

1. Chemical Product Identification

GHS Product Identifier: 100.04, Iodine, Crude; 100.15, Iodine, USP; 100.24, Iodine, ACS; 100.34, Iodine, HP

Manufacturer/Supplier: Deepwater Chemicals, Inc. 1210 Airpark Road, Woodward, Oklahoma 73801; Tel: 800-854-4064, Website: www.deepwaterchemicals.com

Recommended Use: Elemental Iodine is used for the manufacturing of inorganic and organic derivatives; used as a disinfectant and anti-bacterial agent in solutions, tinctures and salves; used in x-ray contrast media. Not permitted in the manufacturing of clandestine chemicals.

(24) Hour Emergency Contact: Chemtrec 800-424-9300

Technical Service: 580-334-3539



2. Hazard Identification

Toxic! Corrosive! Danger! Causes severe skin burns and eye damage. Harmful if swallowed or inhaled. Vapors cause severe irritation to skin, eyes and respiratory tract. Strong oxidizer. Affects the cardiovascular and central nervous systems. Routes of Entry include skin contact and absorption; eye contact; inhalation and ingestion. Health Effects include irritant, and sensitizer. Warning! Iodine is corrosive to certain metals including zinc, aluminum and carbon steel GHS Symbols; Corrosive, Skull and Crossbones. In the event of a release, refer to Guide# 154 in the Emergency Response Guidebook.

3. Composition/Information on Ingredients

Chemical Identity	Molecular Weight	Chemical Formula	CAS#	EINECS#	Percent%
Iodine	253.81	I ₂	7553-56-2	231-442-4	99.5-100

4. First-Aid Measures

Eye Contact: Corrosive! Vapors are extremely irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage. In the event of Exposure:

Flush with copious amounts of water for 15 minutes, occasionally lifting the upper and lower lids. SEEK MEDICAL ATTENTION if irritation persists.

Skin Contact: Corrosive! Liquid contact may cause blistering burns, irritation and pain. Vapors may be severely irritating to the skin. In the event of Exposure

Wash skin with copious amounts of water and soap for 15 minutes while removing any contaminated clothing and shoes. Iodine stains can be removed by immediately washing skin with 5% sodium thiosulfate solution. SEEK MEDICAL ATTENTION if irritation persists

Ingestion: Toxic! Can cause severe burns of the mouth, throat and stomach. Causes abdominal pain, diarrhea, fever, and vomiting. Iodine is more toxic by the oral route in humans than in experimental animals. Ingestion of 2 to 3 grams of the solid may be fatal in humans. In the event of Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. SEEK MEDICAL ATTENTION IMMEDIATELY.

Inhalation: Toxic! Vapors severely irritate and can burn the mucous membranes and respiratory tract. The acute toxicity of iodine by inhalation is high. Exposure can cause severe breathing difficulties, headache, tightness of the chest and congestion of the lungs. In the event of Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. SEEK MEDICAL ATTENTION IMMEDIATELY. Observe for the development of pulmonary edema.

5. Fire Fighting Measures

Flash Point: No data

LEL % : No data

UEL % : No data

Method: N/A

Auto-ignition: N/A

FIRE AND EXPLOSION HAZARDS : Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

EXTINGUISHING MEDIA: Use dry powder or carbon dioxide extinguishers. Water spray may be used to keep fire exposed containers cool. Keep water use to a minimum.

FIRE FIGHTING INSTRUCTIONS:

Small Fires: Dry chemical, CO₂ or alcohol-resistant foam.

Large Fires: Dry chemical, CO₂ or alcohol-resistant foam. Move containers from area if you can without risk. Dike fire control water for later disposal. Do not scatter material.

Protective Clothing: Wear chemical protective clothing, minimum, Level B Suit, with positive self-contained breathing apparatus (SCBA). Structural firefighter's protective clothing provides limited protection in fire situations.

6. Accidental Release Measures

Evacuation: Notify safety personnel of iodine spills or leaks. Ventilate and isolate hazard area. Keep unnecessary and unprotected personnel from entering. Wear proper protective equipment. Collect and containerize as much solid iodine as possible. Cover the spill area with an excess of reducing agent (sodium thiosulfate, bisulfate) and then neutralize with caustic soda or potash. Collect slurry into approved containers.

Containment: Eliminate all ignition sources. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do without risk. Prevent entry into waterways, sewers, basements or confined areas.

Reporting: In the event of a Hazardous Materials Incident during transportation, the regulations in 49CFR 171.5 and 171.16 are to be followed. Under 40CFR 302.6 (CERCLA), any release of a substance in a quantity equal to or greater than its threshold amount to soil, water or air, must be reported to the US Coast Guard National Response Center at 800-424-8801, as soon as that person has knowledge of the release.

7. Handling and Storage

Storage Conditions: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed and away from sources of heat or ignition. It is recommended to use a double-liner system using a PTFE and PE liner. Containers of this material may be hazardous when empty since they contain product residue.

