

Infosafe No™ 1CHBQ Issue Date : February 2022 RE-ISSUED by CHEMSUPP

Product Name **POTASSIUM PERIODATE**

Classified as hazardous

## Section 1 - Identification

**Product Identifier** POTASSIUM PERIODATE  
**Company Name** CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)  
**Address** 38 - 50 Bedford Street GILLMAN  
 SA 5013 Australia  
**Telephone/Fax Number** Tel: (08) 8440-2000  
**Emergency Phone Number** CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)  
**E-mail Address** www.chemsupply.com.au  
**Recommended use of the chemical and restrictions on use** Oxidising manganese compounds to permanganate, powerful oxidiser in acid solution, oxidation of some organic compounds and laboratory reagent.

<b>Other Names</b>	<u>Name</u>	<u>Product Code</u>
	Potassium iodate (VII), Potassium metaperiodate, Potassium metaperiodate, Potassium tetroxiodate POTASSIUM PERIODATE AR	PA132

### Other Information

ChemSupply Australia 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 ChemSupply Australia 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 ChemSupply Australia 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.

## Section 2 - Hazard(s) Identification

**GHS Classification of the Substance/Mixture** Oxidizing Solids: Category 2  
 Skin Corrosion/Irritation: Category 1  
 Specific target organ toxicity - Single Exposure Category 3 (respiratory tract irritation)  
 Acute Toxicity - Oral - Category 4

**Signal Word** DANGER

**Hazard Statement (s)** H272 May intensify fire; oxidiser.  
 H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H371 May cause damage to organs.

**Pictogram (s)** Flame over circle, Corrosion, Health Hazard, Exclamation mark



**Precautionary Statement - Prevention** P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 P220 Keep/Store away from clothing/.../combustible materials.  
 P221 Take any precaution to avoid mixing with combustibles ...  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264 Wash thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/protective clothing/eye protection/face

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protection.

**Precautionary Statement – Response**  
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.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
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.  
P370+P378 In case of fire: Use flooding quantities of water for extinction.

**Precautionary Statement – Storage**  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

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

### Section 3 - Composition and Information on Ingredients

Ingredients	Name	CAS	Proportion
	Potassium periodate	7790-21-8	100 %

### Section 4 - First Aid Measures

**Inhalation**      If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.

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

**Skin**      Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If rapid recovery does not occur, obtain medical attention

**Eye**      Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If rapid recovery does not occur, obtain medical attention

**First Aid Facilities**      Maintain eyewash fountain and safety shower 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.

### Section 5 - Firefighting Measures

**Hazards from Combustion Products**      May evolve toxic fumes of hydrogen iodide (HI), potassium iodate, oxides of potassium, iodide ions (I-) and oxygen.

**Specific Methods**      Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO2 or foam. If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat.  
Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.

**Specific Hazards Arising from the Chemical**      Will accelerate burning when involved in a fire. May explode from heating, shock, friction or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode when heated. Runoff may create fire or explosion hazard.

**Hazchem Code**      1Y

**Decomposition Temperature**      > 582 °C; boiling point.

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**Precautions in connection with Fire** Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

## Section 6 - Accidental Release Measures

**Spills & Disposal** Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat.

**Dry Spill**

Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area.

**Small Liquid Spill**

Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal.

**Large Liquid Spill**

SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

**Personal Precautions** Avoid raising a dust cloud. Do not breathe dust, fumes, vapour, gas. Ventilate contaminated area thoroughly. Evacuate all personnel

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

## Section 7 - Handling and Storage

**Precautions for Safe Handling** Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid prolonged or repeated exposure. If you feel unwell, seek medical attention and show the label when possible. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Ensure good ventilation at the workplace. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from incompatibles such as reducing agents, combustible, organic and flammable materials. Keep away from heat and all sources of ignition. No smoking. Take precautionary measures against electrostatic discharges. Minimize dust generation and accumulation. Containers of this material may be hazardous when empty since they contain product residue.

**Conditions for safe storage, including any incompatibilities** Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances. Store away from flammable and combustible materials. Keep away from reducing agents. Keep away from sources of heat or ignition. Heat can cause thermal decomposition and pressure build-up inside containers. Keep well closed and protected from direct sunlight and moisture. Hygroscopic. Avoid storage on wood floors. Oxidizing materials should be stored in a separate safety storage cabinet or room. Containers of this material may be hazardous when empty since they contain product residue.

