



SAFETY DATA SHEET STRONTIUM CARBONATE REVISION 5, DATE 27 JUN 19

1. IDENTIFICATION

Product Name	Strontium Carbonate
Other Names	No Data Available
Uses	Manufacture of pyrotechnical products, glazes, frits and enamels, ceramics, electro-ceramic materials other strontium compounds; Use in welding electrode coating, zinc electrolysis.
Chemical Family	No Data Available
Chemical Formula	CH2O3.Sr
Chemical Name	Carbonic acid, strontium salt (1:1)
Product Description	No Data Available

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
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled

Redox Ltd
Corporate Office Sydney
Locked Bag 15 Minto NSW 2566 Australia
2 Swettenham Road Minto NSW 2566 Australia
All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

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E-mail sydney@redox.com
Web www.redox.com
ABN 92 000 762 345

Australia
Adelaide
Brisbane
Melbourne
Perth
Sydney

New Zealand
Auckland
Christchurch
Hawke's Bay
UK
London

Malaysia
Kuala Lumpur
USA
Los Angeles
Oakland
Mexico
Saltillo



Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

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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Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards 6.9B	Substances that are harmful to human target organs or systems
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Strontium carbonate	CH2O3.Sr	1633-05-2	>=96 %
Barium carbonate	CH2O3.Ba	513-77-9	<=2.5 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth with water. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.
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 10 - 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 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. If respiratory symptoms persist, get medical advice/attention.
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.
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Flammability Conditions	Not combustible; Material 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	No information available.
Hazardous Products of Combustion	Fire or heat may produce irritating and/or toxic fumes, including Strontium oxide, Barium oxide.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may 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	Pick up/Sweep up and transfer to suitable, properly labelled containers for disposal (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Should not be released into the environment. Local authorities should be advised if significant spillages cannot be contained.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (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).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep in properly labelled containers. Keep container tightly closed. Keep away from incompatible products (see SECTION 10). *In bulk: in silo or in heap (covered and isolated from the ground) on a well-drained surface.
Container	Store in original container or suitable packaging material, i.e. Paper, Polyethylene.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. COMPONENT: Barium carbonate: - Safe Work Australia Exposure Standard for Barium, soluble compounds (as Ba): TWA = 0.5 mg/m ³ .
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Provide appropriate exhaust ventilation at places where dust is formed.

Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Respirator with a particle filter (P3). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Goggles. - Hand protection: Handle with gloves. Recommended: PVC, Natural rubber. Unsuitable material: Do not wear neoprene gloves, as neoprene absorbs nanoparticles. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Dust impervious protective suit (PVC).
Special Hazards Precautions	Dispose of rinse water in accordance with local and national regulations.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder
Odour	Odourless
Colour	White
pH	7.0 - 8.0 (20 °C) saturated aqueous solution
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Slightly soluble in water (3.4 mg/l) 20°C
Specific Gravity	3.79
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	300 - 700 kg/m ³ (powder)
Corrosion Rate	No Data Available
Decomposition Temperature	ca. 667 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	147.6 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	0.74 - 10 µm
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	No information available.
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	Not combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire or heat may produce irritating and/or toxic fumes, including Strontium oxide, Barium oxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Risk of violent reaction - Contact with acids liberates CO ₂ , sometimes violently.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid generating dust.
Materials to Avoid	Incompatible/reactive with acids.
Hazardous Decomposition Products	Fire or heat may produce irritating and/or toxic fumes, including Strontium oxide, Barium oxide.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"> - Acute toxicity: Not classified as hazardous for acute toxicity. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. - Skin corrosion/irritation: Prolonged skin contact may cause skin irritation. No skin irritation [By analogy: Strontium nitrate]. - Eye damage/irritation: Contact with eyes may cause irritation. No eye irritation (Rabbit) [OECD Test Guideline 405]. - Respiratory/skin sensitisation: Does not cause skin sensitisation (GPMT) [OECD Test Guideline 406; By analogy: Strontium chloride, hexahydrate]. - Germ cell mutagenicity: In vitro tests did not show mutagenic effects (in vitro) [By analogy]. - Carcinogenicity: Animal testing did not show any carcinogenic effects [By analogy: Strontium nitrate]. - Reproductive toxicity: No information available. - STOT (single exposure): The substance or mixture is not classified as a specific target organ toxicant, single exposure according to GHS criteria. In case of inhalation, may cause nose, throat and lung irritation. - STOT (repeated exposure): The substance or mixture is not classified as a specific target organ toxicant, repeated exposure according to GHS criteria. Possible risk of irreversible effects through inhalation. In case of repeated or prolonged exposure, risk of pulmonary overload (respirable particulates). Chronic exposure to the product can cause bone calcification disorders. - Aspiration toxicity: No information available.
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Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat (female): >2,000 mg/kg [By analogy: Strontium nitrate].
Inhalation	Acute toxicity (Inhalation): - LC50, Rat (male/female): >4.5 mg/l (4 h) dust/mist [OECD Test Guideline 403; By analogy: Strontium nitrate].
Reproduction	Toxicity to reproduction/Fertility (Oral): - NOAEL, Rat (male/female): 287.5 mg/kg (Parent) [By analogy]. Developmental Toxicity/Teratogenicity (Gavage): - NOAEL, Rat (female): 144 mg/kg [By analogy].

