

## Safety Data Sheet SODIUM IODATE

SDS no. QYK9AH43 • Version 1.0 • Date of issue: 2023-01-29

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### SECTION 1: Identification

#### GHS Product identifier

Product name SODIUM IODATE

#### Recommended use of the chemical and restrictions on use

Antiseptic, disinfectant, feed additive and laboratory reagent.

#### Supplier's details

Name ChemSupply Australia Pty Ltd  
Address 38-50 Bedford Street  
5013 Gillman South Australia  
Australia

Telephone 08 8440 2000  
email [www.chemsupply.com](http://www.chemsupply.com)

#### Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

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### SECTION 2: Hazard identification

#### General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

#### Classification of the substance or mixture

#### GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, oral, Cat. 4
- Oxidizing solids, Cat. 2
- Respiratory sensitizer, Cat. 1
- Skin sensitizer, Cat. 1

#### GHS label elements, including precautionary statements

#### Pictograms



**Signal word**

**Danger**

**Hazard statement(s)**

H272  
H302  
H317  
H334

May intensify fire; oxidizer  
Harmful if swallowed  
May cause an allergic skin reaction  
May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Precautionary statement(s)**

P210  
  
P220  
P261  
P264  
P270  
P272  
P280  
P284  
P301+P312  
P302+P352  
P304+P340  
P330  
P333+P313  
P342+P311  
P362+P364  
P370+P378  
P501

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Keep away from clothing and other combustible materials.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell,  
IF ON SKIN: Wash with plenty of water/soap  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Rinse mouth.  
If skin irritation or rash occurs: Get medical advice/attention.  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician  
Take off contaminated clothing and wash it before reuse.  
In case of fire: Use agents recommended in Section 5 of SDS for extinction  
Dispose of contents/container to an approved waste disposal facility

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**SECTION 3: Composition/information on ingredients**

**Mixtures**

Molecular weight: 197.89

**Components**

Component	Concentration
Sodium iodate (CAS no.: 7681-55-2; EC no.: 231-672-5)	100 - 100 % (weight)
CLASSIFICATIONS: Acute toxicity, oral, Cat. 4; Oxidizing solids, Cat. 2; Respiratory sensitizer, Cat. 1; Skin sensitizer, Cat. 1. HAZARDS: H272 - May intensify fire; oxidizer; H302 - Harmful if swallowed; H317 - May cause an allergic skin reaction; H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.	

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**SECTION 4: First-aid measures**

**Description of necessary first-aid measures**

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

If inhaled

If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

In case of skin contact	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
In case of eye contact	If in eyes wash out immediately with water.
If swallowed	If swallowed, do NOT induce vomiting.
Personal protective equipment for first-aid responders	No action shall be taken involving any personal risk or without suitable training.

**Most important symptoms/effects, acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**Indication of immediate medical attention and special treatment needed, if necessary**

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

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**SECTION 5: Fire-fighting measures**

**Suitable extinguishing media**

Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO<sub>2</sub> 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**

Very toxic fumes including halogenated compounds, iodine, hydrogen iodide (HI), and sodium/sodium oxides.

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.

**Special protective actions for fire-fighters**

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

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**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

**Methods and materials for containment and cleaning up**

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. Prevent exposure to heat.  
Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely.

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**SECTION 7: Handling and storage**

**Precautions for safe handling**

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Avoid ingestion and inhalation of dust. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. Keep container tightly-closed. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Under no circumstances eat, drink or smoke while handling this material. Keep away from flammable substances, reducing agents or combustible materials. Keep away from heat and all sources of ignition.

### Conditions for safe storage, including any incompatibilities

Oxidizing materials should be stored in a separate, fireproof, safety storage cabinet or room. Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances. Store away from combustible materials, flammable substances, acids, alkalis, and reducing agents. Keep away from heat, sparks, and open flame.

Corrosiveness: Neutral in solution.

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## SECTION 8: Exposure controls/personal protection

### Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

### Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face 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.

#### Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Normally not required but if in doubt ensure hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

#### Body protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

#### Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

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## SECTION 9: Physical and chemical properties

### Basic physical and chemical properties

Physical state	Solid
Appearance	White, fine crystalline powder, crystalline granules, or rhombic crystals.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.

