

# SAFETY DATA SHEET



Revision date: 13-Oct-2022

Revision Number 6

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** IODINE PRILLS 99.9%

**Product Code(s)** 000000033944

### Other means of identification

**UN number** 3495

**CAS No.** 7553-56-2

**Synonyms** Iodine BP

**Pure substance/mixture** Substance

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

**Recommended use** Pharmaceutical applications.

**Uses advised against** No information available.

### Supplier

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia  
ABN:51 600 546 512  
70 Marple Avenue  
Villawood NSW 2163  
Australia

Telephone Number: +61 2 8717 2929

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### Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Acute aquatic toxicity	Category 1

**SIGNAL WORD**

Danger

**Label elements**

Corrosion  
Skull and crossbones  
Health hazard  
Exclamation mark  
Environment



**Hazard statements**

- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H335 - May cause respiratory irritation
- H372 - Causes damage to organs through prolonged or repeated exposure

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:  
H400 - Very toxic to aquatic life

**Precautionary Statements - Prevention**

- Avoid breathing dust / fume / gas / mist / vapours / spray
- Do not eat, drink or smoke when using this product
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves / protective clothing / eye protection / face protection
- Avoid release to the environment
- Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

- Specific treatment (see First aid on this SDS)
- Call a POISON CENTER or doctor/physician if you feel unwell
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention
- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation or rash occurs: Get medical advice/attention
- Take off contaminated clothing and wash it before reuse
- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth
- Collect spillage

**Precautionary Statements - Storage**

- Store locked up

Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**

Poisons Schedule (SUSMP) 6

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Chemical name	CAS No.	Weight-%
Iodine	7553-56-2	99-100

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Inhalation</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, (trained personnel should) give oxygen. Seek immediate medical attention/advice.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. This material can be absorbed through the skin with resultant toxic effects. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

<b>Symptoms</b>	Irritation. May cause redness and tearing of the eyes. Coughing and/ or wheezing. Difficulty in breathing.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically.
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**5. FIRE FIGHTING MEASURES****Suitable Extinguishing Media**

<b>Suitable Extinguishing Media</b>	Fine water spray. Foam. Dry chemical or CO2.
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<b>Unsuitable extinguishing media</b>	No information available.
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**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Non-combustible. Substance itself does not burn but may decomposes upon heating to produce corrosive/toxic fumes, including those of iodine and hydrogen iodide. Avoid
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generation of dust. In the event of fire, cool tanks with water spray. Environmentally hazardous. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Hazardous combustion products** Iodine vapours.

#### **Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** 2WE

## **6. ACCIDENTAL RELEASE MEASURES**

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

**Personal precautions** Avoid breathing dust / fume / gas / mist / vapours / spray. Ensure adequate ventilation. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Avoid generation of dust. Evacuate personnel to safe areas. Wash thoroughly after handling. Use personal protective equipment as required.

**Other information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Shut off ignition sources. Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

### **Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter into soil/subsoil. Prevent product from entering drains. See Section 12 for additional Ecological Information.

### **Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Remove ignition sources. Provide adequate ventilation. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

**Methods for cleaning up** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Neutralise with lime or soda ash.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. Avoid breathing dust or spray mist. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take off contaminated clothing and wash before reuse. Wash thoroughly after handling. Use personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Use according to package label instructions. Keep out of reach of children.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection.

### **Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs and sources of heat or ignition. Protect from sunlight. Store away from incompatible materials described in Section 10. Keep container closed when not in use.  This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.
<b>Packaging materials</b>	Avoid: Metal, steel, iron and zinc materials.(1).
<b>Incompatible materials</b>	Ammonia, sulfur, sodium, phosphorus, acetylene, ammonium hydroxide, powdered metals and strong reducing metals/agents.
<b>Poisons Schedule (SUSMP)</b>	6

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Limits

Chemical name	Australia	ACGIH TLV
Iodine 7553-56-2	0.1 ppm Peak 1 mg/m <sup>3</sup> Peak	

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

Peak Limitation - a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls

<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.  If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.
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### Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



