

1. IDENTIFICATION

Product Name	Soda Ash Dense
Other Names	Soda ash, dense; Sodium carbonate; Sodium carbonate, anhydrous; Washing soda
Uses	Cleaning agents and additives; Dishwashing and laundry detergents; Photochemicals; Fillers; Laboratory chemicals; pH-regulating/buffering agent in cosmetic products; Used in the manufacture of glass; Fuel gas desulphurisation; Water treatment and paper/pulp industry.
Chemical Family	No Data Available
Chemical Formula	Na ₂ CO ₃
Chemical Name	Carbonic acid, disodium salt
Product Description	Inorganic (alkaline) salt.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Serious Eye Damage/Irritation - Category 2A



Pictograms



Signal Word

Warning

Hazard Statements

H319

Causes serious eye irritation.

Precautionary Statements Prevention

P264

Wash skin thoroughly after handling.

P280

Wear eye protection/face protection.

Response

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313

If eye irritation persists: Get medical advice.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium carbonate, anhydrous	Na ₂ CO ₃	497-19-8	>=99 - 100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get immediate medical advice/attention. If vomiting occurs, give further water. Never give anything by mouth to an unconscious person.

Eye

IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.

Skin

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

Inhaled

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove contaminated clothing and loosen remaining clothing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Advice to Doctor

Treat symptomatically.

Medical Conditions Aggravated by Exposure

No information available.

5. FIRE FIGHTING MEASURES

General Measures

If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.

Flammability Conditions

Non-combustible; Material itself does not burn.



Extinguishing Media	If material is involved in a fire, use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	Decomposes on heating, emitting toxic fumes.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Sodium oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material - slipping hazard! Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
Decontamination	After cleaning, flush away any residual traces with water. *Prevent any mixture with an acid into the sewer/drain (gas formations).
Environmental Precautionary Measures	Prevent entry into drains and waterways. Local authorities should be advised if significant spillages cannot be contained.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away.
Personal Precautionary Measures	Wear protective equipment to prevent skin and eye contact and breathing in dust (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Avoid extreme heat and contact with incompatible materials (see SECTION 10).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers closed when not in use - check regularly for spills. Avoid moisture/humidity. Avoid extreme heat. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in properly labelled original container or suitable packaging material, i.e. Polyethylene, woven plastic material + PE. Do not store in moisture permeable material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No value assigned for this specific material by Safe Work Australia. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m3, measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m3; TWA = 3 mg/m3 (respirable).
Exposure Limits	No Data Available
Biological Limits	No information available.



Engineering Measures	Provide appropriate exhaust ventilation at places where dust is formed. Apply technical measures to comply with the occupational exposure limits.
Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: Wear respiratory protection in case of inadequate ventilation or an inhalation risk exists. Recommended: Dust mask/particulate respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Safety glasses with side shields or protective goggles. - Hand protection: Handle with gloves. Recommended: Impervious gloves, e.g. neoprene, natural rubber. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Long-sleeved protective clothing; Overalls or dust-impervious protective suit; Apron (rubber or plastic); Safety shoes or boots (rubber or plastic).
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granular or powder
Odour	Odourless
Colour	White
pH	10.3 - 11.3 (10 g/L aqueous solution)
Vapour Pressure	Negligible (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	851 °C
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	2.53 (Water = 1)
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	>=400 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Hygroscopic: absorbs moisture or water from surrounding air.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.



Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material itself does not burn.
Reactions That Release Gases or Vapours	Decomposes on heating, emitting toxic fumes, including Carbon dioxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Reacts exothermically with strong acids evolving carbon dioxide.
Chemical Stability	Stable if stored and handled under recommended conditions.
Conditions to Avoid	Avoid generating dust. Avoid exposure to moisture. Avoid exposure to heat.
Materials to Avoid	Incompatible/reactive with acids, phosphorus pentoxide, aluminium, lead, magnesium, iron, zinc, fluorine.
Hazardous Decomposition Products	Decomposes on heating, emitting toxic fumes, including Carbon dioxide.
Hazardous Polymerisation	Hazardous polymerisation does not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"> - Acute toxicity: Low acute toxicity following oral, dermal and inhalation exposure. In case of ingestion, may cause severe irritation, nausea, abdominal pain, vomiting, diarrhoea. - Skin corrosion/irritation: Prolonged contact may cause skin irritation. - Eye damage/irritation: Causes serious eye irritation; may cause redness, lachrymation, swelling. - Respiratory/skin sensitisation: Not a skin sensitiser. - Germ cell mutagenicity: Not considered to be genotoxic. - Carcinogenicity: Not considered carcinogenic. - Reproductive toxicity: Does not show specific reproductive or developmental toxicity. - STOT (single exposure): In case of inhalation at high concentrations, may cause cough, nose, throat and lung irritation. - STOT (repeated exposure): Carbonate ions are neutralised under physiological conditions to form bicarbonate ions and/or carbon dioxide, which are major products of all human metabolic activities; therefore, systemic toxicity is not expected. Risk of sore throat, nose bleeds in case of repeated or prolonged inhalation exposure. - Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rats: >2,800 mg/kg [Supplier's SDS].
Other	Acute toxicity (Dermal): - LD50, Rabbit: >2,000 mg/kg [Supplier's SDS].
Inhalation	Acute toxicity (Inhalation): - LC50, Rat: 2.3 mg/l (2 h) [Supplier's SDS].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (Lepomis macrochirus): 300 mg/L (96 h). - EC50, Crustacea (Ceriodaphnia dubia): 200 mg/L (48 h).
Persistence/Degradability	Sodium carbonate is an inorganic substance. In the presence of water, it will fully dissociate to sodium and carbonate ions which will disperse in the various media.
Mobility	Solid sodium carbonate has a negligible vapour pressure and for this reason it will not be distributed to the atmosphere. If sodium carbonate is emitted to water it will remain in the water phase. If the pH is decreased then



carbonic acid (H₂CO₃ or CO₂) can be formed. If the concentration of carbon dioxide in water is above the water solubility limit, the carbon dioxide will distribute to the atmosphere. If sodium carbonate is emitted to soil it can escape to the atmosphere as CO₂, precipitate as a metal carbonate, form complexes or stay in solution.

Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	Does not bioaccumulate. The substance dissociates fully on introduction to water. *Log Po/w is not applicable for an inorganic compound which dissociates.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	If recycling is not practicable, dispose of in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Packaging disposal: Where possible, recycling is preferred to disposal or incineration. Clean container with water; Dispose of rinse water in accordance with local and national regulations.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Dense Soda Ash
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Dense Soda Ash
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Dense Soda Ash
Class	No Data Available
Subsidiary Risk(s)	No Data Available



UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	ALKALINE SALTS, being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination, are listed in Schedule 5 of the SUSMP in (other) solid preparations, the pH of which in a 10 g/L aqueous solution is more than 11.5.
Poisons Schedule (Aust)	Not Scheduled

National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	207-838-8
Europe (REACH)	Listed
Japan (ENCS/METI)	1-164
Korea (KECI)	KE-31380
Malaysia (EHS Register)	Listed
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Listed
USA (TSCA)	Listed