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Melting point/freezing point  
Boiling point or initial boiling point and boiling range  
Flammability  
Lower and upper explosion limit/flammability limit  
Flash point  
Explosive properties

Approx. 540 °C (decomposes).

No data available.

No data available.

No data available.

No data available.

Risk of explosion with reducing agents and combustible materials. Mixtures of iodates with finely divided aluminium, arsenic, copper, carbon, phosphorous (red or white), sulfur; hydrides of alkali and alkaline earth metals; sulfides of antimony, arsenic, copper or tin, metal cyanides, thiocyanates or impure manganese dioxide may react violently or explosively, either spontaneously (especially in the presence of moisture) or on initiation by heat, friction impact, sparks, or addition of sulfuric acid.

No data available.

Approx. 540 °C.

Strong oxidizer. Contact with combustible material may cause fire.

Aqueous solution is neutral; ~ 5.8 (90 g/l H<sub>2</sub>O at 25 °C).

No data available.

Solubility in Water: Soluble in water (81 g/L at 20 °C, 330 g/L at 100 °C). [13] Solubility in Organic Solvents: Soluble in acetone and acetic acid; insoluble in methanol.

No data available.

Negligible.

Negligible.

Specific Gravity: 4.277.

No data available.

Auto-ignition temperature  
Decomposition temperature  
Oxidizing properties

pH  
Kinematic viscosity  
Solubility

Partition coefficient n-octanol/water (log value)  
Vapor pressure  
Evaporation rate  
Density and/or relative density  
Relative vapor density

#### Particle characteristics

No data available.

#### Supplemental information regarding physical hazard classes

No data available.

#### Further safety characteristics (supplemental)

Two hydrates exist in saturated solution, the pentahydrate up to 19.85 °C and the monohydrate from 19.85-73.4 °C.

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## SECTION 10: Stability and reactivity

### Reactivity

Reacts with incompatible materials

### Chemical stability

Stable under ordinary conditions of use and storage. However, may decompose on exposure to light, on exposure to air and moisture and if heated.

### Possibility of hazardous reactions

Reaction with reducing agents and combustible materials may be flammable and explosive. Reacts with flammable substances. Contact with other material may cause a fire. May react violently with aluminium; arsenic; carbon; copper; hydrogen peroxide; metal sulfides; organic matter; phosphorus; potassium; sulfur. Slightly reactive with acids and alkalis.

### Conditions to avoid

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High temperatures, strong heating (formation of oxygen), dust generation, exposure to light, air and moisture, combustible materials, organic materials and incompatible materials.

### Incompatible materials

Water/moisture; reducing agents; flammable liquids; combustible substances (risk of explosion); easily oxidized materials; organic materials; sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide); sulfides of antimony, arsenic, copper or tin; hydrogen peroxide; ammonium perchlorate; magnesium; potassium; finely powdered metals mixtures of iodates with finely divided aluminium, arsenic, copper, carbon, phosphorous (red or white), sulfur; hydrides of alkali and alkaline earth metals; metal cyanides; thiocyanates or impure manganese dioxide; acids and alkalis.

### Hazardous decomposition products

Very toxic fumes including halogenated compounds, iodine, hydrogen iodide (HI), and sodium/sodium oxides.

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

Acute Toxicity - Oral: LD50 (mouse): 505 mg/kg, Remarks: Behavioural: Food intake (animal).

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting, diarrhoea and abdominal pain. Large doses (between 187 and 470 mg/kg body weight) may produce retinal toxicity, possible acute renal failure and possible nephrotoxic and haemolytic effects (haemoglobinuria). Effects following absorption of toxic quantities may include cyanosis, collapse, respiratory arrest and mucosal irritations. Probable oral lethal dose for humans is 50-500 mg/kg; between 1 teaspoon and 1 ounce for 70 kg person.

Inhalation: May be harmful if inhaled. Inhalation of dust may cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary oedema.

// ----- From the Suggestion report (31/01/2023, 5:45 PM) ----- //

The ATE (oral) of the mixture is: 500 mg/kg bw

#### Skin corrosion/irritation

Irritating to skin and mucous membranes, with itching, scaling, reddening, or, occasionally, blistering. Exposure can cause skin rash. May be harmful if absorbed through the skin.

