

# Safety Data Sheet

## Iodine Solution, 2%

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Iodine Solution, 2%  
**Recommended Use:** Science education applications  
**Synonyms:** Iodine Sodium Iodide Solution  
**Distributor:** Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215-3398  
**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**



May cause an allergic skin reaction. May damage fertility or the unborn child. Toxic to aquatic life.

**GHS Classification:**

Skin Sensitisation Category 1, Reproductive Toxicity Category 1A, Hazardous to the aquatic environment - Acute Category 2

**Other Safety Precautions:** IF exposed or concerned: Get medical advice/attention.

**Acute Toxicity Inhalation Vapor Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Dust/Mist Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u> | <u>CAS #</u> | <u>%</u> |
|----------------------|--------------|----------|
| Water                | 7732-18-5    | 95.6     |
| Sodium Iodide        | 7681-82-5    | 2.4      |
| Iodine               | 7553-56-2    | 2        |

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**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:** Iodine (gas)

### Section 6 Spill or Leak Procedures

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## 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.

## Section 7 Handling and Storage

**Handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. 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. Use personal protective equipment as required.

**Storage:** Store locked up. Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

| Chemical Name | ACGIH   |                                     | OSHA PEL |        |
|---------------|---|-------------------------------------|----------|--------|
|               | (TWA)   | (STEL)                              | (TWA)    | (STEL) |
| Sodium Iodide | 0.01 ppm TWA<br>(inhalable fraction<br>and vapor) | N/A                                 | N/A      | N/A    |
| Iodine        | 0.01 ppm TWA<br>(inhalable fraction<br>and vapor) | 0.1 ppm STEL<br>(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:** No respiratory protection required under normal conditions of use.

**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:** No information available

## Section 9 Physical Data

|   |  |
|---|--|
| <b>Formula:</b> See Section 3                     | <b>Vapor Pressure:</b> No data available             |
| <b>Molecular Weight:</b> No data available        | <b>Evaporation Rate (BuAc=1):</b> No data available  |
| <b>Appearance:</b> Purple-Yellow Liquid           | <b>Vapor Density (Air=1):</b> No data available      |
| <b>Odor:</b> Moderate Characteristic              | <b>Specific Gravity:</b> No data available           |
| <b>Odor Threshold:</b> No data available          | <b>Solubility in Water:</b> Soluble                  |
| <b>pH:</b> No data available                      | <b>Log Pow (calculated):</b> No data available       |
| <b>Melting Point:</b> No data available           | <b>Autoignition Temperature:</b> No data available   |
| <b>Boiling Point:</b> Estimated 100 C 100 C       | <b>Decomposition Temperature:</b> No data available  |
| <b>Flash Point:</b> No data available             | <b>Viscosity:</b> No data available                  |
| <b>Flammable Limits in Air:</b> No data available | <b>Percent Volatile by Volume:</b> No data available |

## Section 10 Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.

**Chemical Stability:** Stable under normal conditions.

**Conditions to Avoid:** Exposure to light. Elevated temperatures

**Incompatible Materials:** Water-reactive materials, Strong oxidizing agents, Strong acids, Metals (ferrous), Acetaldehydes, Rust, Strong reducing agents, Magnesium, Sulfur, Rubber, Plastics, Halogens

**Hazardous Decomposition Products:** Iodine (gas)

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Hazardous Polymerization: Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation, ingestion, eye or skin contact.  
**Symptoms (Acute):** Hyperthyroidism, Allergies, Impaired Kidney Function, Cardiovascular system, Central Nervous System Disorders, Pulmonary Edema, Headache, Iodism  
**Delayed Effects:** No data available

| Acute Toxicity:<br>Chemical Name | CAS Number | Oral LD50                   | Dermal LD50 | Inhalation LC50 |
|----------------------------------|------------|-----------------------------|-------------|-----------------|
| Water                            | 7732-18-5  | Not applicable              |             |                 |
| Sodium Iodide                    | 7681-82-5  | ORAL LD50 Rat<br>4340 mg/kg |             |                 |
| Iodine                           | 7553-56-2  | ORAL LD50 Rat<br>14 g/kg    |             |                 |

| Carcinogenicity:<br>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:** Evidence of a teratogenic effect (birth defect).  
**Sensitization:** Evidence of a sensitization effect.  
**Reproductive:** Evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** No data available  
**Chronic:** Thyroid

## Section 12 Ecological Data

**Overview:** Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.  
**Mobility:** No data  
**Persistence:** Dissolved into water, Adsorbs to sediment, evaporates into atmosphere.  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** Combines with organics, forming new compounds.

| Chemical Name | CAS Number | Eco Toxicity  |
|---------------|------------|---|
| Water         | 7732-18-5  | No data available   |
| Sodium Iodide | 7681-82-5  | Aquatic LC50 (96h) Rainbow Trout 860 MG/L<br>Aquatic EC50 (48h) Daphnia 0.17 MG/L |
| 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:** Not regulated for transport by US DOT.  
**Air - IATA Proper Shipping Name:** Not regulated for air transport by IATA.

## Section 15 Regulatory Information

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

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| 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            |

## Section 16

## Additional Information

Revised: 03/25/2013

Replaces: None

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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

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