

Iodine, USP

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Iodine, USP

Synonyms/Generic Names: None

Product Number: 2775

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Toxic by inhalation, Harmful by skin absorption, Skin sensitizer, Corrosive

Target Organs: Thyroid, Respiratory system

Signal Word: Danger

Pictograms:



GHS Classification:

Acute toxicity, Inhalation	Category 4
Acute toxicity, Dermal	Category 4
Skin corrosion	category 1B
Serious eye damage	category 1
Specific target organ toxicity-single exposure-Respiratory system	Category 3
Specific target organ toxicity-repeated exposure-thyroid	Category 1
Acute aquatic toxicity	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H312+H332	Harmful in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Precautionary Statements:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician.
P321	Specific treatment is urgent (see first aid instruction on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye burns.
Inhalation	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Causes skin burns.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	3
Fire	0
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Iodine	>99	7553-56-2	231-422-4	I ₂	253.81 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool unopened containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (hydrogen iodide) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Iodine	0.01 ppm 0.1 mg/m ³	TLV	ACGIH
	0.1 ppm 1 mg/m ³	STEL	ACGIH
	0.1 ppm 1 mg/m ³	STEL	OSHA
	0.1 ppm 1 mg/m ³	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Dark purple solid with metallic luster.
Odor	Pungent.
Odor threshold	Not Available
pH	5.4
Melting point/freezing point	113.7°C (236.7°F)
Initial boiling point and boiling range	184.4°C (363.9°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	0.41 hPa (0.31 mmHg) at 25 °C (77 °F)
Vapor density	8.76 (Air = 1.0)
Density	4.93 (Water = 1)
Solubility (ies)	Easily soluble in diethyl ether. Soluble in methanol. Very slightly soluble in cold water, hot water.
Partition coefficient: n-octanol/water	log Pow: 2.49
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, direct sunlight.
Incompatible Materials	Rubber, plastics, iron and iron salts., sulfur compounds, ammonia, magnesium, zinc, aluminum, metals, alkalis, antimony salts, arsenites, bromides, chlorides, iodides, thiocyanates, ferrous salts, hypophosphites, morphine salts, oils, creosote, phosphates, tannins, tartrates, mixing iodine, antimony, ammonia, acetaldehyde, acetylene, acetaldehyde.
Hazardous Decomposition Products	Hydrogen iodide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral - rat - 14,000 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness, itchiness, rash.
Eyes	Irritation, redness, watering eyes, itchiness.
Respiratory	Irritation, coughing, wheezing, runny nose.
Ingestion	Irritation, nausea, vomiting, diarrhea.

Chronic Toxicity	Causes damage to the following organs: thyroid. May cause damage to the following organs: blood, kidneys, liver, skin, eyes.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	May cause adverse reproductive effects.
Respiratory/Skin Sensitization	May cause allergic skin reaction.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 1.7 mg/l - 96.0 h
Aquatic Invertebrate	EC50 - <i>Daphnia magna</i> (Water flea) - 0.2 mg/l - 48 h
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN3495, Iodine, 8, (6.1), pg III
TDG	UN3495, IODINE, 8, (6.1), PG III
IMDG	UN3495, IODINE, 8, (6.1), PG III
Marine Pollutant	No
IATA/ICAO	UN3495, Iodine, 8, (6.1), pg III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard, Chronic Health Hazard
SARA 312	Acute Health Hazard, Chronic Health Hazard
SARA 313	Not Listed
WHMIS Canada	Class E: Corrosive material Class D-2A: Poisonous and infectious material- Other effects- Very toxic

16. OTHER INFORMATION

Revision	Date
Revision 1	07/24/2012
Revision 2	10/17/2013
Revision 3	08/03/2015
Revision 4	10/23/2019

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Columbus has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. COLUMBUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.