16. OTHER INFORMATION

SOCABR1000, SOCABR1100, SOCABR2000, SOCARB0005, SOCARB0215, SOCARB1000, SOCARB1001,



Related Product Codes

SOCARB1002, SOCARB1003, SOCARB1004, SOCARB1005, SOCARB1006, SOCARB1007, SOCARB1008, SOCARB1009, SOCARB1010, SOCARB1011, SOCARB1012, SOCARB1013, SOCARB1014, SOCARB1015, SOCARB1016, SOCARB1017, SOCARB1018, SOCARB1019, SOCARB1022, SOCARB1100, SOCARB1101, SOCARB1102, SOCARB1103, SOCARB1104, SOCARB1105, SOCARB1106, SOCARB1107, SOCARB1108, SOCARB1109, SOCARB1110, SOCARB1112, SOCARB1113, SOCARB1114, SOCARB1140, SOCARB1150, SOCARB1160, SOCARB1200, SOCARB1201, SOCARB1202, SOCARB1210, SOCARB1211, SOCARB1212, SOCARB1240, SOCARB1300, SOCARB1500, SOCARB1501, SOCARB1502, SOCARB1650, SOCARB1700, SOCARB1807, SOCARB1808, SOCARB1809, SOCARB1810, SOCARB1811, SOCARB1812, SOCARB1813, SOCARB1814, SOCARB1815, SOCARB1816, SOCARB1817, SOCARB1818, SOCARB2100, SOCARB2150, SOCARB2500, SOCARB2501, SOCARB2502, SOCARB2503, SOCARB2504, SOCARB2505, SOCARB2515, SOCARB2525, SOCARB2530, SOCARB2600, SOCARB3000, SOCARB3010, SOCARB3020, SOCARB3030, SOCARB3040, SOCARB4000, SOCARB4600, SOCARB4700, SOCARB4701, SOCARB5000, SOCARB5001, SOCARB5100, SOCARB5200, SOCARB5300, SOCARB5500, SOCARB5501, SOCARB5510, SOCARB5600, SOCARB5601, SOCARB5602, SOCARB5605, SOCARB5606, SOCARB5608, SOCARB5609, SOCARB5610, SOCARB5611, SOCARB5700, SOCARB5800, SOCARB5900, SOCARB6000, SOCARB6001, SOCARB6100, SOCARB6200, SOCARB6500, SOCARB6501, SOCARB6600, SOCARB6601, SOCARB6700, SOCARB7000, SOCARB7001, SOCARB7002, SOCARB7003, SOCARB8000, SOCARB8001, SOCARB8002, SOCARB8003, SOCARB8100, SOCARB8101, SOCARB9000, SOCARB9200, SOCARB9201, SOCARB9500, SOCARB9600, SOCARB9990, SOCARF1000, SOCARF1001, SOCARF1100, SOCARF2500, SOCARF3000, SOCARF4000, SOCARF5000, SOCARF5001, SOCARF5002, SOCARF5100, SOCARF5200, SOCARF9900, SODCAB1000, SODCAB1001, SODCAB1002, SODCAB1003, SODCAB1004, SODCAB1005, SODCAB1006, SODCAB1100, SODCAB1101, SODCAB1102, SODCAB1103, SODCAB1104, SODCAB1105, SODCAB1106, SODCAB1107, SODCAB1108, SODCAB1140, SODCAB1200, SODCAB1201, SODCAB1210, SODCAB1240, SODCAB2100, SODCAB2101, SODCAB2102, SODCAB2151, SODCAB2600, SODCAB2601, SODCAB2700, SODCAB2800, SODCAB2900, SODCAB2901, SODCAB3000, SODCAB3001, SODCAB3100, SODCAB3101, SODCAB3200, SODCAB3300, SODCAB3400, SODCAB3500, SODCAB3501, SODCAB3503, SODCAB3600, SODCAB3700, SODCAB3800, SODCAB3900, SODCAB3901, SODCAB3902, SODCAB4000, SODCAB4100, SODCAB4200, SODCAB4300, SODCAB4400, SODCAB5000, SODCAB5500, SODCAB5800, SODCAB5801, SODCAB5900, SODCAB5910, SODCAB6000, SODCAB6001, SODCAB6010, SODCAB6015, SODCAB6100, SODCAB6500, SODCAB6501, SODCAB6600, SODCAB6601, SODCAB6605, SODCAB7000, SODCAB7500, SODCAB7600, SODCAB8000, SODCAB8800, SODCAB9000, SODCAB9500, SODCAB9600, SODCAL1000, SODCAR0500, SODCAR0501, SODCAR0502, SODCAR0503, SODCAR1000, SODCAR1001, SODCAR1002, SODCAR1003, SODCAR1004, SODCAR1005, SODCAR1006, SODCAR1007, SODCAR1008, SODCAR1009, SODCAR1010, SODCAR1100, SODCAR1101, SODCAR1200, SODCAR2000, SODCAR2001, SODCAR3000, SODCAR3001, SODCAR3100, SODCAR3300, SODCAR3400, SODCAR3500, SODCAR4000, SODCAR5000, SODCAR5001, SODCAR5500, SODCAR6500, SODCAR7000, SODCAR7500, SODCAR9000, SODCAR9500

Revision

5

Revision Date

11 Nov 2021

Key/Legend

< Less Than
 > Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO₂ Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Fahrenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.



mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Health and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight

