

1. IDENTIFICATION

Product Name	Potassium bicarbonate
Other Names	Potassium acid carbonate; Potassium hydrogencarbonate
Uses	Chemical basic material; Industrial use; Acidity regulator; Fire extinguishers; Agriculture.
Chemical Family	No Data Available
Chemical Formula	KHCO ₃
Chemical Name	Carbonic acid, monopotassium salt
Product Description	No Data Available

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
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Redox Pty Ltd
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Brisbane
Melbourne
Perth
Sydney

New Zealand
Auckland
Christchurch
Hawke's Bay

Malaysia
Kuala Lumpur
USA
Los Angeles



Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Potassium bicarbonate	KHCO ₃	298-14-6	<=100 %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure**

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Get medical advice/attention if large amounts were swallowed or if you feel unwell. Do not induce vomiting unless directed to do so by medical personnel. 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 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. Apply resuscitation 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 does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction. Use any means suitable for extinguishing surrounding fire.
Fire and Explosion Hazard	Not considered to be a fire hazard; Not considered to be an explosion hazard.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Potassium oxides.
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. ELIMINATE all ignition sources. 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 or vacuum up) and place into a suitable, closed container for recovery or disposal (see SECTION 13). Avoid dispersal of dust in the air (i.e. clearing dust surfaces with compressed air). Non-sparking tool should be used. If appropriate, moisten first or cover with damp absorbent, to reduce airborne dust and prevent scattering.



Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	After cleaning, flush away traces with water.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
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). Keep away from (excessive) heat and sources of ignition - No smoking.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Protect against physical damage. Hygroscopic - Protect from moisture/humidity. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). - Storage temperature: +2 °C - 25 °C.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Contains no substances with occupational exposure limit values. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
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.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or for conditions of use where exposure to dust or mist is apparent. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716). For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen deficient atmospheres. - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical safety goggles. - Hand protection: Handle with gloves. Recommended: Protective gloves, e.g. Nitrile rubber (0.11 mm). - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Clean, body covering clothing.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling, before breaks and after work. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline powder
Odour	Odourless
Colour	White
pH	8 - 9 (Aqueous solution)
Vapour Pressure	No Data Available



Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	100 - 120 °C (Decomposes)
Freezing Point	No Data Available
Solubility	Soluble in water (36 g/100 ml) - Insoluble in alcohol
Specific Gravity	2.17
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	>100 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	100.12 g/mol
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	0% (21 °C)
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 may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Potassium oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Violent reaction with strong acids, with formation of Carbon dioxide.
Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Avoid generating dust. Keep away from (excessive) heat and sources of ignition. Protect from moisture/humidity.
Materials to Avoid	Incompatible/reactive with acids, strong oxidising agents.
Hazardous Decomposition Products	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Potassium oxides.
Hazardous Polymerisation	Will not occur.



11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: May cause gastrointestinal irritation. Large doses may produce abdominal pain, nausea and vomiting. - Eye contact: May cause eye irritation, redness and pain. - Skin contact: May cause skin irritation with redness and pain. - Inhalation: May cause irritation to the respiratory tract; Symptoms may include coughing, sore throat, laboured breathing and chest pain. Chronic effects: Not considered carcinogenic.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat (male/female): >2,000 mg/kg bw [ECHA].
Other	Acute toxicity (Dermal): - LD50, Rabbit (male/female): >2,000 mg/kg bw [ECHA].
Inhalation	Acute toxicity (Inhalation): - LC50, Rat (male/female): >4.88 mg/L dust (4.5 h) [ECHA].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (<i>Oncorhynchus mykiss</i>): 1,300 mg/L (96 h). - EC50, Crustacea (<i>Daphnia magna</i>): 630 mg/L (48 h).
Persistence/Degradability	In aquatic ecosystems, Potassium hydrogencarbonate will rapidly dissociate to potassium cation and inorganic carbon species; These are naturally-occurring ions in the environment [ECHA].
Mobility	High water solubility and very low vapour pressure indicate that potassium hydrogencarbonate will be found predominantly in the aquatic environment [ECHA].
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No potential for bioaccumulation. The substance does not accumulate in lipophilic tissues of living organisms. In animal and plant organisms, the mass balance of carbonate and potassium will be regulated by physiological mechanisms to ensure appropriate cell concentrations for natural life processes [ECHA].
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility and in accordance with local/regional/national regulations. Processing, use or contamination of this product may change the waste management options.
Special Precautions for Land Fill	Contaminate packaging: Non-contaminated packages may be recycled.

14. TRANSPORT INFORMATION**Land Transport (New Zealand)**

NZS5433

Proper Shipping Name	Potassium bicarbonate
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	Potassium bicarbonate
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	Potassium bicarbonate
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.

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	Not Hazardous
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed



Europe (EINECS)	206-059-0
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
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)	Listed
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	POBICA1000, POBICA1001, POBICA1002, POBICA1003, POBICA1004, POBICA1005, POBICA1006, POBICA1007, POBICA1008, POBICA1009, POBICA1010, POBICA1011, POBICA1012, POBICA1013, POBICA1500, POBICA1540, POBICA1570, POBICA1575, POBICA1580, POBICA1700, POBICA1701, POBICA1702, POBICA1703, POBICA1710, POBICA1715, POBICA1770, POBICA1775, POBICA1800, POBICA1801, POBICA1802, POBICA1900, POBICA1910, POBICA1950, POBICA2000, POBICA2100, POBICA2200, POBICA2300, POBICA2400, POBICA2500, POBICA2600, POBICA2700, POBICA2800, POBICA2900, POBICA3000, POBICA4000, POBICA4100, POBICA5000, POBICA5100, POBICA6000
Revision	3
Revision Date	17 Jan 2019
Key/Legend	<p>< 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</p>



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

tn Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight

