

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 407.00

Revision Date: February 23, 2012

---

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

#### Iodine

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

---

### SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

---

Iodine

CAS#: 7553-56-2

---

### SECTION 3 — HAZARDS IDENTIFICATION

---

Gray-black flakes or granules with a metallic luster. Characteristic odor.  
Highly toxic by ingestion and inhalation.  
Irritating and corrosive to skin. Avoid all body contact.

#### FLINN AT-A-GLANCE

Health-3

Flammability-0

Reactivity-2

Exposure-3

Storage-1

0 is low hazard, 3 is high hazard

---

### SECTION 4 — FIRST AID MEASURES

---

Call a physician and seek medical attention for further treatment, observation, and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.

Eye or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

---

### SECTION 5 — FIRE FIGHTING MEASURES

---

Nonflammable, noncombustible solid.

When heated to decomposition, emits toxic fumes of iodide and various iodine compounds.

**Fire Fighting Instructions:** Use a triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

#### NFPA CODE

None

established

---

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

---

Restrict unprotected personnel from the area. Ventilate area. Sweep up the spill, place in a sealed bag or container, and dispose.

Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

---

### SECTION 7 — HANDLING AND STORAGE

---

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates, and phosphates. Store in a cool, dry place. Store in a Flinn Chem-Saf bag; the substance sublimates. Frequently oxidizes metal shelves or metal containers in proximity to the iodine. Use and dispense in a hood.

---

### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

---

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and a chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).

Exposure guidelines: Ceiling 0.1 ppm (OSHA)

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Gray-black flakes with a metallic luster and characteristic odor.  
Solubility: Soluble in alcohol and other organic solvents, but not in water.

Formula: I<sub>2</sub>

Formula weight: 253.80

Boiling point: 185.24 °C

Melting point: 113.5 °C

Specific gravity: 4.98

**SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with magnesium, zinc, ammonia, and aluminum. Corrodes steel. Reacts violently with acetaldehyde.  
Shelf life: Fair, the substance sublimes. Frequently oxidizes metal shelves or metal containers in proximity to the iodine.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Highly toxic, harmful vapor, corrosive, severe lachrymator, sensitizer, stomach pains, vomiting.

Chronic effects: Dermatitis.

Target organs: Thyroid.

ORL-HUM LD<sub>50</sub>: 28 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

**SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

**SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply, before proceeding.

Flinn Suggested Disposal Method #12a is one option.

**SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Iodine

Hazard class: 8L

UN number: UN3495

N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (231-442-4), RCRA code D002.

**SECTION 16 — OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

**Consult your copy of the *Flinn Science Catalog/Reference Manual*  
for additional information about laboratory chemicals.**