



CONSOLIDATED CHEMICAL CO.

Material Safety Data Sheet

CS: 1.4.21

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Infosafe NoTM 7CO1K Issue Date : June 2006 E-ISSUED by CONSCHEM

CS: 1.4.21

Product Name **SODA ASH DENSE**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name SODA ASH DENSE
Product Code 948
Product Use Used as a water softener, general cleanser, photographic agent, catalyst in coal liquefaction, and food additive. Textile processing (bleaching of linen, hemp, cotton), petroleum refining, and the manufacture of glass, sodium compounds, pulp and paper, soaps and detergents, and aluminum.
Company Name CONSOLIDATED CHEMICAL CO (ABN 34 527 060 773)
Address 52-62 WATERVIEW CLOSE DANDENONG SOUTH VICTORIA 3175
Telephone Number/Fax Tel: 03/9799 7555 Fax: 03/9799 7666

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Solid
Characterization
Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
Disodium Carbonate Inorganic Salt	497-19-8	99.2 %		
		0.8 %		

3. HAZARDS IDENTIFICATION

Irritating to eyes.

Chronic Effects HEALTH EFFECTS SKIN: Repeated or prolonged skin contact may result in dermatitis and/or ulceration of the skin.
 INHALATION: A study involving employees working with soda ash (sodium carbonate) found that the incidence of perforations and impending perforations of the nasal septum in four groups with large, moderate, slight and no exposure to soda ash dust was, respectively, 11.1%, 12.1%, 1% and 0%. This data suggests that repeated or prolonged inhalation of sodium carbonate dust may be related to perforations of the nasal septum.
 CARCINOGENICITY No data. Not classed as a carcinogen by Worksafe Aust.
 TERAUTOGENICITY AND EMBRYOTOXICITY No human data. Animal studies report no positive findings.
 TOXICOLOGICAL SYNERGISTIC MATERIALS Information not available
 MUTAGENICITY No data
 POTENTIAL FOR ACCUMULATION None

Inhalation Irritation of the nose, throat and lungs may occur due to the irritant nature of sodium carbonate. Symptoms may include coughing, sneezing and difficulty breathing.

Ingestion Large amounts are corrosive, resulting in cramps, vomiting, diarrhoea and possibly circulatory collapse and death.

Skin Dust or solid can cause mild to moderate irritation. Concentrated solutions can be corrosive, causing severe irritation and burning.

Eye Moderate to severe irritation. Direct contact with solid or concentrated solution may result in permanent injury to eye unless promptly rinsed from eye with water.

4. FIRST AID MEASURES

Inhalation Remove the source of contamination or move the victim to fresh air. Seek medical attention if condition persists.

Ingestion Immediately rinse mouth with water. Give water to drink. DO NOT INDUCE



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Skin vomiting. Seek immediate medical assistance Note: Never give an unconscious person anything to drink
If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.

Eye Rinse immediately with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical advice.
Contact lenses should only be removed by Experienced Personnel.

First Aid Facilities An eye wash fountain, safety shower and a general washing facility should be available immediately adjacent to the work area.

Advice to Doctor Treat symptomatically as for strong alkalis.

Other Information Provide general supportive measures (comfort, warmth, rest). Consult a physician and/or the nearest Poison Control Centre for all exposures except minor instances of inhalation or skin contact.

5. FIRE FIGHTING MEASURES

Specific Hazards As in any fire, wear an approved self-contained breathing apparatus in pressure-demand, and full protective gear.
EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT Not sensitive. Stable material. EXPLOSION DATA - SENSITIVITY TO STATIC CHARGE Not applicable
FIRE EXTINGUISHING AGENTS Not applicable
FIRE FIGHTING PROCEDURES Sodium carbonate and its solutions will not burn or support combustion. Water can be used to extinguish a fire in an area where sodium carbonate is stored as long as the water does not come into contact with the sodium carbonate. Sodium carbonate generates heat when it dissolves in water.
COMBUSTION PRODUCTS Begins to decompose at 400 deg C (752 deg F) producing carbon dioxide gas

Flash Point Non-combustible (does not burn)

Ignition Not applicable

Temperature

Flammability Non combustible material.