8. Exposure Controls/Personal Protection

<u>Substance (CAS NO.)</u>	<u>ACGIH- TLV</u>	<u>ACGIH- STEL</u>	<u>OSHA- PEL</u>	<u>OSHA- STEL</u>
Iodine (7553-56-2) IFV + Inhalable Fraction/ Vapor	0.01 ppm (IFV)	0.1 ppm (V)	0.1 ppm	1 mg/m ³ (C)

Engineering Controls/Ventilation: Use appropriate engineering controls to reduce air contamination to approved or permissible standards. Where such systems are not effective, wear suitable personal protective equipment which performs satisfactorily and meets local/national standards.

Eye/Face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described in OSHA's 29 CFR 1910.133 Eye and Face Protection Standard.

Skin Protection: Proper protective gloves should be worn when handling hazardous or toxic materials. The degradation and permeation characteristics of the glove material selected must be appropriate for protection from the material being handled. Glove selection guides should be consulted.

Respiratory Protection: Follow the OSHA 's 29 CFR 1910.134 Respirator Protection Program regulations. Always use a NIOSH approved respirator when necessary with the proper gas/vapor cartridge. Observe the manufacturer's cartridge service-life and the recommended change schedule. If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airlined hood or full-facepiece SCBA. This substance has unknown warning properties.

9. Physical and Chemical Properties

PARAMETER

Physical state (gas, liquid, solid).....	Bluish-black crystals; metallic luster
Odor.....	Sharp, characteristic odor
Specific Gravity.....	4.98
Vapor pressure.....	.3 mmHg @ 20 °C
Vapor density (Air=1).....	8.8
Evaporation.....	Not available
Boiling Point.....	184 °C (sublimes)
pH.....	5.4 (saturated solution)
Solubility.....	Slightly soluble (.03 g/100g water)
Melting Point.....	114 °C

Note: The physical data presented above are typical values and should not be construed as a specification.

10. Stability and Reactivity

Stability: Stable under ambient temperatures and pressures, but will sublime at increasing temperatures.

Incompatible Materials: Incompatible with ammonia, powdered metals, alkali metals or strong reducing agents. Reaction can be violent or explosive with acetaldehyde and acetylene. Reacts with ammonium hydroxide to form shock-sensitive iodides on drying.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

<u>Substance (CAS No.)</u>	<u>Route(s) of Entry</u>	<u>Value</u>	<u>Critical Effects</u>
Iodine (7553-56-2)	LCLo inhal (rat)	80 mg/m ³	Irritation
	LD ₅₀ oral (rat)	14,000 mg/kg	CNS

12. Ecological Information

Terrestrial Fate: Iodine has a unique and complex chemistry in the environment and it's fate and transport. There is little published information available.

Aquatic Fate: Iodine has a unique and complex chemistry in the environment and it's fate and transport in aqueous environments is dictated by it's chemicals speciation. In reducing environments, aqueous iodine may be present as the more highly mobile iodide anion. Under oxidizing conditions, iodine may be present as the more reactive iodate anion.

13. Disposal Considerations

Dispose of in a manner consistent with federal, state and local regulations.

RCRA-This material does not meet the criteria for RCRA F, P or U-series waste codes. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements.

14. Transport Information

SHIPPING CRITERIA	US DOT	IATA and IMDG
Proper Shipping Name	Iodine	Iodine
Hazard Class	Class 8, 6.1	Class 8, 6.1
Identification Number	UN 3495	UN 3495
Packing Group	PG III	PG III
Shipping Label	Corrosive, Toxic	Corrosive, Toxic
Additional Marking Requirement	Consult the 49 CFR §172 for special provisions and markings	Consult the current DGR Regulations , Section 7

15. Regulatory Information

European Priority Lists Information (Council Regulation (EEC) 793/93):

This chemical substance is not listed in a priority list.

Classification and Labeling Information:

This chemical substance is not classified in the Annex I of Directive 67/548/EEC.

IUCLID & OECD Chemical Data Sheets and Export Files Information:

Not available for this substance

European Risk Assessment Information (Council Regulation (EEC) 793/93):

Not available for this substance

EU: EINECS#: 231-442-4

Hazard Symbol



Toxic (T)



Irritant (Xi)



Corrosive (C)

Risk Description

R21	Harmful in contact with skin.
R25	Toxic if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.

Safety Description

S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28A	After contact with skin, wash immediately with plenty of water.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. Other Information

Users Responsibility: A bulletin such as this cannot be expected to cover all possible individual situations. The user has the responsibility to provide a safe workplace. All aspects of an individual operation should be examined to determine if and where, precautions are required. All health hazard and safety information herein should be passed on to your customers and employees.

Disclaimer of Liability: The information contained herein is accurate to the best of our knowledge and belief. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards. We cannot guarantee that the hazards described herein are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

SDS Code: 100.04 GHS, 100.15, 100.24, 100.34

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For MSDS, Technical or Regulatory Information contact:

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