1. IDENTIFICATION

Product Name	**Calcium carbonate**
Other Names	C.I. Pigment White 18; CALMIN - 2mm
Uses	Neutralising agent; Filler; Food & pharmaceutical applications.
Chemical Family	No Data Available
Chemical Formula	CaCO3
Chemical Name	Carbonic acid, calcium salt (1:1)
Product Description	Contains <1 % respirable crystalline silica.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty 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

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)

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

HSNO Classifications	Health Hazards	**6.4A**	Substances that are irritating to the eye

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Calcium carbonate	CaCO3	471-34-1	<=100 %
Limestone (Natural calcium carbonate)	Alternative CAS No.	1317-65-3	<=100 %
Crystalline silica (Quartz)	SiO2	14808-60-7	<1 %

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. If vomiting occurs, give further water to drink. Get medical advice/attention.
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 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 until recovered. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	(Chronic) exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema and asthma.

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 does not burn.
Extinguishing Media	Use dry chemical, Carbon dioxide, foam or water spray for extinction; Use extinguishing media appropriate to surrounding fire conditions.

Fire and Explosion Hazard	Containers may explode when heated.
Hazardous Products of Combustion	Fire or heat will produce irritating and/or toxic fumes, including oxides of Carbon, oxides of Calcium.
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) in combination with normal firefighting clothing (full fire kit).
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. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Collect material (sweep up or vacuum) and place it into suitable, labelled containers for subsequent recycling or disposal (see SECTION 13); If appropriate, moisten first to prevent dusting.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	Wash surfaces thoroughly with soap and water.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate all unprotected personnel. Keep unauthorised personnel away; Keep upwind.
Personal Precautionary Measures	Use personal protective equipment as required; In case of inadequate ventilation, wear respiratory protection (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. Avoid generating dust and prevent the build-up of dust in the work atmosphere. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required; In case of inadequate ventilation, wear respiratory protection (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed. Protect from moisture. Keep away from incompatible materials (acids, strong oxidising agents, ammonium salts).
Container	Store in suitable, labelled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	COMPONENT: Calcium carbonate (CAS No. 471-34-1): - Safe Work Australia Exposure Standard: TWA = 10 mg/m3; This value is for inhalable dust containing no asbestos and <1 % crystalline silica. - New Zealand WES: TWA = 10 mg/m3. COMPONENT: Crystalline silica/Quartz (respirable dust): - Safe Work Australia Exposure Standard: TWA = 0.1 mg/m3. - New Zealand WES: TWA = 0.1 mg/m3; The value for respirable dust (r); Confirmed carcinogen (6.7A).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Ensure ventilation is adequate to maintain air concentrations

	below workplace exposure standards.
Personal Protection Equipment	Respiratory protection: In case of inadequate ventilation or if an inhalation risk exists, wear respiratory protection. Recommended: Dust mask/respirator meeting the requirements of AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices, and AS/NZS 1716 - Respiratory protective devices. Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side shields or chemical goggles. Eye protection devices should conform with AS/NZS 1337 - Eye Protectors for Industrial Applications. Hand protection: Handle with gloves. Recommended: Impervious gloves. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance. Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrists; Chemical-resistant apron when large quantities are handled.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	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	Powder
Odour	Odourless
Colour	Off-white
pH	9.5 20 % slurry
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	Insoluble in water
Specific Gravity	2.72
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	No Data Available
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	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	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire or heat will produce irritating and/or toxic fumes, including oxides of Carbon, oxides of Calcium.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Reacts with acids liberating Carbon dioxide.
Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Avoid dust generation/accumulation. Protect from moisture and extremes of temperature.
Materials to Avoid	Incompatible/reactive with acids, strong oxidising agents, ammonium salts.
Hazardous Decomposition Products	Fire or heat will produce irritating and/or toxic fumes, including oxides of Carbon, oxides of Calcium.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: Ingestion of this product may irritate the gastrointestinal tract causing nausea and vomiting. - Eye contact: May cause (physical) eye irritation, redness, itching and tearing. - Skin contact: May cause skin irritation, redness, itching and swelling. Repeated or prolonged contact may cause skin dryness and cracking and may lead to dermatitis. - Inhalation: Inhalation of dusts may irritate the respiratory system. (Chronic) exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema and asthma. Repeated exposure to respirable crystalline silica may lead to silicosis or other serious delayed lung injury. COMPONENT: Silica dust, crystalline, in the form of quartz... (CAS No. 14808-60-7) is classified by the IARC Monographs as carcinogenic to humans (Group 1). Product contains <1% respirable crystalline silica.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of spilled or waste material in accordance with local/regional/national regulations. In the supplied state, this product may be disposed of as non-hazardous, light industrial waste; However, after installation and use, depending on the process, contamination may occur - Refer to waste management authority for advice.
Special Precautions for Land Fill	During removal, consideration should be given to the potential formation of increased crystalline silica, including respirable quartz, as may have occurred during use at elevated temperatures. Exposure to respirable dust should be minimised by appropriate engineering controls and PPE. Loose material should be contained to prevent airborne dust.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	CALCIUM 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

