



# SAFETY DATA SHEET

## POTASSIUM CARBONATE SOLUTION

### REVISION 5, DATE 25 JUL 19

## 1. IDENTIFICATION

<b>Product Name</b>	<b>Potassium Carbonate Solution</b>
<b>Other Names</b>	Potassium carbonate, 50% Solution; Potassium carbonate, Liquid
<b>Uses</b>	Cleaning agents and additives; Dishwashing and laundry detergents; Photochemicals; Fillers; Laboratory chemicals; pH regulating/buffering agent in cosmetic products.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	K <sub>2</sub> CO <sub>3</sub>
<b>Chemical Name</b>	Carbonic acid, dipotassium salt, aqueous solution
<b>Product Description</b>	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)

Schedule 5

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

Phone +61 2 9733 3000  
Fax +61 2 9733 3111  
E-mail [sydney@redox.com](mailto:sydney@redox.com)  
Web [www.redox.com](http://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

<b>Hazard Classification</b>		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
<b>Hazard Categories</b>		Skin Corrosion/Irritation - Category 1B Serious Eye Damage/Irritation - Category 1	
<b>Pictograms</b>			
<b>Signal Word</b>		Danger	
<b>Hazard Statements</b>		<b>H314</b>	Causes severe skin burns and eye damage.
<b>Precautionary Statements</b>	Prevention	<b>P260</b>	Do not breathe mist/vapour/spray.
		<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	<b>P303 + P361 + P353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower]
		<b>P310</b>	Immediately call a POISON CENTER or doctor.
		<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		<b>P301 + P330 + P331</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		<b>P363</b>	Wash contaminated clothing before reuse.
		<b>P304 + P340</b>	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
	Storage	<b>P405</b>	Store locked up.
	Disposal	<b>P501</b>	Dispose of contents/container in accordance with local / regional / national / international regulations.

## National Transport Commission (Australia)

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

<b>Dangerous Goods Classification</b>	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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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

## Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Potassium carbonate	K <sub>2</sub> CO <sub>3</sub>	584-08-7	50 %
Water	H <sub>2</sub> O	7732-18-5	50 %

## 4. FIRST AID MEASURES

## Description of necessary measures according to routes of exposure

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth, then drink a glass of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
<b>Eye</b>	IF IN EYES: Immediately flush eyes with running water (continuously) for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Immediately call a Poison Centre or doctor/physician for advice. Remove contact lenses if present and easy to do. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.
<b>Skin</b>	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at least 15 minutes. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. Immediately call a Poison Centre or doctor/physician for advice. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing and shoes before reuse.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device - Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	Treat symptomatically. Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

## 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
<b>Flammability Conditions</b>	Non-combustible; Material does not burn.
<b>Extinguishing Media</b>	If material is involved in a fire, use dry chemical, Carbon dioxide (CO <sub>2</sub> ), foam or water spray for extinction - Do not use water jets. Use extinguishing medium as appropriate for surrounding fire.
<b>Fire and Explosion Hazard</b>	Containers may explode when heated. Decomposes on heating, emitting toxic fumes.
<b>Hazardous Products of Combustion</b>	Fire or heat will produce irritating, toxic and/or corrosive gases, including oxides of Carbon, oxides of Potassium.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may be toxic and/or corrosive and may pollute waterways.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for this material.
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	2X

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Do not breathe vapours and prevent contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Absorb with earth, sand or other non-combustible material and transfer to a suitable, properly labelled container for disposal (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Cover with plastic sheet to prevent spreading.
<b>Decontamination</b>	Wash area down with excess water.
<b>Environmental Precautionary Measures</b>	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.

**Personal Precautionary Measures** Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	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. Do not breathe mist/vapours/spray and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Avoid exposure to heat.
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
<b>Container</b>	Keep in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards are available for this product.
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	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.
<b>Personal Protection Equipment</b>	<ul style="list-style-type: none"><li>- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Wear a suitable mist respirator (refer to AS/NZS 1715 &amp; 1716).</li><li>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles, face shield.</li><li>- Hand protection: Wear protective gloves. Recommended: Elbow-length impervious gloves.</li><li>- Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls, splash apron, rubber boots.</li></ul>
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove contaminated clothing and shoes immediately and wash before storage or reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear liquid
<b>Odour</b>	Odourless
<b>Colour</b>	Colourless
<b>pH</b>	~13
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	~115 °C
<b>Melting Point</b>	No Data Available
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Soluble in water
<b>Specific Gravity</b>	~1.5

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	Not applicable.
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, toxic and/or corrosive gases, including oxides of Carbon, oxides of Potassium.
Release of Invisible Flammable Vapours and Gases	No information available.

