# SAFETY DATA SHEET

**Creation Date** 20-Oct-2009 **Revision Date** 23-Jul-2019 **Revision Number** 6

## 1. Identification

**Product Name** **Iodine**

**Cat No. :** **AC196560000; AC196560025; AC196560050; AC196561000; AC196565000**

**CAS-No** 7553-56-2
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

**Emergency Telephone Number**
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

**Classification**
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---|---|
| Acute oral toxicity | Category 4 |
| Acute dermal toxicity | Category 4 |
| Acute Inhalation Toxicity - Dusts and Mists | Category 4 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system, Central nervous system (CNS). | |
| Specific target organ toxicity - (repeated exposure) | Category 1 |
| Target Organs - Kidney, Liver, Blood, Thyroid. | |

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Causes damage to organs through prolonged or repeated exposure
Harmful if swallowed, in contact with skin or if inhaled

**Precautionary Statements**
**Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
**Response**
Get medical attention/advice if you feel unwell
**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
**Skin**
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
**Eyes**
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
**Ingestion**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
**Storage**
Store in a well-ventilated place. Keep container tightly closed
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant
**Hazards not otherwise classified (HNOC)**
Very toxic to aquatic life

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Iodine | 7553-56-2 | >95 |

## 4. First-aid measures

**General Advice** If symptoms persist, call a physician.

| | |
|---|---|
| **Eye Contact** | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| **Skin Contact** | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| **Inhalation** | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. |
| **Ingestion** | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. |
| **Most important symptoms and effects** | None reasonably foreseeable. |
| **Notes to Physician** | Treat symptomatically |

## 5. Fire-fighting measures

| | |
|---|---|
| **Unsuitable Extinguishing Media** | No information available |
| **Flash Point** | No information available |
| **Method -** | No information available |
| **Autoignition Temperature** | No information available |
| **Explosion Limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Sensitivity to Mechanical Impact** | No information available |
| **Sensitivity to Static Discharge** | No information available |

**Specific Hazards Arising from the Chemical**
Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Do not allow run-off from fire-fighting to enter drains or water courses.

**Hazardous Combustion Products**
Hydrogen iodide.
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 3 | 0 | 0 | N/A |

## 6. Accidental release measures

| | |
|---|---|
| **Personal Precautions** | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. |
| **Environmental Precautions** | Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. |
| **Methods for Containment and Clean Up** | Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. |

## 7. Handling and storage

| | |
|---|---|
| **Handling** | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. |

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store in metal containers. Keep at temperatures below 25°C.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|---|---|---|---|---|
| Iodine | TWA: 0.01 ppm<br>STEL: 0.1 ppm | Ceiling: 0.1 ppm<br>Ceiling: 1 mg/m$^3$<br>(Vacated) Ceiling: 0.1 ppm<br>(Vacated) Ceiling: 1 mg/m$^3$ | IDLH: 2 ppm<br>Ceiling: 0.1 ppm<br>Ceiling: 1 mg/m$^3$ | TWA: 0.01 ppm<br>STEL: 0.1 ppm |

***Legend***

***ACGIH*** *- American Conference of Governmental Industrial Hygienists*
***OSHA*** *- Occupational Safety and Health Administration*
***NIOSH IDLH:*** *NIOSH - National Institute for Occupational Safety and Health*

**Engineering Measures** Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

| | |
|---|---|
| **Physical State** | Solid |
| **Appearance** | Grey |
| **Odor** | pungent |
| **Odor Threshold** | No information available |
| **pH** | 5.1 saturated solution |
| **Melting Point/Range** | 113 °C / 235.4 °F |
| **Boiling Point/Range** | 185 °C / 365 °F @ 760 mmHg |
| **Flash Point** | No information available |
| **Evaporation Rate** | Not applicable |
| **Flammability (solid,gas)** | No information available |
| **Flammability or explosive limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Vapor Pressure** | 0.41 hPa @ 25 °C |
| **Vapor Density** | Not applicable |
| **Specific Gravity** | No information available |
| **Bulk Density** | ~ 2100 kg/m$^3$ |
| **Solubility** | slightly soluble |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | No information available |
| **Decomposition Temperature** | No information available |

| | |
|---|---|
| **Viscosity** | Not applicable |
| **Molecular Formula** | I2 |
| **Molecular Weight** | 253.81 |

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Avoid dust formation. Incompatible products. Excess heat.

**Incompatible Materials** Strong oxidizing agents, Finely powdered metals, Ammonia, Alcohols, copper

**Hazardous Decomposition Products** Hydrogen iodide

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Product Information**

**Component Information**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Iodine | 315 mg/kg ( Rat ) | 1425 mg/kg ( Rabbit ) | 4.588 mg/L 4h ( Rat ) |

**Toxicologically Synergistic Products** No information available

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

**Irritation** Irritating to eyes, respiratory system and skin

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| Iodine | 7553-56-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system Central nervous system (CNS)

**STOT - repeated exposure** Kidney Liver Blood Thyroid

**Aspiration hazard** No information available

**Symptoms / effects,both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---|---|---|---|---|
| Iodine | EC50 = 0.13 mg/L 72h | LC50 = 1.67 mg/L 96h | EC50 = 280 mg/L 3h | EC50 = 0.55 mg/L 48h |

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment due its low water solubility.

| Component | log Pow |
|---|---|
| Iodine | 2.49 |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

| | |
|---|---|
| **UN-No** | UN3495 |
| **Proper Shipping Name** | IODINE |
| **Hazard Class** | 8 |
| **Subsidiary Hazard Class** | 6.1 |
| **Packing Group** | III |

**TDG**

| | |
|---|---|
| **UN-No** | UN3495 |
| **Proper Shipping Name** | IODINE |
| **Hazard Class** | 8 |
| **Subsidiary Hazard Class** | 6.1 |
| **Packing Group** | III |

**IATA**

| | |
|---|---|
| **UN-No** | UN3495 |
| **Proper Shipping Name** | IODINE |
| **Hazard Class** | 8 |
| **Subsidiary Hazard Class** | 6.1 |
| **Packing Group** | III |

**IMDG/IMO**

| | |
|---|---|
| **UN-No** | UN3495 |
| **Proper Shipping Name** | IODINE |
| **Hazard Class** | 8 |
| **Subsidiary Hazard Class** | 6.1 |
| **Packing Group** | III |

## 15. Regulatory information

**United States of America Inventory**

| Component | CAS-No | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|---|---|---|---|---|
| Iodine | 7553-56-2 | X | ACTIVE | - |

**Legend:**
**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component | CAS-No | DSL | NDSL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|
| Iodine | 7553-56-2 | X | - | 231-442-4 | X | X | X | X | KE-21023 |

**U.S. Federal Regulations**

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA** - Occupational Safety and Health Administration Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---|---|---|---|---|---|
| Iodine | X | X | X | - | - |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Regulatory Affairs
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**Creation Date** 20-Oct-2009
**Revision Date** 23-Jul-2019
**Print Date** 23-Jul-2019
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,**

**transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

## End of SDS