Exposure Limits.

PRODUCT NAME: Dense Soda Ash  
FORMULA:  $\text{Na}_2\text{CO}_3$   
CHEMICAL NAME: Sodium Carbonate  
SYNONYMS: Bisodium carbonate, carbonic acid, disodium salt;  
carbonic acid sodium salt; crystal carbonate

COMPONENTS:  
Material: Dense Soda Ash  
CAS Number: 497-19-8  
Percent: 99.7%

### 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Soda Ash is a white powdered substance that is not flammable, combustible, or explosive. Soda Ash decomposes at temperatures above 1,000°C, releasing carbon dioxide gas. Contact with eyes causes severe irritation and contact with skin or nose causes moderate irritation. Soda Ash has low toxic by ingestion, however, may cause burns of the gastrointestinal tract if swallowed.

ROUTES OF EXPOSURE: Inhalation, dermal and eye contact incidental ingestion.

INHALATION: Dust causes irritation to nose, throat and respiratory tract (see Section 15).

EYE CONTACT: Causes severe irritation.

DERMAL CONTACT: Dust causes irritation and redness of skin. Sensitivity reactions may occur from repeated topical use.

INGESTION: Low toxicity by ingestion. If swallowed, may

cause burns of the mouth, nose and throat. Ingestion of large quantities may produce corrosion of the gastrointestinal tract, vomiting, diarrhea, circulatory collapse or death.

CANCER: Soda Ash (or any component of Soda ash) is not considered a carcinogen.

REPRODUCTIVE: No Available

TARGET ORGANS: No target organs have been determined in humans or animals from Soda ash.

SIGNS AND SYMPTOMS OF EXPOSURE: Symptoms of accidental over-exposure include severe eye irritation, burning sensation to the nose, throat and eyes, redness and irritation of the skin, and coughing or sneezing. Ingestion may cause severe irritation of the gastrointestinal tract, vomiting, and diarrhea.

See Section 11 for details on Toxicological Data.

### 4 EMERGENCY & FIRST AID PROCEDURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, call a physician.

SKIN: Wash with soap and water until no evidence of chemical remains (15-20 minutes). Wash clothing before reuse. Thoroughly clean shoes before reuse.

INHALATION: Remove from exposure area to fresh air immediately. Treat symptomatically and supportively.

INGESTION: If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

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## FIRE FIGHTING MEASURES

GENERAL HAZARD: This product is not flammable and does not support combustion. AUTOIGNITION TEMPERATURE: Not Applicable  
UEL/LEL: Not Applicable FLAMMABILITY CLASSIFICATION: Not Applicable  
FLASH POINT: Not Applicable EXTINGUISHING MEDIA: Most fire extinguishing agents may be used in fires involving sodium sulfate.

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## ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS OR LEAKS: For dry spills, sweep or shovel and place in containers for disposal in accordance with applicable regulations (see Sections 13 and 15). Avoid contamination of bodies of water during cleanup.

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## HANDLING & STORAGE

GENERAL: Store in cool, dry area. Keep container tightly closed. Good housekeeping should be maintained to minimize dust accumulation and generation. HYGIENIC PRACTICES: Wash hands thoroughly with soap and water after handling, and before eating, drinking, or smoking.

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## EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use general dilution and local exhaust ventilation techniques to meet nuisance exposure limit (see Section 15). Use if excessively dusty or if skin is damaged. Wear gloves that will not allow alkaline solutions to penetrate.  
EYE PROTECTION: Use goggles or vented safety glasses in excessively dusty conditions. Ensure eyewash fountain is located in immediate work area. RESPIRATORY PROTECTION: Use appropriate NIOSH/MSHA certified respirators when levels are expected to exceed exposure limits (see Section 15).  
SKIN PROTECTION: Not required under normal conditions.

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## PHYSICAL & CHEMICAL PROPERTIES

SOLUBILITY IN WATER: 16.3% at 22.6°C pH VALUE: @ 20°C 1% solution 11.37  
APPEARANCE: White granular solid, odorless. FLASH POINT: Not Applicable  
MOLECULAR WEIGHT: 105.99 SPECIFIC GRAVITY: 2.533  
BOILING POINT: Not Applicable VAPOR PRESSURE: Not Applicable  
MELTING POINT: 851°C

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## STABILITY & REACTIVITY DATA

STABILITY: Stable under normal conditions. May react violently with strong acids. Carbon dioxide gas and large quantities of heat can be evolved. Reacts with hydrated lime in the presence of moisture to form caustic soda, a corrosive. HAZARDOUS DECOMPOSITION PRODUCTS: Soda Ash decomposes at temperatures above 1,000°C, releasing carbon dioxide gas (CO<sub>2</sub>). Carbon dioxide is an asphyxiant and may affect respiration rate or interfere with breathing. The sodium oxide residue sublimates at 1275°C, forming vapors and mists of caustic soda on contact with moisture or water.  
INCOMPATIBILITY: Keep away from aluminum powder, fluorine, phosphorous pentoxide, sulfuric acid, ammoniacal silver nitrate and molten lithium. HAZARDOUS POLYMERIZATION: Will not occur.