## 10. STABILITY AND REACTIVITY

General Information	Exothermic reaction with acids, evolving carbon dioxide.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid exposure to heat.
Materials to Avoid	Incompatible/reactive with acids, lime, metals.
Hazardous Decomposition Products	Fire or heat will produce irritating, toxic and/or corrosive gases, including oxides of Carbon, oxides of Potassium.
Hazardous Polymerisation	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**General Information**

- Acute toxicity: Low acute toxicity following oral, dermal and inhalation exposure. Aqueous solutions of Potassium carbonate are strongly alkaline; Ingestion of large quantities may produce corrosion of the gastrointestinal tract, vomiting, diarrhoea, circulatory collapse and (even) death [NICNAS].
- Skin corrosion/irritation: Corrosive to skin; Causes severe skin burns.
- Eye damage/irritation: Corrosive to eyes; Causes serious eye damage.
- Respiratory/skin sensitisation: Not considered to be skin sensitising [NICNAS].
- Germ cell mutagenicity: Not considered to be genotoxic [NICNAS].
- Carcinogenicity: Not considered carcinogenic [NICNAS].
- Reproductive toxicity: Does not show specific reproductive or developmental toxicity [NICNAS].
- STOT (single exposure): Potassium carbonate solutions are strongly alkaline and concentrated solutions can produce corrosive effects, including local necrosis of mucous membranes [NICNAS]. Following acute inhalation exposure, respiratory impairment, dermal necrosis (around the mouth) and corneal opacity were noted in all animals tested [NICNAS].
- STOT (repeated exposure): In rats, histopathological changes of the respiratory tract and the lungs were seen following repeated inhalation exposure to Potassium carbonate; These effects were considered local responses to the high alkalinity of this chemical [NICNAS].
- Aspiration toxicity: No information available.

**Acute****Ingestion**

Acute toxicity (Oral):  
COMPONENT: Potassium carbonate (CAS No. 584-08-7):  
- LD50, Rat: >2,000 mg/kg bw. [NICNAS].

**Other**

Acute toxicity (Dermal):  
COMPONENT: Potassium carbonate (CAS No. 584-08-7):  
- LD50, Rat: >2,000 mg/kg bw. [NICNAS].

**Carcinogen Category**

None

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Aquatic toxicity:  
- LC50, Fish (Rainbow trout): 68 mg/L (96 h).  
- LC50, Fish (Bluegill sunfish): 230 mg/L (96 h).  
- EC50, Crustacea (Daphnia magna): 430 mg/L (48 h) hard water.  
- EC50, Crustacea (Daphnia pulex): 200 mg/L (48 h) soft water.

**Persistence/Degradability**

Potassium carbonate dissociates completely in water to K<sup>+</sup> and inorganic carbon species. Both potassium and inorganic carbon are ubiquitously present in the environment. Biodegradation is not relevant because potassium carbonate is an inorganic substance.

**Mobility**

Due to the ionic character, potassium carbonate has a very low vapour pressure and very high water solubility. Based on this, potassium carbonate will remain predominantly in the water phase; and no sorption onto soil and sediment organic matter occurs [ECHA].

**Environmental Fate**

May increase pH of waterways and adversely affect aquatic life. Prevent entry into drains and waterways.

**Bioaccumulation Potential**

No potential for bioaccumulation. Potassium carbonate is very soluble in water; Therefore the substance does not accumulate in lipophilic tissues of living organisms. In animals and plants, 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**

Reuse or reprocess, if possible; or dispose of contents/container in accordance with local/regional/national regulations.

**Special Precautions for Land Fill**

No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium carbonate solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium carbonate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium carbonate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium carbonate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	154 Substances - Toxic and/or Corrosive (Non-Combustible)
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium carbonate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available
EMS	F-A, S-B
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium carbonate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	3266
Hazchem	2X
Pack Group	II
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	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)	Schedule 5

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Additives Process Chemicals and Raw Materials Corrosive Group Standard 2020 HSR002491 *HSR005777 (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)	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	POCARB1800, POCARB1801, POCARB1802, POCARB1804, POCARB1819, POCARB1820, POCARB1821, POCARB1822, POCARB1823, POCARL1000, POCARL1001, POCARL5000, POCARL5500, POCARL6500
Revision	5
Revision Date	25 Jul 2019
Key/Legend	<p>&lt; Less Than &gt; Greater Than  <b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></b> Carbon Dioxide  <b>COD</b> Chemical Oxygen Demand  <b>deg C (°C)</b> Degrees Celcius  <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand  <b>deg F (°F)</b> Degrees Farenheit  <b>g</b> Grams  <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre  <b>g/l</b> Grams per Litre  <b>HSNO</b> Hazardous Substance and New Organism  <b>IDLH</b> Immediately Dangerous to Life and Health  <b>immiscible</b> Liquids are insoluable in each other.  <b>inHg</b> Inch of Mercury  <b>inH<sub>2</sub>O</b> Inch of Water  <b>K</b> Kelvin  <b>kg</b> Kilogram  <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre  <b>lb</b> Pound  <b>LC<sub>50</sub></b> LC stands for lethal concentration. LC<sub>50</sub> 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.  <b>LD<sub>50</sub></b> LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.  <b>ltr or L</b> Litre  <b>m<sup>3</sup></b> Cubic Metre</p>

**mbar** Millibar

**mg** Milligram

**mg/24H** Milligrams per 24 Hours

**mg/kg** Milligrams per Kilogram

**mg/m<sup>3</sup>** Milligrams per Cubic Metre

**Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

**mm** Millimetre

**mmH<sub>2</sub>O** 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