



SAFETY DATA SHEET POTASSIUM IODIDE REVISION 5, DATE 25 FEB 21

1. IDENTIFICATION

Product Name	Potassium Iodide
Other Names	Hydriodic acid, potassium salt; Iodic acid, potassium salt; Potide
Uses	Additive; Pharmaceutical manufacture.
Chemical Family	No Data Available
Chemical Formula	KI
Chemical Name	Potassium iodide
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



Globally Harmonised System

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

Hazard Categories Specific Target Organ Toxicity (Repeated Exposure) - Category 1

Pictograms



Signal Word Danger

Hazard Statements **H372** Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements	Prevention	P260	Do not breathe dusts or mists.
		P264	Wash hands thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.
	Response	P314	Get medical attention if you feel unwell.
	Disposal	P501	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 & 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)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Potassium iodide	KI	7681-11-0	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth with plenty of water. Do not induce vomiting. Get medical advice/attention if you feel unwell. 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: Do not rub the affected area! Wipe off excess material from skin immediately, then flush skin with running water for at least 15 minutes. 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	Get medical advice/attention if you feel unwell. Show this SDS to the doctor in attendance. Symptomatic treatment should include correction of hydro-electric and metabolic disturbances and respiratory failure. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
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 dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Do not use water jets. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	Ambient fire may liberate hazardous iodide vapours.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including potassium oxides, hydrogen iodide (HI).
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 - No smoking. Do not touch or walk through spilled material. Avoid generating dust. Do not breathe dust and avoid contact with eyes, skin and clothing.
Clean Up Procedures	Take up mechanically. Sweep up and shovel. Keep in suitable containers for disposal (see SECTION 13). Avoid dispersal of dust in the air.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
Decontamination	No information available.
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	Do not touch damaged containers or spilled material without the use of appropriate clothing! Use personal protective equipment as required (see SECTION 8). *For emergency responders: Chemical safety goggles and/or a full face shield. Full protective clothing that covers the entire body. Protective gloves. For large spills, where the exposure is large, the use of protective mask with dust filter is recommended.

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 formation of dust and aerosols. Do not breathe dust/mist/aerosols and avoid 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 container tightly closed. Protect from exposure to light, air and moisture. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For Iodine (CAS No. 7553-56-2): - Safe Work Australia Exposure Standard: TWA = 0.1 ppm (1 mg/m ³) Peak limitation. - New Zealand Workplace Exposure Standard [Next review 2021]: TWA = 0.1 ppm (1 mg/m ³) Ceiling.
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: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator (type P2) as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Face shield and safety glasses. - Hand protection: Handle with gloves. Recommended: Nitrile rubber. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals
Odour	Odourless
Colour	White
pH	7 - 9 (50 g/L water)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	1,330 °C
Melting Point	680 °C
Freezing Point	No Data Available
Solubility	Soluble in water and ethanol
Specific Gravity	3.1

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	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	0.04
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	0% (21 °C)
VOC Volume	No Data Available
Additional Characteristics	Over long air exposure, becomes yellow due to release of iodine.
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	Ambient fire/decomposition may liberate hazardous fumes/vapours, including potassium oxides, iodides, hydrogen iodide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Exothermic reaction with oxidising agents. Risk of ignition or formation of inflammable gases or vapours with fluorine.
Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Protect from exposure to light, air and moisture.
Materials to Avoid	Incompatible/reactive with oxidising agents, reducing agents, alkali metals, Ammonia, Bromine trifluoride, Chlorine trifluoride, Hydrogen peroxide.
Hazardous Decomposition Products	Ambient fire/decomposition may liberate hazardous fumes/vapours, including potassium oxides, iodides, hydrogen iodide.
Hazardous Polymerisation	Does not occur.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Product not classified as acutely toxic by the oral route. On ingestion, provokes abdominal pain, nausea and vomiting. After absorption of toxic quantities, may cause drop in blood pressure, paralysis symptoms, agitation.
- Skin corrosion/irritation: No skin irritation (Rabbit) [OECD Guideline 404]. May provoke skin irritation with redness, pain and dryness.
- Eye damage/irritation: No eye irritation (Rabbit) [OECD Guideline 405]. May provoke eye irritation with redness and pain.
- Respiratory/skin sensitisation: Not sensitising. Negative (Patch test: human). Sensitisation possible in predisposed persons (iodides).
- Germ cell mutagenicity: It is not expected that the product causes germ cell mutagenicity.
- Carcinogenicity: Not classified as carcinogenic.
- Reproductive toxicity: It is not expected that the product causes reproductive toxicity.
- STOT (single exposure): It is not expected that the product presents specific target organ toxicity (single exposure).
- STOT (repeated exposure): Causes damage to organs (thyroid) through prolonged or repeated exposure (oral route).
- Aspiration toxicity: No information available.

Acute**Ingestion**

Acute toxicity (Oral):
- LD50, Rats: 2,779 mg/kg [Supplier's SDS].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Aquatic toxicity:
- LC50, Crustacea (Daphnia magna): 2.7 mg/L (48 h).

Persistence/Degradability

Potassium iodide will completely dissociate in water giving potassium ion (K+) and iodide anion (I-). Biodegradation is not applicable for inorganic substances.

Mobility

Expected to have a low potential for adsorption (completely ionized in water phase). Negligible distribution to air due to high water solubility and low vapour pressure.

Environmental Fate

Prevent entry into drains and waterways.

Bioaccumulation Potential

Not likely to be bioaccumulated.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container by appropriate incineration or landfill and in accordance with local/regional/national regulations.

Special Precautions for Land Fill

Leave chemicals in original containers. Do not reuse empty packaging. These may contain residues of the product and must be kept closed and sent for destruction in the appropriate place.

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

ADG Code

Proper Shipping Name

Potassium iodide

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 (Malaysia)

ADR Code

Proper Shipping Name	Potassium iodide
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	Potassium iodide
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	Potassium iodide
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 iodide
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 iodide
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 - Additives Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020
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National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	231-659-4
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)	Not Determined

16. OTHER INFORMATION

Related Product Codes	POIODI1000, POIODI1001, POIODI1002, POIODI1003, POIODI1004, POIODI1005, POIODI1006, POIODI1007, POIODI1008, POIODI1009, POIODI1800, POIODI1801, POIODI1802, POIODI1803, POIODI1804, POIODI1805, POIODI1806, POIODI1807, POIODI3000, POIODI3500, POIODI3501, POIODI4000, POIODI5000, POIODI5600, POIODI7000, POIODI8000, POIODI8500, POIODI9000
Revision	5
Revision Date	25 Feb 2021
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 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 insoluble 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</p>

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