#### Serious eye damage/irritation

Contact with eyes may cause severe irritation, and possible eye burns. Inflammation of the eye is characterized by redness, watering, and itching. May cause eye injury.

#### Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

#### Germ cell mutagenicity

Not considered to be a mutagenic hazard.

#### Carcinogenicity

Not considered to be a carcinogenic hazard.

#### Reproductive toxicity

Not considered to be toxic to reproduction.

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### Specific target organ toxicity (STOT) - single exposure

Not expected to cause toxicity to a specific target organ.

### Specific target organ toxicity (STOT) - repeated exposure

Not expected to cause toxicity to a specific target organ.

### Aspiration hazard

Not expected to be an aspiration hazard.

### Additional information

Chronic Effects: Prolonged or repeated exposure may cause gastrointestinal irritation and kidney damage. Chronic exposure may affect the liver. Chronic ingestion may cause central nervous system failure. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation and damage to lungs and mucous membranes. Repeated or prolonged exposure to the substance can produce skin burns, ulcerations, local skin destruction or dermatitis. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Chronic exposure can lead to iodism characterized by headache, excess salivation, nasal discharge, conjunctivitis, laryngitis, bronchitis, stomatitis, enlarged submaxillary glands, skin rashes.

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Sodium iodate: dog LDLo intravenous 200mg/kg (200mg/kg) "Handbook of Toxicology," 4 vols., Philadelphia, W.B. Saunders Co., 1956-59Vol. 1, Pg. 274, 1955.

mouse LD50 intraperitoneal 119mg/kg (119mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

BEHAVIORAL: EXCITEMENT

LUNGS, THORAX, OR RESPIRATION: OTHER CHANGES Journal of Pharmacology and Experimental Therapeutics. Vol. 120, Pg. 171, 1957.

[Link to PubMed](#)

mouse LD50 intravenous 108mg/kg (108mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

LUNGS, THORAX, OR RESPIRATION: OTHER CHANGES

BEHAVIORAL: EXCITEMENT Journal of Pharmacology and Experimental Therapeutics. Vol. 120, Pg. 171, 1957.

[Link to PubMed](#)

mouse LD50 oral 505mg/kg (505mg/kg) BEHAVIORAL: FOOD INTAKE (ANIMAL) Journal of Pharmacology and Experimental Therapeutics. Vol. 120, Pg. 171, 1957.

[Link to PubMed](#)

rabbit LDLo intravenous 75mg/kg (75mg/kg) PERIPHERAL NERVE AND SENSATION: SPASTIC PARALYSIS WITH OR WITHOUT SENSORY CHANGE

BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

KIDNEY, URETER, AND BLADDER: PROTEINURIS Journal of Pharmacology and Experimental Therapeutics. Vol. 40, Pg. 451, 1930.

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## SECTION 12: Ecological information

### Toxicity

Acute Toxicity - Fish: *Oncorhynchus mykiss* LC50: 220 mg/l/96 hrs.

### Persistence and degradability

No data available.

### Bioaccumulative potential

No data available.

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### Mobility in soil

No data available.

### Results of PBT and vPvB assessment

No data available.

### Endocrine disrupting properties

No data available.

### Other adverse effects

No data available.

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## SECTION 13: Disposal considerations

### Disposal methods

#### Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

#### Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

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## SECTION 14: Transport information

### ADG (Road and Rail)

UN Number: 1479

Class: 5.1

Packing Group: II

Proper Shipping Name: OXIDIZING SOLID, N.O.S.

### Hazchem emergency action code (EAC)

1Y

### IMDG

UN Number: 1479

Class: 5.1

Packing Group: II

EMS Number:

Proper Shipping Name: OXIDIZING SOLID, N.O.S.

### IATA

UN Number: 1479

Class: 5.1

Packing Group: II

Proper Shipping Name: OXIDIZING SOLID, N.O.S.

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### Australia SUSMP

Poison Schedule: NS



## **SECTION 16: Other information**

### **Further information/disclaimer**

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.