Chronic

Ingestion	Repeated dose toxicity (Oral): - NOAEL, Rat (male/female): 21 mg/kg (90 day) [By analogy: Strontium chloride, hexahydrate].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Short-term (acute) aquatic hazard: - Not harmful to aquatic life (LC/LL50, EC/EL50 > 100 mg/L) [Strontium carbonate]. Long-term (chronic) aquatic hazard: - No adverse chronic effect observed up to and including the threshold of 1 mg/L [Strontium carbonate].
Persistence/Degradability	The methods for determining biodegradability are not applicable to inorganic substances.
Mobility	Low solubility and mobility (Water/soil) [Strontium carbonate].
Environmental Fate	Should not be released into the environment.
Bioaccumulation Potential	Potential accumulation of the cation [Strontium carbonate].
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of wastes in an approved waste disposal facility and in compliance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.
Special Precautions for Land Fill	Cleaning and disposal of packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	Strontium Carbonate
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 LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Strontium Carbonate
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.

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	Strontium Carbonate
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.

Land Transport (United States of America)
US DOT

Proper Shipping Name	Strontium Carbonate
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	Strontium Carbonate
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	Strontium Carbonate
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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	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR002503 HSR002718 (Revoked)
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National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined

Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	STCARB1000, STCARB1001, STCARB1002, STCARB1003, STCARB1004, STCARB1005, STCARB1006, STCARB1007, STCARB1008, STCARB1009, STCARB1010, STCARB1011, STCARB1012, STCARB1013, STCARB1014, STCARB1015, STCARB1016, STCARB1017, STCARB1018, STCARB1019, STCARB1020, STCARB1021, STCARB1022, STCARB1023, STCARB1024, STCARB1025, STCARB1026, STCARB1027, STCARB1028, STCARB1029, STCARB1030, STCARB1031, STCARB1032, STCARB1033, STCARB1034, STCARB1036, STCARB1037, STCARB1100, STCARB1200, STCARB1300, STCARB1400, STCARB1500, STCARB1600, STCARB1900, STCARB2000, STCARB2001, STCARB2100, STCARB2200, STCARB2300, STCARB2400, STCARB2500, STCARB2600, STCARB2700, STCARB2800, STCARB2900, STCARB3000, STCARB3100, STCARB3101, STCARB3102, STCARB3103, STCARB3150, STCARB3200, STCARB3300, STCARB3400, STCARB3500, STCARB4000, STCARB5000, STCARB5200, STCARB5201, STCARB5500, STCARB5700, STCARB6000, STCARB6001, STCARB7000, STCARB7001, STCARB8000, STCARB9000, STCARB9001, STCARB9300, STCARB9400, STCARB9500, STCARB9600, STCARB9700
Revision	5
Revision Date	27 Jun 2019
Reason for Issue	SDS updated
Key/Legend	<p>< Less Than > Greater Than</p> <p>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 Farenheit 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</p>

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