

## SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : **Iodine**

Product Number : 376558  
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Pte Ltd  
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### 2. HAZARDS IDENTIFICATION

#### Risk advice to man and the environment

Harmful by inhalation and in contact with skin. Very toxic to aquatic organisms.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : I<sub>2</sub>  
Molecular Weight : 253,81 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration [%]
<b>Iodine</b>				
7553-56-2	231-442-4	053-001-00-3	Xn, N, R20/21- R50	-

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not let product enter drains.

### Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### Storage

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

Handle and store under inert gas. hygroscopic

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	solid
Colour	black, violet
Odour	pungent

## Safety data

pH	5,4
Melting point	113,5 °C
Boiling point	184,4 °C at 1.013 hPa
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	0,41 hPa at 25 °C
Density	4,930 g/cm <sup>3</sup>
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: 2,49
Vapour density	8,76 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Rubber, Plastics, Iron and iron salts., Sulphur compounds, Ammonia, Magnesium, Zinc, Aluminum, Metals, Alkalis, Antimony salts, Arsenites, bromides, chlorides, iodides, thiocyanates, ferrous salts, hypophosphites, morphine salts, oils, creosote, phosphates, tannins, tartrates, Mixing iodine, antimony, and ammonia resulted in an explosion. A violent reaction occurs between iodine and acetaldehyde., Acetylene, Acetaldehyde

### Hazardous decomposition products

#### Hazardous decomposition products formed under fire conditions.

Nature of decomposition products not known.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 14.000 mg/kg

### Irritation and corrosion

no data available

### Sensitisation

May cause allergic skin reaction.

### Chronic exposure

no data available

### Signs and Symptoms of Exposure

Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include: skin rash, running nose, headache and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters and black and blue spots. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration.

### Potential Health Effects

<b>Inhalation</b>	Harmful if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	Harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Target Organs</b>	Thyroid., Kidney, Endocrine system., Skin, Eyes, Reproductive system., Central nervous system,

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 1,7 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 0,2 mg/l - 48 h

### Further information on ecology

Very toxic to aquatic organisms.

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### ADR/RID

UN-Number: 1759 Class: 8 Packing group: II  
Proper shipping name: CORROSIVE SOLID, N.O.S. (Iodine)

### IMDG

UN-Number: 1759 Class: 8 Packing group: II EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE SOLID, N.O.S. (Iodine)  
Marine pollutant: No

### IATA

UN-Number: 1759 Class: 8 Packing group: II  
Proper shipping name: Corrosive solid n.o.s. (Iodine)

## 15. REGULATORY INFORMATION

### Labelling according to EC Directives

EC Label

Hazard symbols

Xn	Harmful
N	Dangerous for the environment

R-phrases)

R20/21 Harmful by inhalation and in contact with skin.  
R50 Very toxic to aquatic organisms.

S-phrases(s)

S23 Do not breathe gas/fumes/vapour/spray.  
S25 Avoid contact with eyes.  
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

**16. OTHER INFORMATION**

**Further information**

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