<b>Eye/face protection</b>	Tight sealing safety goggles. Face protection shield.
<b>Skin and body protection</b>	Wear suitable protective clothing. Overalls. Apron. Boots.
<b>Hand protection</b>	Impervious gloves.
<b>Respiratory protection</b>	If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
<b>Environmental exposure controls</b>	No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	Prills Crystals
<b>Color</b>	Grey Metallic Violet - Black
<b>Odor</b>	Irritating , Pungent
<b>Odor threshold</b>	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	5.4 (saturated solution)	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Melting point / freezing point</b>	114 °C	None known
<b>Boiling point / boiling range</b>	184 °C	None known
<b>Flash point</b>	Not Applicable	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	Not Applicable	
<b>Lower flammability or explosive limits</b>	Not Applicable	
<b>Vapor pressure</b>	0.4 hPa @20 °C	None known
<b>Vapor density</b>	8.8	None known
<b>Relative density</b>	4.9	None known
<b>Water solubility</b>	0.03 g/100ml	None known
<b>Solubility(ies)</b>	Insoluble in water Sinks in water. Soluble in ethanol, ether, chloroform, tetrachloromethane, methanol, carbondisulfide.	None known
<b>Partition coefficient</b>	2.49 (experimental value)	None known
<b>Autoignition temperature</b>	Not Applicable	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	Not Applicable	None known
<b>Dynamic viscosity</b>	0.0022 Pa.s @ 116 °C	None known

### Other information

## 10. STABILITY AND REACTIVITY

**Reactivity**

**Reactivity** Reacts with incompatible materials shown below.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** May react violently or explosively with ammonium hydroxide, acetaldehyde and acetylene. (2).

**Conditions to avoid**

**Conditions to avoid** Heat, flames and sparks. Avoid contact with combustible substances. Dust formation. Direct sunlight. Do not contaminate food or feed stuffs.

**Incompatible materials**

**Incompatible materials** Ammonia, sulfur, sodium, phosphorus, acetylene, ammonium hydroxide, powdered metals and strong reducing metals/agents.

**Hazardous decomposition products**

**Hazardous decomposition products** Iodine vapours.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Information on likely routes of exposure**

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** Harmful by inhalation. May cause irritation of respiratory tract.

**Eye contact** Causes serious eye irritation.

**Skin contact** Causes skin irritation. Harmful in contact with skin. May be absorbed through the skin in harmful amounts.

**Ingestion** Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms** Irritation. May cause redness and tearing of the eyes. Coughing and/ or wheezing. Difficulty in breathing.

**Numerical measures of toxicity - Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Iodine	= 14 000 mg/kg ( Rat ) ATE CA (oral)= 500 mg/kg bodyweight (1)	= 1425 mg/kg (Rabbit)bodyweight (1)	> 4.588 mg/l/4h (Rat, dust/mist) ATE CA (dust,mist)=1.5 mg/l/4h (1)

See section 16 for terms and abbreviations

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	Causes skin irritation. pH: 5.4 (1).
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation. pH: 5.4 (1).
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause respiratory irritation.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	No information available.
<b>Chronic effects:</b>	Chronic over-exposure can lead to iodism, a mild toxic syndrome, with symptoms of salivation, nasal discharge, sneezing, conjunctivitis, fever, laryngitis, bronchitis, stomatitis and various skin rashes. Long-term high level exposure will cause a reversible reduction in thyroid function. (2)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Toxic to aquatic life. Avoid contaminating waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Iodine	ErC50: 0.13 mg/l (algae)	LC50: =0.164 mg/l (LC50; 96 h)	-	EC50 =0.55 mg/l (Daphnia)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** This chemical shows a low bioaccumulation potential. BCF= 0.027. (1).

### Component Information

Chemical name	Partition coefficient
Iodine	2.49 (Experimental value)(1)

### Mobility

**Mobility in soil** No information available.



Other adverse effects**13. DISPOSAL CONSIDERATIONS**Waste treatment methods

<b>Waste from residues/unused products</b>	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

<b>UN number</b>	3495
<b>Proper shipping name</b>	IODINE
<b>Hazard class</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>Packing group</b>	III
<b>Environmental hazard</b>	Yes
<b>Special Provisions</b>	279
<b>Hazchem code</b>	2WE

**IATA**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

<b>UN number</b>	3495
<b>UN proper shipping name</b>	IODINE
<b>Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>Packing group</b>	III

**IMDG**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

<b>UN number</b>	3495
<b>UN proper shipping name</b>	IODINE
<b>Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>Packing group</b>	III
<b>IMDG EMS Fire</b>	F-A
<b>IMDG EMS Spill</b>	S-B
<b>Marine pollutant</b>	Yes

**15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixtureNational regulations

**Australia**

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poisons Schedule (SUSMP)** 6

**International Inventories**

**AIIC** This material is listed on the Australian Inventory of Industrial Chemicals.

**Legend:**

**AIIC - Australian Inventory of Industrial Chemicals**

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**16. OTHER INFORMATION**

- (1) Supplier Safety Data Sheet 03/ 2018
- (2) Bronson & Jacobs Safety Data Sheet 12/ 2016

**Reason(s) For Issue:** 5 Yearly Revised Primary SDS  
Change in Hazardous Chemical Classification

**Issuing Date:** 13-Oct-2022

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal

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Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.**

**Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.**

**End of Safety Data Sheet**