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
CHEMTREC: 800-424-9300

PREPARATION/REVISION DATE: April 12, 2004

2 COMPOSITION/INFORMATION ON INGREDIENTS

Note: See Section 15 for Exposure Limits.

PRODUCT NAME: Dense Soda Ash
FORMULA: NA

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 toxicity by ingestion, however, may cause burns of the gastrointestinal tract if swallowed.

ROUTES OF EXPOSURE: Inhalation, dermal and eye contact.

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.
5  **FIRE FIGHTING MEASURES**

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

6  **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.

7  **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.

8  **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Use general dilution and local exhaust ventilation techniques to meet nuisance exposure limit (see Section 15).

**EYE PROTECTION:** Use goggles or vented safety glasses in excessively dusty conditions. Ensure eyewash fountain is located in immediate work area.

**SKIN PROTECTION:** Not required under normal conditions.

**RESPIRATORY PROTECTION:** Use appropriate NIOSH/MSHA certified respirators when levels are expected to exceed exposure limits (see Section 15).

9  **PHYSICAL & CHEMICAL PROPERTIES**

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

10  **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.

**INCOMPATIBILITY:** Keep away from aluminum powder, fluorine, phosphorus pentoxide, sulfuric acid, ammoniacal silver nitrate and molten lithium.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Soda Ash decomposes at temperatures above 1,000°C, releasing carbon dioxide gas (CO₂). Carbon dioxide is an asphyxiant and may affect respiration rate or interfere with breathing. The sodium oxide residue sublimes at 1275°C, forming vapors and mists of caustic soda on contact with moisture or water.

**HAZARDOUS POLYMERIZATION:** Will not occur.

11  **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.

**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.

**INHALATION:** Male rats were exposed to an aerosol of a 2% aqueous solution of sodium carbonate, 4 hours a day, 5 days 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/m³/2 hours, n.nusae - 1,200 mg/m³/2 hours, and guinea pig - 800 mg/m³/2 hours.

**INGESTION:** Low acute oral toxicity; reported LD₅₀ in rats was 4,090 mg/kg of body weight. Reported LD₅₀ in mice was 117mg/kg (IPR).

**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.
EXposure to this product.

ECOLOGICAL DATA

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.

PHYSICAL CHEMICAL PROPERTIES:

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.

DI SPOSAL CONSIDERATIONS

DI SPOSAL 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.

See Section 15 for details on Regulatory Information.

TRANSPORT REGULATIONS

US DEPARTMENT of TRANSPORTATION (DOT) IDENTIFI CATI ON 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.

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

NATIONAL 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 as generally recognized as safe. Soda ash is used as a general purpose food additive in animal drugs, feeds, and related products is generally GRAS when used in accordance with good manufacturing practice.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS (WHMIS):

With the exception of the 16 section format, this MSDS conforms to current WHMIS standards.

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

American Conference of Governmental Industrial Hygienists (ACGIH). 1986. Documentation of threshold limit values and biological exposure indices. 5th ed. Cincinnati, OH.

American Conference of Governmental Industrial Hygienists (ACGIH). 1990. 1990-1991 Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH.


