

**1. Identification of the substance/preparation and of the company/undertaking***Identification of the product*

Iodine

*Manufacturer/supplier identification*

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**2. Hazards identification****Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Dermal (Category 4)

Skin corrosion (category 1C)

Skin sensitization (Category 1)

Acute aquatic toxicity (Category 1)

**Label elements**

Pictogram



Signal word    Danger

**Hazard statement(s)**

- H312     Harmful in contact with skin.  
H314     Causes severe skin burns and eye damage.  
H317     May cause an allergic skin reaction.  
H332     Harmful if inhaled.  
H400     Very toxic to aquatic organisms.

**Precautionary statement(s)**

- P273                      Avoid release to the environment.  
P280                      Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P303 + P361 + P353    IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P310    IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
P305 + P351 + P338    IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P391                      Collect spillage.

**Supplemental Hazard Statements**

none



## Material Safety Data Sheet

### 3. Composition/information on ingredients

#### *Synonyms*

Iodine

CAS-No.: 7553-56-2

*M*: 253.81 g/mol

Molecular formula: I<sub>2</sub>

### 4. First aid measures

#### **If inhaled**

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

#### **In case of skin contact**

Take off contaminated clothing and shoes immediately. 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**

Do NOT induce vomiting. 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.

#### **Advice for firefighters**

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 vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

#### **Environmental precautions**

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

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

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

### 7. Handling and storage

#### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

#### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Handle and store under inert gas. Hygroscopic.

### 8. Exposure controls/personal protection

#### **Appropriate engineering controls**

General industrial hygiene practice.

#### **Personal protective equipment**

#### **Eye/face protection**



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Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### **Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

## **9. Physical and chemical properties**

**Form:** solid

**Colour:** black, violet

**Odour:** not available

**pH value:** not available

**Melting point:** 113 °C

**Boiling point:** 184 °C

**Ignition temperature:** not available

**Flash point:** 72 °C

**Autoignition temperature:** not available

### **Explosion limits**

**lower:** not available

**upper:** not available

**Density :** 4.93 g/mL

**Bulk density:** not available

### **Solubility in**

**water (20 °C) :** not available

**diluted acids (20 °C) :** not available

**Thermal decomposition:** not available

## **10. Stability and reactivity**

### **Chemical stability**

no data available

### **Conditions to avoid**

no data available

### **Materials to avoid**

Rubber, Plastics, Iron and iron salts., Sulphur compounds, Ammonia, Magnesium, Zinc, Aluminum, Metals,



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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, Strong oxidizing agents

### Hazardous decomposition products

Other decomposition products - no data available

## 11. Toxicological information

### Acute toxicity

LD50 Oral - Rat - 14.000 mg/kg

Remarks: Diarrhoea

LC50 Inhalation - Rat - 4 h - > 4,588 mg/l

(OECD Test Guideline 403)

Remarks: Cough Respiratory disorder

LC50 Dermal - Rat - male - 1.425 mg/kg

(OPPTS 870.1200)

### Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: Moderate skin irritation

### Serious eye damage/eye irritation

Moderate eye irritation

### Respiratory or skin sensitization

- Mouse

Result: Does not cause skin sensitisation.

### Germ cell mutagenicity

Hamster

Embryo

Result: negative

Mutagenicity (micronucleus test)

Mouse - male and female

Result: negative

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory system

### Specific target organ toxicity - repeated exposure

Oral - Causes damage to organs through prolonged or repeated exposure. - Thyroid

### Aspiration hazard

no data available

## 12. Ecological information

### Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 1,7 mg/l - 96,0 h

Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 0,2 mg/l - 48 h

other aquatic

invertebrates

Toxicity to algae Growth inhibition EC50 - Desmodesmus subspicatus (green algae) - 0,13 mg/l

### Persistence and degradability



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no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

### 13. Disposal considerations

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

### 14. Transport information

**ADR/RID**

UN-Number: 3495 Class: 8(6.1) Packing group: III

Proper shipping name: IODINE

**IMDG**

UN-Number: 3495 Class: 8(6.1) Packing group: III

Proper shipping name: IODINE

Marine pollutant: yes

**IATA**

UN-Number: 3495 Class: 8(6.1) Packing group: III

Proper shipping name: Iodine

### 15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 16. Other information

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.