



Infosafe No™	1CH5J	Issue Date : November 2017	RE-ISSUED by CHEMSUPP
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Product Name : **POTASSIUM IODIDE**

Classified as hazardous

**1. Identification**

<b>GHS Product Identifier</b>	POTASSIUM IODIDE		
<b>Company Name</b>	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)		
<b>Address</b>	38 - 50 Bedford Street GILLMAN SA 5013 Australia		
<b>Telephone/Fax Number</b>	Tel: (08) 8440-2000 Fax: (08) 8440-2001		
<b>Recommended use of the chemical and restrictions on use</b>	Reagent in analytical chemistry, photographic emulsions (precipitating Ag), feed additive, spectroscopy, infrared transmission, scintillation, dietary supplement, expectorant for treatment of chronic respiratory diseases; antifungal agent (human and vet use); iodine source in treatment of thyroid disorders; ingredient in personal hygiene products; topical deodorizing agent for livestock manure, and laboratory reagent.		
<b>Other Names</b>	<u>Name</u>	<u>Product Code</u>	
	POTASSIUM IODIDE LR	PL001	
	POTASSIUM IODIDE AR	PA001	
<b>Other Information</b>	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.		

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

**2. Hazard Identification**

<b>GHS classification of the substance/mixture</b>	Acute Toxicity - Dermal: Category 2 Eye Damage/Irritation: Category 2A Acute Toxicity - Oral: Category 4 Specific target organ toxicity (Oral, Thyroid) Repeated Exposure: Category 1
<b>Signal Word (s)</b>	DANGER
<b>Hazard Statement (s)</b>	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H372 Causes damage to organs (Thyroid) through prolonged or repeated exposure.
<b>Pictogram (s)</b>	Health hazard, Exclamation mark



<b>Precautionary statement – Prevention</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection.
<b>Precautionary statement – Response</b>	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P332+P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P314 Get medical advice/attention if you feel unwell.



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**Precautionary statement – Storage** P405 Store locked up.

**Precautionary statement – Disposal** P501 Dispose of contents/container to an approved waste disposal plant.

**3. Composition/information on ingredients**

Ingredients	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
	Potassium iodide	7681-11-0	100 %		

**4. First-aid measures**

**Inhalation** Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention in severe cases, or if symptoms develop.

**Ingestion** Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

**Skin** Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. If symptoms develop seek medical attention.

**Eye contact** If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.

**First Aid Facilities** Maintain eyewash fountain and drench facilities in work area.

**Advice to Doctor** Treat symptomatically based on judgement of doctor and individual reactions of the patient.

**Other Information** For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

**5. Fire-fighting measures**

**Hazards from Combustion Products** Toxic fumes including hydrogen iodide (HI), oxides of potassium and iodine, possibly also free, or ionic iodine, toxic iodine vapours and iodate.

**Specific Methods** Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.

**Specific hazards arising from the chemical** Material does not burn. Runoff may pollute waterways. Fire or heat may produce irritating, poisonous and/or corrosive fumes. Containers may explode when heated.

**Precautions in connection with Fire** Wear SCBA and structural firefighter's uniform.

**6. Accidental release measures**

**Personal Precautions** Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

**Personal Protection** Wear protective clothing specified for normal operations (see Section 8)

**Clean-up Methods - Small Spillages** Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

**7. Handling and storage**

**Precautions for Safe Handling** Avoid ingestion and inhalation of dust. Avoid contact with eyes, skin and clothing. Minimize dust generation and accumulation. Keep containers closed when not in use. Ensure good ventilation at the workplace. Provide appropriate exhaust ventilation at places where dust is formed. Use with adequate ventilation. If you feel unwell, seek medical attention and show the label when possible. Wear suitable protective clothing and equipment. As with all chemicals, wash hands thoroughly after handling. Ensure a high level of personal hygiene is maintained when using this product. That is; always wash hands before eating, drinking, smoking or using the toilet. Protect from freezing and physical damage. Keep away from incompatibles such as oxidizing agents, reducing agents, metals, acids, moisture.

**Conditions for safe storage, including any incompatibilities** Store in labelled, corrosion- and light-resistant, tightly closed containers, in a cool, dry, well ventilated area and isolated from incompatible substances. Air, light, and moisture sensitive - accelerate decomposition. Protect against physical damage and exposure to air, light and humidity/water/moisture. Store away from reducing agents, acids. Iodine has a persistent and irritating odour and should not be stored near odour sensitive material. Prolonged storage is not recommended because of possible degradation problems, including yellowing of the potassium iodide product. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings



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**Corrosiveness** and precautions listed for the product.  
Corrosive in presence of steel, of aluminium, of zinc. Corrosive in all concentrations to most metals, except stainless steel, titanium, and tantalum. Incompatible with water, producing a corrosive.  
Non-corrosive in presence of glass, of copper, of stainless steel(304), of stainless steel(316).