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## TOXICOLOGICAL EFFECTS

EYES: Dry, powdered sodium carbonate, as 25% to 75% of a mixture with dry sodium sulfate, applied to eyes of rabbits and monkeys in a systematic study was judged "corrosive" or "harmful" to both species, whether or not followed by irrigation at two minutes after application. However, most monkey eyes exposed to 50% mixture showed little or no persistent injury 21 days after exposure. a week, for 3.5 months. In observations from exposure at approximately 70 mg/cubic meter, the weight gain of the exposed group was 24% less than that of controls. Inhalation LC50 in the rat was 2,300 mg/m<sup>3</sup>/2 hours, mouse - 1,200 mg/m<sup>3</sup>/2 hours, and guinea pig - 800 mg/m<sup>3</sup>/2 hours.  
SKIN: An aqueous solution, 50% weight/volume, of sodium carbonate was applied to the intact and abraded skins of rabbits and guinea pigs. The sites were examined at 4, 24, and 48 hours and scored for erythema, edema, or corrosion. The abraded skins of the guinea pigs were negligibly affected, but the rabbit skins showed moderate erythema and edema. INGESTION: Low acute oral toxicity; reported LD<sub>50</sub>s in rats was 4,090 mg/kg of body weight. Reported LD<sub>50</sub> in mice was 117mg/kg (IPR)  
INHALATION: Male rats were exposed to an aerosol of a 2% aqueous solution of sodium carbonate, 4 hours a day, 5 days CARCINOGENICITY: Soda Ash (or any of the components of Soda Ash) is not listed as a carcinogen by the Environmental Protection Agency (EPA), the State of California, or the International Agency for the Research on Cancer (IARC).  
REPRODUCTIVE: An intrauterine dose of 0.085 mg/kg given to pregnant mice on day 4 of pregnancy caused preimplantation mortality.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin or eye disorders or damaged skin may be aggravated by exposure to this product. Respiratory disorders may be aggravated by

exposure to this product.

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ECOLOGICAL DATA

FISH TOXICITY: Not Available
BIRD TOXICITY: Not Available
INVERTEBRATE TOXICITY: Not Available

PHYTOTOXICITY: Not Available
ENVIRONMENTAL FATE DATA: Occurs in nature as the hydrate, thermonitrite, and decahydrate, natron or natrite.

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DISPOSAL CONSIDERATIONS

DISPOSAL GUIDANCE: Small quantities of Soda Ash can usually be disposed of at municipal landfill sites, and requires no special treatment. Tonnage quantities are not, however, recommended for the landfill, and if possible, should be re-used for an appropriate application. Refer to state and local regulation for applicable site-specific requirements. Keep out of

drinking water sources.
CALIFORNIA HAZARDOUS WASTE DESIGNATION: California identifies substances with acute LD50s of less than 2,500 mg/kg as "hazardous wastes". Soda Ash is therefore not considered a "hazardous waste" if spilled in California.

See Section 15 for details on Regulatory Information.

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TRANSPORT REGULATIONS

US DEPARTMENT of TRANSPORTATION (DOT) IDENTIFICATION NUMBER: Soda Ash is not a DOT Hazardous Material or Hazardous Substance.
INTERNATIONAL TRANSPORTATION: Soda Ash has no U.N. number, and is not regulated under international rail, highway, water, or air transport regulations.

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REGULATORY INFORMATION

TSCA NUMBER: 497-19-8
RCRA (40 CFR 261): Non Regulated
CERCLA (SUPERFUND): Not listed under any section.
CLEAN WATER ACT (CWA): Soda Ash is not regulated by any water quality criteria under Section 304, is not listed as priority pollutant under Section 307, and is not listed as a hazardous substance under Section 311.
SAFE DRINKING WATER ACT (SDWA): Not regulated under SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories involving boron.
OCCUPATIONAL EXPOSURE LIMITS: Soda Ash is listed/regulated by OSHA, CAL OSHA, or ACGIH as "Particulate Not Otherwise Regulated" or "Nuisance Dust".
OSHA: Permissible Exposure Limit: 15 mg/m³, total dust
5 mg/m³, respirable dust
ACGIH: Threshold Limit Value: 10 mg/m³
CALIFORNIA OSHA: Permissible Exposure Limit: 10 mg/m³
INTERNATIONAL AGENCY for RESEARCH on CANCER: Not listed as

a carcinogen.
NTP ANNUAL REPORT ON CARCINOGENS: Not listed as a carcinogen.
OSHA CARCINOGEN: Not listed as an OSHA carcinogen.
CONEG MODEL LEGISLATION: Meets all CONEG requirements relating to heavy metal limitations on components of packaging materials.
CALIFORNIA PROPOSITION 65: Not listed as carcinogen or reproductive toxin.
FEDERAL DRUG AGENCY (FDA): Pursuant to 21 CFR 582.1742 soda ash is approved by the FDA for use in substance added to human foods affirmed as generally recognized as safe (GRAS). Sodium carbonate used as a general purpose food additive in animal drugs, feeds, and related products is generally GRAS when used in accordance with good manufacturing or feeding practice.
WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS (WHMIS): With the exception of the 16 section format, this MSDS conforms to current WHMIS standards.

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OTHER INFORMATION

OTHER INFORMATION:
Product Label Text Hazard Information:
• May be harmful if swallowed.
• May cause eye irritation.
• Avoid contact with eyes, skin and clothing.
• Not for food or drug use.
• Practice good housekeeping.
• Refer to MSDS.
• KEEP OUT OF THE REACH OF CHILDREN.

National Fire Protection Association (NFPA) Classification:
4 = Severe, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal
Health 2
Flammability 0
Reactivity 0

Hazardous

Materials Information Systems (HMIS):
4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Insignificant
Blue: (Acute Health) 2
Red: (Flammability) 0
Yellow: (Reactivity) 0

NOTICE

Judgements as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility.

Therefore, although reasonable care has been taken in the preparation of such information, Searles Valley Minerals extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

## REFERENCES

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