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	CALCIUM 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

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	CALCIUM 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

Land Transport (United States of America)
US DOT

Proper Shipping Name	CALCIUM 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

Sea Transport
IMDG Code

Proper Shipping Name	CALCIUM 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

Air Transport
IATA DGR

Proper Shipping Name	CALCIUM 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

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)

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	HSR006678

National/Regional Inventories

Australia (AICS)	Listed

Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	CACARB0100, CACARB0200, CACARB0300, CACARB0301, CACARB0400, CACARB0500, CACARB0600, CACARB0700, CACARB0800, CACARB0900, CACARB1000, CACARB1001, CACARB1002, CACARB1003, CACARB1004, CACARB1005, CACARB1006, CACARB1007, CACARB1008, CACARB1009, CACARB1010, CACARB1011, CACARB1012, CACARB1013, CACARB1100, CACARB1200, CACARB1300, CACARB1400, CACARB1500, CACARB1600, CACARB1700, CACARB1800, CACARB1900, CACARB2000, CACARB2001, CACARB2100, CACARB2200, CACARB2300, CACARB2400, CACARB2500, CACARB2600, CACARB2700, CACARB2800, CACARB3000, CACARB3200, CACARB3201, CACARB3202, CACARB3500, CACARB4000, CACARB4300, CACARB4400, CACARB4600, CACARB4800, CACARB5000, CACARB5001, CACARB5500, CACARB6000, CACARB6500, CACARB7000, CACARB7500, CACARB7600, CACARB8000, CACARB8500, CACARB9000, CACARB9001, CACARB9200, CACARS1000, CALCAB1000, CACARF1000, CACARF1001, CACARF1002, CACARF1003, CACARF1004, CACARF1100, CACARF1101, CACARF1200, CACARF1300, CACARF1500, CACARF2000, CACARF2100, CACARF2200, CACARF2300, CACARF3000, CACARF3500, CACARF4000, CACARF5000, CACARF6000, CACARF7000, CACARF7300, CACARF7500, CACARF7700, CACARF8000, CACARB2401, CACARB2410, CACARF1800, CACARF1801, CACARF1015, CACARB2402, CACARB2403, CACARF7002, CACARF7502, CACARF7702, CACARB0310, CACARB2900, CACARB2902, CACARB2910, CACARB2912, CACARF7710, CACARB2930, CACARB9500, CACARB2940, CACARB2941, CACARB2950, CACARB2951, CACARB2960, CACARB2961, CACARB2901, CACARB2931, RAWMAT1300, CACARB2942, CACARB2970, CACARB2990, CACARB2965, CACARB0130, CACARB0132, CACARB0320, CACARB0312, CACARF3100, CACARB1601, CACARB1014, CACARB1015, CACARB7100, CACARB0302, CACARB1016, CACARB1017, CACARB1020, CACARF7530, CACARB0305, CACARF7540, CACARF7740, CACARF7741, CACARB4100, CACARB4200, CACARB4105, CACARF1005, CACARB6900, CACARB4150, CACARB4160, CACARB4220, CACARB4230
Revision	3
Revision Date	11 Feb 2015
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 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
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath 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