# Safety Data Sheet

## Iodine

CAROLINA®
www.carolina.com

## Section 1 Product Description

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|---|---|
| **Product Name:** | Iodine |
| **Recommended Use:** | Science education applications |
| **Synonyms:** | Di-iodine |
| **Distributor:** | Carolina Biological Supply Company<br>2700 York Road, Burlington, NC 27215<br>1-800-227-1150 |
| **Chemical Information:** | 800-227-1150 (8am-5pm (ET) M-F) |
| **Chemtrec:** | 800-424-9300 (Transportation Spill Response 24 hours) |

## Section 2 Hazard Identification

**Classification of the chemical in accordance with paragraph (d) of §1910.1200;**

**DANGER**

Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Very toxic to aquatic life.

**GHS Classification:**
Skin Corrosion/Irritation Category 1C, Serious Eye Damage/Eye Irritation Category 1, Skin Sensitisation Category 1, Hazardous to the aquatic environment - Acute Category 1, Acute Toxicity - Inhalation Gas Category 4, Acute Toxicity - Dermal Category 4, Acute Toxicity - Oral Category 4

## Section 3 Composition / Information on Ingredients

| Chemical Name | CAS # | % |
|---|---|---|
| Iodine | 7553-56-2 | 100 |

## Section 4 First Aid Measures

**Emergency and First Aid Procedures**

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|---|---|
| **Inhalation:** | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| **Eyes:** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| **Skin Contact:** | IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. |
| **Ingestion:** | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |

## Section 5 Firefighting Procedures

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|---|---|
| **Extinguishing Media:** | Use media suitable to extinguish surrounding fire. |
| **Fire Fighting Methods and Protection:** | Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus. |
| **Fire and/or Explosion Hazards:** | Fire or excessive heat may produce hazardous decomposition products. |
| **Hazardous Combustion Products:** | Hydrogen Iodide |

## Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Collect spillage.

## Section 7 Handling and Storage

**Handling:** Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Avoid direct sunlight and heat.
**Storage:** Store locked up. Keep container tightly closed in a cool, well-ventilated place.
**Storage Code:** Blue - Toxic. Store separately in a secured area.

## Section 8 Protection Information

| | ACGIH | | OSHA PEL | |
|---|---|---|---|---|
| **Chemical Name** | **(TWA)** | **(STEL)** | **(TWA)** | **(STEL)** |
| Iodine | 0.01 ppm TWA (inhalable fraction and vapor) | 0.1 ppm STEL (aerosol and vapor) | N/A | N/A |

**Control Parameters**

**Engineering Measures:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.
**Respiratory Protection:** Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.
**Respirator Type(s):** None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.
**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.
**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
**Gloves:** Nitrile, Polyvinyl chloride, Butyl rubber

## Section 9 Physical Data

**Formula:** I2
**Molecular Weight:** 253.80
**Appearance:** Purple Solid
**Odor:** Strong Characteristic Irritating
**Odor Threshold:** No data available
**pH:** No data available
**Melting Point:** 114 C
**Boiling Point:** 184 C
**Flash Point:** No data available
**Flammable Limits in Air:** Not explosive
**Vapor Pressure:** 0.3 mm at 20°C
**Evaporation Rate (BuAc=1):** Sublimes at ordinary temperatures
**Vapor Density (Air=1):** 8.75
**Specific Gravity:** 4.93
**Solubility in Water:** Slightly Soluble
**Log Pow (calculated):** 2.49
**Autoignition Temperature:** No data available
**Decomposition Temperature:** No data available
**Viscosity:** No data available
**Percent Volatile by Volume:** 100%

## Section 10 Reactivity Data

**Reactivity:** Mildly reactive - See below

**Chemical Stability:** Stable under normal conditions.
**Conditions to Avoid:** Elevated temperatures
**Incompatible Materials:** Metals (ferrous), Acetaldehydes, Rust, Strong reducing agents, Magnesium, Sulfur, Rubber, Plastics, Halogens
**Hazardous Decomposition Products:** Hydrogen Iodide
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry** Inhalation, ingestion, eye or skin contact.
**Symptoms (Acute):** Allergies, Impaired Kidney Function, Cardiovascular system, Central Nervous System Disorders, Pulmonary Edema, Headache, Iodism
**Delayed Effects:** Hyperthyroidism
Hypothyroidism
Acne
Allergies

**Acute Toxicity:**

| Chemical Name | CAS Number | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|---|
| Iodine | 7553-56-2 | Oral LD50 Mouse 22000 mg/kg<br>Oral LD50 Rat 14000 mg/kg | Not determined | Not determined |

**Carcinogenicity:**

| Chemical Name | CAS Number | IARC | NTP | OSHA |
|---|---|---|---|---|
| Iodine | 7553-56-2 | Not listed | Not listed | Not listed |

**Chronic Effects:**
**Mutagenicity:** No evidence of a mutagenic effect.
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).
**Sensitization:** Evidence of a sensitization effect.
**Reproductive:** Evidence of negitive lactation effects.
**Target Organ Effects:**
**Acute:** No data available
**Chronic:** No data available

## Section 12 Ecological Data

**Overview:** Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.
**Mobility:** This material is expected to have moderate mobility in soil. It absorbs to most soil types.
**Persistence:** Adsorbs to sediment, evaporates into atmosphere.
**Bioaccumulation:** Bioconcentration may occur.
**Degradability:** Naturally occuring element. Does not biodegrade.
**Other Adverse Effects:** Combines with organics, forming new compounds.

| Chemical Name | CAS Number | Eco Toxicity |
|---|---|---|
| Iodine | 7553-56-2 | No data available |

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

**Ground - DOT Proper Shipping Name:**

**Air - IATA Proper Shipping Name:**

UN3495
Iodine
Class 8 (Division 6.1)
P.G. III

UN3495
Iodine
Class 8 (Division 6.1)
P.G. III

## Section 15 Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

| Chemical Name | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|---|---|---|---|---|---|---|
| Iodine | 7553-56-2 | No | No | No | No | No |

**California Prop 65:** No California Proposition 65 ingredients

## Section 16 Additional Information

**Revised: 08/22/2018** **Replaces: 08/22/2018** **Printed: 08-24-2018**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

**Glossary**

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|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| CAS | Chemical Abstract Service Number |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| DOT | U.S. Department of Transportation |
| IARC | International Agency for Research on Cancer |
| N/A | Not Available |
| NTP | National Toxicology Program |
| OSHA | Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| ppm | Parts per million |
| RCRA | Resource Conservation and Recovery Act |
| SARA | Superfund Amendments and Reauthorization Act |
| TLV | Threshold Limit Value |
| TSCA | Toxic Substances Control Act |
| IDLH | Immediately dangerous to life and health |