Explosion Data (LEL) Not applicable - (UEL) Not applicable

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal PRECAUTIONS Restrict access to area. Provide adequate protective equipment and ventilation. Remove chemicals that can react with the spilled material.
CLEANUP Stop or reduce discharge if it can be done safely. Contain material. Do not allow sodium carbonate to enter into sewers or water systems. Shovel or sweep up dry sodium carbonate for recycling or disposal. Neutralize final traces and flush area with water. Contain spilled solutions by diking with absorbent material, such as sand or earth. Solutions can be recovered or carefully diluted with water and cautiously neutralized with acids such as acetic acid or hydrochloric acid.
DISPOSAL Review federal, state and local regulations prior to disposal. It may be acceptable to neutralize, dilute and flush the material into a sewer.

7. HANDLING AND STORAGE

Storage STORAGE CONDITIONS Store in tightly-closed containers in a cool, dry place separate from normal work area. Area should have a caustic-resistant floor and approved drainage. Store in suitable, labelled containers. Protect containers from damage or breakage. Store separately from acids and other incompatible materials.
HANDLING Wear appropriate protective equipment to prevent skin and eye contact. Avoid generating mist or dust. When diluting or preparing solution, add to water in small amounts to avoid boiling and splattering. Label containers and keep closed when not in use. Empty containers may contain residues which are hazardous.



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Packaging As required by the Standard for the Uniform Scheduling of Drugs and Poisons

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure standards have been established for this material by Worksafe Australia, however the TWA exposure standard for dusts/mists not otherwise specified is 10mg/m³. Respirable Fraction: 5 mg/m³

Other Exposure Information No limits set by Worksafe Australia
Blanket limit of 10mg/m for dusts or mists when limits have not otherwise been established.

Personal Protective Equipment RESPIRATORY PROTECTION If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection. Have appropriate equipment available for use in emergencies such as spills or fire. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. RESPIRATORY PROTECT. GUIDELINES No specific guidelines available. However, based on information available on similar chemicals, any dust or mist respirator should provide adequate respiratory protection from objectionably irritating concentrations. A self-contained breathing apparatus with a full face-piece operated in pressure-demand or other positive pressure mode should provide adequate respiratory protection from high concentrations or for escape from unknown concentrations. The respirator use limitations specified by the approving agency and the manufacturer must be observed. EYE/FACE PROTECTION Dust- or splash-proof chemical safety goggles or face shield (eight-inch minimum), as required. SKIN PROTECTION Impervious gloves, coveralls, aprons, overshoes, etc. as required. RESIST. FOR PROTECTIVE CLOTHING No specific guidelines are available. Contact your safety equipment supplier for advice. PERSONAL PROTECTION COMMENTS NOTE: Eye wash fountains and safety showers should be located near any area where sodium carbonate is used.

Eng. Controls ENGINEERING CONTROLS Engineering control methods to reduce hazardous exposures are preferred. General methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions and process modification (e.g. substitution of a less hazardous material). Administrative controls and personal protective equipment may also be required. Use a corrosion-resistant ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Use local exhaust ventilation, and process enclosure if necessary, to control airborne dust and mist. Supply sufficient replacement air to make up for air removed by exhaust systems.

Hygiene Measures Wash hands before eating, drinking, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Grayish white powder or lumps; hygroscopic (on exposure to air, will gradually absorb water, approximately 15%). - no odour.

Melting Point 851 deg C

Boiling Point Decomposes

Specific Gravity (H₂O=1) (SG) 2.53 @ 20 deg C (water = 1)

pH Value 11.5 (1% aqueous solution)

Vapour Pressure Not volatile

Vapour Density (Air=1) Not applicable

Flash Point Non-combustible (does not burn)



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Flammability Non combustible material.

Ignition Not applicable

Temperature

Explosion Properties (LEL) Not applicable - (UEL) Not applicable

Molecular Weight 105.99 (anhydrous); 124.01 (monohydrate)

Other Information CONVERSION FACTOR Not applicable EVAPORATION RATE Not applicable **CRITICAL TEMPERATURE** Not applicable SOLUBILITY IN WATER 7.1 g in 100 ml @ 0 deg C; 22 g in 100 ml @ 22 deg C; SOLUBILITY IN OTHER LIQUIDS Soluble in glycerol; insoluble in alcohol, acetone, and ether (monohydrate).

10. STABILITY AND REACTIVITY

Hazardous Reaction STABILITY Stable INCOMPATIBILITY -MAT'LS TO AVOID WATER - reaction will generate heat PHOSPHORUS PENTOXIDE - violent reaction SULFURIC ACID - violent reaction FLUORINE - ignites and burns fiercely MAGNESIUM - may cause explosive reaction ALUMINUM - explosive reaction may result, if aluminum is red hot ACIDS - reaction generates heat HAZARDOUS DECOMPOSITION PRODUCTS None HAZARDOUS POLYMERIZATION Does not occur CORROSIVITY TO METALS No specific data. Probably corrodes aluminum.

11. TOXICOLOGICAL INFORMATION

Toxicology Information ANIMAL TOXICITY DATA Lethal dose (rat, oral): 4000 mg/kg LC50 (rat, inhalation): 2100-2500 mg/m³; duration of exposure, 2 hr. (91% sodium carbonate aerosol); whole body exposure (3). LC50 (mouse, inhalation): 1200 mg/m³; duration of exposure, 2 hr. (95% sodium carbonate aerosol); whole body exposure (3). LC50 (guinea pig, inhalation): 800 mg/m³; duration of exposure, 2 hr. (95% sodium carbonate aerosol); whole body exposure (3). SKIN IRRITATION (rabbit): Moderate skin irritant (500 mg; 24 hr-exposure) EYE IRRITATION (rabbit): Severe eye irritant (100 mg; 24 hr-exposure) Male rats exposed to an aerosol of a 2% aqueous solution of sodium carbonate (particle size less than 5 microns in diameter) for 4 hours/day, 5 days/week for 3 1/2 months showed no pronounced effects. Exposure to extremely high concentrations (approx. 70 mg/m³) resulted in reduction in weight gain and cellular changes in the lungs (probably due to irritation). SKIN: 50% aqueous solution applied to intact and abraded skin of rabbits, guinea pigs and human volunteers. No effect on intact skin. Abraded guinea pig skin affected minimally. Abraded rabbit and human skin showed mild irritation. Pregnant mice, rats and rabbits orally intubated (intra-gastric administration) with low to very high doses of aqueous sodium carbonate solution. No positive findings reported.

Inhalation Irritation of the nose, throat and lungs may occur due to the irritant nature of sodium carbonate. Symptoms may include coughing, sneezing and difficulty breathing.

Ingestion Large amounts are corrosive, resulting in cramps, vomiting, diarrhoea and possibly circulatory collapse and death.

Skin Dust or solid can cause mild to moderate irritation. Concentrated solutions can be corrosive, causing severe irritation and burning.

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CARCINOGENICITY No data. Not classed as a carcinogen by Worksafe Aust.
TERATOGENICITY AND EMBRYOTOXICITY No human data. Animal studies report no positive findings.
TOXICOLOGICAL SYNERGISTIC MATERIALS Information not available
MUTAGENICITY No data
POTENTIAL FOR ACCUMULATION None

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Waste Disposal In accordance with Federal, State and Local Waste Management regulations.

14. TRANSPORT INFORMATION

U.N. Number NIL

15. REGULATORY INFORMATION

Risk Phrase R36 Irritating to eyes.

Safety Phrase S22 Do not breathe dust.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Poisons Schedule S5

Packaging & Labelling As required by the Standard for the Uniform Scheduling of Drugs and Poisons
Hazard Category Irritant

16. OTHER INFORMATION

Contact Person/Point Mr. David Broberg
Technical Regulations Manager
TELEPHONE (03) 9799.7555

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Empirical Formula MOLECULAR FORMULA C-Na₂-O₃
& Structural STRUCTURAL FORMULA Na₂-CO₃
Formula CHEMICAL FAMILY Carbonate

Poisons Schedule S5

Hazard Category Irritant

Molecular Weight 105.99 (anhydrous); 124.01 (monohydrate)

...End Of MSDS...



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