**Storage Regulations** Refer Australian Standard AS 4326-1995 'The storage and handling of oxidizing agents'.

**Storage Temperatures** Store at room temperature (15 to 25 °C recommended).

**Unsuitable Materials** Organic materials.

## Section 8 - Exposure Controls and 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.

**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

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<b>Eye and Face Protection</b>	required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. 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.
<b>Hand Protection</b>	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Butyl rubber gloves Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.
<b>Personal Protective Equipment</b>	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
<b>Body Protection</b>	Flame retardant antistatic protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
<b>Hygiene Measures</b>	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## Section 9 - Physical and Chemical Properties

<b>Form</b>	Solid
<b>Appearance</b>	Colourless crystals or white fine crystalline powder.
<b>Odour</b>	Pungent
<b>Melting Point</b>	582 °C
<b>Boiling Point</b>	Decomposes.
<b>Decomposition Temperature</b>	> 582 °C; boiling point.
<b>Solubility in Water</b>	Slightly soluble (2.3 g/l water @ 20 °C) (one of the less soluble of potassium salts, owing to a large anion).
<b>Specific Gravity</b>	3.62 g/cm <sup>3</sup> at 20 °C
<b>pH</b>	Slightly alkaline aqueous solution (4.5 - 5.5).
<b>Vapour Pressure</b>	Negligible.
<b>Relative Vapour Density (Air=1)</b>	7.9
<b>Evaporation Rate</b>	Negligible.
<b>Volatile Component</b>	0 %vol @ 21 °C.
<b>Flammability</b>	Not combustible but assists combustion of other substances.
<b>Explosion Properties</b>	May explode when shocked, or if exposed to heat, open flames, friction, reducing materials, or combustible materials. Also may act as initiation source for dust or vapour explosions.
<b>Molecular Weight</b>	230.00
<b>Oxidising Properties</b>	Strong oxidizing agent, can release gaseous oxygen when heated.
<b>Solubility in other solvents (kg/m<sup>3</sup>)</b>	Sparingly soluble in aqueous KOH.

## Section 10 - Stability and Reactivity

<b>Chemical Stability</b>	Stable under ordinary conditions of use and storage.
<b>Possibility of Hazardous Reactions</b>	Highly reactive with reducing agents, combustible materials, organic materials, flammable substances.
<b>Conditions to Avoid</b>	Heat, high temperatures, flames, ignition sources, incompatible materials, combustible materials, organic materials, water, air, light and dust generation.

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<b>Incompatible Materials</b>	Some organic compounds or reducing agents; finely powdered metals, such as aluminium or magnesium metal; hydrides; reducing agents; ammonium perchlorate; amines; combustible materials; manganese(IV) oxide + heat; flammable substances and sulphuric acid.
<b>Hazardous Decomposition Products</b>	Toxic fumes of hydrogen iodide (HI), potassium iodate, oxides of potassium, iodide ions (I <sup>-</sup> ) and oxygen.
<b>Hazardous Polymerization</b>	Will not occur.

## Section 11 - Toxicological Information

<b>Ingestion</b>	May be harmful if swallowed. May cause irritation of the digestive tract. May cause gastrointestinal upset with symptoms of abdominal pain, vomiting, and diarrhoea. Animal experiments suggest a potential for kidney and blood cell damage, similar to that of the bromates and chlorates.
<b>Inhalation</b>	May be harmful if inhaled. Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
<b>Skin</b>	May be harmful if absorbed through the skin. Causes irritation to skin. Symptoms include redness, itching, and pain.
<b>Eye</b>	Causes serious eye irritation, redness, and pain. Crystals may be abrasive.
<b>Skin Sensitisation</b>	Sensitization with allergic manifestations in predisposed persons.
<b>Carcinogenicity</b>	Not listed in the IARC Monographs.
<b>Chronic Effects</b>	Repeated ingestions may cause kidney dysfunction or failure and blood conditions such as hemolysis. Central nervous system may be affected. Effects may be delayed.

## Section 12 - Ecological Information

<b>Ecological Information</b>	No ecological problems are to be expected when the product is handled and used with due care and attention.
<b>Ecotoxicity</b>	Quantitative data on the ecological effect of this product are not available.
<b>Persistence and Degradability</b>	Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Environmental Protection</b>	Do not allow to enter waters, waste water, or soil!

## Section 13 - Disposal Considerations

<b>Disposal Considerations</b>	Dispose of according to relevant local, state and federal government regulations.
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## Section 14 - Transport Information

<b>Transport Information</b>	Dangerous Goods of Class 5.1 Oxidising Agents are incompatible in a placard load with any of the following: - Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class 7, Class 8, Fire risk substances and combustible liquids.
<b>ADG UN Number</b>	1479
<b>ADG Proper Shipping Name</b>	OXIDIZING SOLID, N.O.S. - (Potassium periodate)
<b>ADG Transport Hazard Class</b>	5.1
<b>ADG Packing Group</b>	II
<b>Hazchem Code</b>	1Y
<b>EPG Number</b>	5B1
<b>IERG Number</b>	31

## Section 15 - Regulatory Information

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**Poisons Schedule**      Not Scheduled

## Section 16 - Any Other Relevant Information

**Literature References**      'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.  
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'  
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.  
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.  
Safe Work Australia, 'Hazardous Chemical Information System'.  
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.  
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

**Contact Person/Point**      Paul McCarthy Ph. (08) 8440 2000      **DISCLAIMER STATEMENT:**  
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**Empirical Formula & Structural Formula**      Empirical Formula: KIO<sub>4</sub>.  
Structural Formula: K-O-IO<sub>3</sub>

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