# ALL-CLEAR SODA ASH **Dense Soda Ash Material Safety Data Sheet**

Manufactured by: North American Chemical Company 8300 College Boulevard, Overland Park, Kansas 66210

#### **CHEMICAL PRODUCT & COMPANY IDENTIFICATION**

PRODUCT NAME: Dense Soda Ash MANUFACTURER: North American Chemical Company 8300 College Boulevard Overtand Park, KS 66210

EMERGENCY PHONE NUMBER: 24 Hour Information Service: 760-372-2291 CHEMTREC: 800-424-9300 PREPARATION/REVISION DATE: December 10,1995 Supersedes November, 1994 version

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#### COMPOSITION/INFORMATION ON INGREDIENTS

Note: See Section 15 for Exposure Limits. PRODUCT NAME: Dense Soda Ash FORMULA: NA, CO, 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%

Soda ash is hazardous under the OSHA Hazard Communication Standard based on animal chronic toxicity studies of similar organic borates.

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# HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Soda Ash is a white powdered substance that is	INGESTION: Low toxicity by ingestion. If swallowed, may cause burns of the
not flammable, combustible, or explosive. Soda Ash decomposes at	mouth, nose and throat. Ingestion of large quantities may produce corrosion
temperatures above 1,000°C, releasing carbon dioxide gas. Contact with eyes	of the gastrointestinal tract, vomiting, diarrhea. circulatory collapse or death.
causes severe irritation and contact with skin or nose causes moderate irritation.	CANCER: Soda Ash (or any component of Soda ash) is not considered a
Soda Ash has low toxic by ingestion, however, may cause burns of the	carcinogen.
gastrointestinal tract if swallowed.	REPRODUCTIVE: No Available
ROUTES OF EXPOSURE; Inhalation, dermal and eye contact incidental	TARGET ORGANS: No target organs have been determined in humans or
ingestion.	animals from Soda ash.
INHALATION: Dust causes irritation to nose, throat and respiratory tract (see	SIGNS AND SYMPTOMS OF EXPOSURE: Symptoms of accidental over-
Section 15).	exposure include severe eye irritation, burning sensation to the nose, throat and
EYE CONTACT: Causes severe irritation.	eyes, redness and irritation of the skin, and coughing or sneezing. Ingestion
DERMAL CONTACT: Dust causes irritation and redness of skin. Sensitivity	may cause severe inflation of the gastrointestinal tract, vomiting, and diarrhea.
reactions may occur from repeated topical use.	

See Section 11 for details on Toxicological Data.

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# **EMERGENCY & FIRST AID PROCEDURES**

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

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 SKIN: Wash with soap and water until no evidence of chemical remains (15-20 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 UEL/LEL: Not Applicable

FLASH POINT: Not Applicable

#### ACCIDENTAL RELEASE MEASURES

involving sodium sulfate.

#### ACTION TO TAKE FOR SPILLS OR LEAKS:

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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.

EXTINGUISHING MEDIA: Most fire extinguishing agents may be used in fires

AUTOIGNITION TEMPERATURE: Not Applicable

FLAMMABILITY CLASSIFICATION: Not Applicable

#### **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. Use if

excessively dusty or if skin is damaged. Wear gloves that will not allow alkaline solutions to penetrate.

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

# **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 FLASH POINT: Not Applicable SPECIFIC GRAVITY: 2.533 VAPOR PRESSURE: Not Applicable

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

HAZARDOUS DECOMPOSITION PRODUCTS: Soda Ash decomposes at temperatures above 1000°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 sublimes at 1275°C, forming vapors and mists of caustic soda on contact with moisture or water 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 Inhalation LC50 in the rat was 2,300 mg/m<sup>3</sup>/2 hours, mouse - 1,200 mg/m<sup>3</sup>/2 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 Respiratory disorders may be aggravated by exposure to this product. gain of the exposed group was 24% less than that of controls.

hours, and guinea pig - 800 mg/m<sup>3</sup>/2 hours.

INGESTION: Low acute oral toxicity; reported LD<sub>so</sub>s in rats was 4,090 mg/kg of body weight. Reported LD<sub>50</sub> in mice

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.

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

# ECOLOGICAL DATA

#### PHYTOTOXICITY: Not Available

ENVIRONMENTAL FATE DATA: Occurs in nature as the hydrate. thermonitrite, and decahydrate, natron or natrite.

#### **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  $LD_{50}$  of less than 5.,000 mg/kg as "hazardous wastes". Soda Ash is therefore 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.

#### **REGULATORY INFORMATION**

TSCA NUMBER: 497-19-8	INTERNATIONAL AGENCY for RESEARCH on CANCER: Not listed as a
RCRA(40CFR261): Non Regulated	carcinogen.
CERCLA (SUPERFUND): Not listed under any section.	NTP ANNUAL REPORT ON CARCINOGENS: Not listed as a carcinogen
CLEAN WATER ACT (CWA): Soda Ash is not regulated by any water quality	OSHA CARCINOGEN: Not listed as an OSHA carcinogen.
criteria under Section 304, is not listed as priority pollutant under Section 307,	CONEG MODEL LEGISLATION: Meets all CONEG requirements relating to
and is not listed as a hazardous substance under Section 311.	heavy metal limitations on components of packaging materials
SAFE DRINKING WATER ACT (SDWA): Not regulated under SDWA, 42 USC	CALIFORNIA PROPOSITION 65: Not listed as carcinogen or reproductive
300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible	toxin.
water quality advisories involving boron.	FEDERAL DRUG AGENCY (FDA): Pursuant to 21 CFR 582.1742 soda ash
OCCUPATIONAL EXPOSURE LIMITS: Soda Ash is listed/regulated by	is approved by the FDA for use in substance added to human foods affirmed as
OSHA, CAL OSHA, or ACGIH as "Particulate Not Otherwise Classified" or	generally recognized as safe (GRAS). Sodium carbonate used as a general
"Nuisance Dust".	purpose food additive in animal drugs, feeds, and related products is generally
OSHA: Permissible Exposure Limit: 15 mg/m <sup>3</sup> , total dust	GRAS when used in accordance with good manufacturing or feeding practice.
5 mg/m <sup>3</sup> , respirable dust	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS
ACGIH: Threshold Limit Value: 10 mg/m <sup>3</sup>	(WHMIS): With the exception of the 16 section format, this MSDS conforms to
CALIFORNIA OSHA; Permissible Exposure Limit: 10mg/m3	current WHMIS standards.

#### **OTHER INFORMATION**

OTHER INFORMATION:	National Fire Protection Association (NFPA) Classification:	
Product Label Text Hazard Information:	4 = Severe, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal	
May be harmful if swallowed.	Health 2	
May cause eye irritation.	Flammability 0	
Avoid contact with eyes, skin and clothing.	Reactivity 0	
Not for food or drug use.	Hazardous Materials Information Systems (HMIS):	
Practice good housekeeping.	4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Insignificant	
Refer to MSDS.	Blue: (Acute Health) 2	
KEEP OUT OF THE REACH OF CHILDREN.	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. North American Chemical Company 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.

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