

Safety Data Sheet

Iodine



Section 1

Product Description

Product Name: Iodine
Recommended Use: Science education applications
Synonyms: Di-iodine
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



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

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>
Iodine	7553-56-2	100

Section 4

First Aid Measures

Emergency and First Aid Procedures

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

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

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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. Collect spillage.

Section 7

Handling and Storage

Handling: Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not 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.

Storage Code: Blue - Toxic. Store separately in a secured area.

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	(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. None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Wear chemical splash goggles when handling this product. Have an eye wash station available.

Respirator Type(s):

Eye Protection:

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

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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
Iodine

CAS Number
7553-56-2

Oral LD50
Oral LD50 Rat 14
g/kg

Dermal LD50
Not applicable

Inhalation LC50
Not applicable

Carcinogenicity:
Chemical Name
Iodine

CAS Number
7553-56-2

IARC
Not listed

NTP
Not listed

OSHA
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 negative 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 occurring element. Does not biodegrade.
Other Adverse Effects: Combines with organics, forming new compounds.

Chemical Name
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Eco Toxicity
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:
UN3495
Iodine
Class 8 (Division 6.1)
P.G. III

Air - IATA Proper Shipping Name:
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.

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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

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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