


SECTION I NAME

912

Product	IODINE		 CHEMTREC 800-424-9300 Day 716-226-6177 Night 716-334-4222	Health	3		
Chemical Synonyms	Iodine			Fire	0		
Formula	I <sub>2</sub>			Reactivity	2		
Unit(s) Size	30, 100, 500 grams, 2.5 Kg.						
C.A.S. No.	7553-56-2		HAZARD RATING				
			LEAST	SLIGHT	MODERATE	HIGH	EXTREME
			0	1	2	3	4

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
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Iodine	100%	See Section V
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DANGER: POISON MAY BE FATAL IF SWALLOWED.

CAUSES IRRITATION TO SKIN, EYES AND MUCOUS MEMBRANES-

CORROSIVE-HARMFUL IF INHALED.

SECTION III PHYSICAL DATA

Melting Point (°F)	113.5°C	Specific Gravity (H <sub>2</sub> O = 1)	4.93
Boiling Point (°F)	363°F (184°C)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	0.2 mm at 20°C	Evaporation Rate	Sublimes at ordinary temperatures.
Vapor Density (Air = 1)	4.4		
Solubility in Water	0.029 grams per 100 ml water at 20°C; 0.078 g at 50°C.		
Appearance and Odor	Bluish-black scales, crystals, metallic luster; characteristic odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA).	Flammable Limits in Air	Lower	Upper
Extinguisher Media	Water spray in quantities depending upon the seriousness of the fire.			

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Sublimes at ordinary temperatures yielding a vapor, violet in color and corrosive to metals and to all body tissues.

D.O.T. OTHER REGULATED MATERIAL-A



FREY SCIENTIFIC

905 HICKORY LANE MANSFIELD OHIO 44905

MSDS No. Effective Date

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

Threshold Limited Value

TWA: (Ceiling limit) 0.1 ppm; 1 mg/m<sup>3</sup> (A1P).  
Toxicity: Oral-human LD<sub>50</sub>: 2000 mg/kg. (ACGIH, 1983-84)

Effects of Overexposure

The solid state or fumes is intensely irritating to eyes, skin and mucous membranes.  
INGESTION: Of large quantities causes abdominal pain, vomiting and diarrhea. In severe cases purging, excessive thirst and circulatory failure may develop.

Emergency and First Aid Procedures

INGESTION: If swallowed, if conscious, give one or two glasses of water to drink. Induce vomiting. Follow by giving starch solution, milk, egg white or gravel. Get immediate medical attention.  
EYES: In case of contact, flush eyes thoroughly with water. Holding eyelids open flush thoroughly with water. Get immediate medical attention.  
INHALATION: If inhaled, remove to fresh air. If breathing has stopped, give artificial respiration. Get immediate medical attention.  
SKIN: Flush thoroughly with water. Get immediate medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid	Excessive temperature or heat will increase rate of sublimation.
	Stable		

Incompatibility (Materials to avoid)  
Contact of gaseous ammonia or its solutions with free iodine should be avoided to prevent the formation of the explosive "nitrogen iodide". Acetaldehyde, Sodium Azide, Sodium hydride.

Hazardous Decomposition Products

Elemental form. Cannot produce decomposition products.

Hazardous Polymerization

Conditions to Avoid

May Occur	Will Not Occur
	x

Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Wearing full protective clothing and using good ventilation. Sweep up and place in a suitable container. Wash floor or spill area with a 5-10% sodium thiosulfate solution.

Waste Disposal Method

Dispose of in an approved chemical landfill or cover with a reducer (hydro, a bisulfite or a ferrous salt but not carbon, sulfur or strong reducing agents.) Mix well and spray with water. A sulfite or ferrous salt will require addition of 3H<sub>2</sub>SO<sub>4</sub> to promote reduction. Scoop slurry into a container of water, neutralize, the slurry with soda Discharge, treatment, or disposal may be subject to federal, state, or local laws, ash and wash to drain with excess water.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection In the laboratory, work in a fume hood or if iodine vapors are produced in work area, wear a NIOSH-approved respirator.

Ventilation

Local Exhaust	Recommended	Special	No
Mechanical (General)	Recommended	Other	No

Protective Gloves

Rubber	Eye Protection	Chemical safety glasses
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Other Protective Equipment Smock, apron, eye wash station, good ventilation, goggles, proper gloves.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Store in a cool, dry, well-ventilated area. Remove all contaminated clothing and shoes. Decontaminate before reuse.

Other Precautions

Read label on container before using.  
Wash thoroughly after handling.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. 10/1 Date 11/2/87 Approved *Charles W. Secor* Chemical Safety Coordinator

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