**Storage Temperatures** Store below 40 °C, preferably between 15 and 25 °C, unless otherwise specified by manufacturer.

**Additional information on precautions for use** Iodides should only be heated in a fume cupboard if iodine vapours are being produced.

**8. Exposure controls/personal protection**

**Other Exposure Information** A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m<sup>3</sup> for dusts when limits have not otherwise been established.

**Appropriate engineering controls** In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

**Respiratory Protection** Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

**Eye Protection** The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

**Hand Protection** Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Excellent: Vinyl, nitrile, neoprene gloves. Good: NR latex.

**Personal Protective Equipment** Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.

**Body Protection** Clean clothing or protective clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

**Hygiene Measures** Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**9. Physical and chemical properties**

**Appearance** Colourless or white, cubical crystals, white to pale yellow, slightly deliquescent granules, or powder; clear, colourless to slightly yellow liquid (aqueous solution becomes yellow in time due to oxidation, but a small amount of alkali prevents it).

**Odour** Odourless.

**Melting Point** 681 °C (solid); ~ 0 °C (11-50%w/v).

**Boiling Point** 1330 °C (solid); ~ 100 °C (11-50%w/v).

**Solubility in Water** Very soluble, 128 g/100 ml (6 °C); 148 g/100 g water at 25 °C; 127.5 g sol in 0.5 mL boiling water; 30 g KI with 21 mL water gives 30 mL of a saturated solution at 25 °C.

**Solubility in Organic Solvents** Soluble in glycerol, ether, ammonia and methanol; slightly soluble in ethanol; partially soluble in acetone; readily dissolves elemental iodine (Potassium iodide solution).

**Specific Gravity** 3.13 (solid); ~ 1.07-1.36 (11-50%w/v).

**pH** ~ 6.9 at 50 g/l H<sub>2</sub>O (20 °C), aqueous solution is neutral or usually alkaline.

**Vapour Pressure** 1.33 hPa (1 mm Hg) at 745 °C.

**Volatile Component** 0 %vol @ 21 °C

**Flammability** Non combustible material.

**Explosion Properties** Potassium iodide solution and fluorine perchlorate will explode on contact.

**Molecular Weight** 166.00

**Other Information** Taste: Strong, bitter, saline taste.  
Index of refraction: 1.677.

**10. Stability and reactivity**



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<b>Chemical Stability</b>	Stable in dry air, under ordinary conditions of use and storage. Air sensitive. Moisture sensitive. Light sensitive. On long exposure to air becomes yellow due to release of iodine.
<b>Conditions to Avoid</b>	Moisture, light, dust generation, prolonged exposure to air, and incompatible materials.
<b>Incompatible Materials</b>	Ammonia, halogen-halogen compounds, fluorine, hydrogen peroxide, salts of alkaloids, chloral hydrate, calomel (mercurous chloride), potassium chlorate, tartaric and other acids, diazonium salts, charcoal, ozone, strong reducers, alkali metals, most metals (brass, aluminium/aluminium alloys, magnesium, zinc, cadmium, copper, tin/tin oxides, nickel, steel (all types and surface treatments)), metal powders, metallic salts, organic materials, light, oxidizing agents, water/moisture, bromine trifluoride, fluorine perchlorate, diisopropyl peroxydicarbonate, perchloryl fluoride, chlorine trifluoride.
<b>Hazardous Decomposition Products</b>	Toxic fumes including hydrogen iodide (HI), oxides of potassium and iodine, possibly also free, or ionic iodine, toxic iodine vapours and iodate.
<b>Possibility of hazardous reactions</b>	A sample of fluorine perchlorate exploded on contact with a potassium iodide solution. Moisture and light accelerate decomposition. Air causes decomposition to iodine. Reacts violently with strong oxidizers, bromotrifluorides, chlorotrifluorides, fluorine perchlorate, metallic salts. Attacks metals in moist environments. Reactive with oxidizing agents, reducing agents, organic materials, acids.
<b>Hazardous Polymerization</b>	Will not occur.

**11. Toxicological Information**

<b>Ingestion</b>	Ingestion may result in a metallic taste, increased salivary and bronchial secretions, gastrointestinal tract irritation with nausea, vomiting, diarrhoea, abdominal pain, parotitis and/or convulsions. Acute poisoning by potassium salts is likely to give rise to irritation of the throat, general stomach upset and vomiting which may lead to weakness, agitation and confusion, hypotension, paralysis and possible circulatory disturbances including cardiac arrhythmias, heart block and cardiac arrest. May affect behaviour (somnolence, muscle weakness), respiration (dyspnoea). Acute hypersensitivity reactions including angioedema, urticaria, Stevens Johnson syndrome, systemic vasculitis, serum-sickness-like reactions such as fever, arthralgia, lymph node enlargement, and eosinophilia may appear. Thrombotic thrombocytopenic purpura, and fatal periarteritis nodosa attributed to hypersensitivity to iodide has been described. Iodides have been known to cause drug-induced fevers, which are usually of short duration.
<b>Inhalation</b>	Inhalation of product dusts may cause irritation of the mucous membranes of the nose, throat and respiratory system. Symptoms may include coughing and shortness of breath. May cause respiratory sensitization. May cause pulmonary oedema and inflammation of the tonsils.
<b>Skin</b>	May cause irritation to skin and mucous membranes with redness, pain, and itching. May be harmful if absorbed through the skin. May cause allergic sensitization in certain individuals.
<b>Eye</b>	May cause irritation, redness, pain, itching and tearing.
<b>Carcinogenicity</b>	Not listed in the IARC Monographs.
<b>Reproductive Toxicity</b>	Suspected Developmental Toxicant (Jankovic, J. A Screening Method for Occupational Reproductive Health Risk. American Industrial Hygiene Association Journal. 57: 641-649. 1996.) Potassium Iodide has been investigated as reproductive effector. Reproductive effects have been observed on tests with laboratory animals. Reproductive effects have been observed on tests with humans. Possible risk of harm to the unborn child. Iodides are readily diffused across the placenta. Potassium iodide is distributed into human breast milk. Exposure to excessive amounts of iodine during pregnancy is capable of producing foetal hypothyroidism. Cretinism and goiter have been reported in children born to mothers chronically taking iodides during pregnancy. Neonatal deaths from respiratory distress secondary to goiter have been reported. Potassium iodide has been shown to produce fetotoxicity in newborns. Reproductive effects, TDL <sub>0</sub> (woman) 2700 mg/kg (1 - 39 w preg): Specific developmental abnormality (endocrine system).
<b>STOT-repeated exposure</b>	Specific target organ toxicity (Oral, Thyroid) Repeated Exposure: Category 1
<b>Chronic Effects</b>	Chronic ingestion of iodides may produce 'iodism,' which may be manifested by salivation, skin rash or eruptions, running nose, sneezing, conjunctivitis, fever, headache, irritation of mucous membranes, laryngitis, bronchitis, stomatitis and parotitis. In severe cases, the skin may show pimples, boils, redness, hives, blisters and black and blue spots, and various cutaneous manifestations, including erythema nodosum, polymorphic eruptions, urticaria, vasculitis, and petechia, and weakness, anaemia, weight loss and general depression may also occur. These symptoms affect certain individuals who are highly sensitive to iodides and they may occur after exposure to minute amounts of iodine or iodides. Chronic ingestion may also affect metabolism (anorexia), and thyroid gland (hypothyroidism, goiter and rarely hyperthyroidism). Furthermore, chronic ingestion of iodides (in animals) during pregnancy has resulted



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**Mutagenicity**

in foetal deaths, severe goiter and cretinoid appearance of the newborn.  
 Bacterial mutagenicity: Salmonella typhimurium: negative, Escherichia coli: negative.  
 Mutagenic for mammalian somatic cells.  
 Mutagenic effects have occurred in experimental animals.

**12. Ecological information****Ecological Information**

No ecological problems are to be expected when the product is handled and used with due care and attention.

**Persistence and degradability**

Methods for the determination of biodegradability are not applicable to inorganic substances. While data specific to potassium iodide were not located, the literature suggests that some pharmaceutically active compounds originating from human and veterinary therapy are not eliminated completely in municipal sewage treatment plants and are therefore discharged into receiving waters. Wastewater treatment processes often were not designed to remove them from the effluent. Selected organic waste compounds may be degrading to new and more persistent compounds that may be released instead of or in addition to the parent compound. Studies have indicated that several polar pharmaceutically active compounds can leach through subsoils into aquifers.

**Acute Toxicity - Fish**

Onchorhynchus mykiss LC50: 2190 mg/l /96 h.

**13. Disposal considerations****Disposal**

Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

**Considerations****14. Transport information****Transport Information**

Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**15. Regulatory information****Regulatory Information**

Listed in the Australian Inventory of Chemical Substances (AICS).

**Poisons Schedule**

Not Scheduled

**16. Other Information****Literature References**

'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016.  
 Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.  
 National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.  
 Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.  
 Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.  
 Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.  
 Safe Work Australia, 'Hazardous Substances Information System, 2005'.  
 Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.  
 Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.

**Contact****Person/Point**Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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**Empirical Formula & Structural Formula**

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# Safety Data Sheet

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