DEEPWATER CHEMICALS

Safety Data Sheet

Prepared to US OSHA HazCom 2012, CMA, ANSI, European Directives and the UN Globally Harmonized System, 3rd Edition

1. Chemical Product Identification

GHS Product Identifier: 117.14 Iodine Solution, 1.0 N; 13% Iodine Solution; Iodine/Potassium Iodide Solution

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

Recommended Use: A standardized solution for accurate volumetric analysis. Used as a disinfectant and anti-bacterial agent in solutions, tinctures and salves.

(24) Hour Emergency Contact: Chemtrec 800-424-9300
Technical Service: 580-334-3539

2. Hazard Identification

Warning! Causes skin irritation. Causes eye irritation. Harmful in contact with skin. Will cause staining of the skin. May cause an allergic skin reaction. Upon decomposition or heating, iodine vapor is released which is harmful if inhaled. Target Organs; Thyroid and Central Nervous System. Routes of Entry; Skin contact and absorption, Eye contact, Inhalation and Ingestion. Wear protective gloves/protective clothing/eye protection/face protection.

3. Composition/Information on Ingredients

Chemical Identity	Molecular Weight	Chemical Formula	CAS#	EINECS#	Percent%
Iodine	126.9	I	7553-56-2	231-442-4	12-13
Potassium Iodide	166.0	KI	7681-11-0	231-659-4	24-26
Water	18.01	H2O	7732-18-5	231-791-2	61-64

4. First-Aid Measures

Eye Contact: Irritant! Vapors are irritating and may cause damage to the eyes. Contact may cause s burns and eye damage. In the event of Exposure:

Flush with copious amounts of water for 15 minutes, occasionally lifting the upper and lower lids. Get medical advice/attention if irritation persists.

Skin Contact: Irritant! Liquid contact may cause blistering, irritation and pain. Vapors may be 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. Get medical advice/attention if irritation persists.

Ingestion: Warning! Can cause 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. Get medical advice/attention immediately.

Inhalation: Warning! Vapors irritate and can burn the mucous membranes and respiratory tract. Exposure can cause 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. Get medical advice/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, CO_2 or alcohol-resistant foam.

Large Fires: Dry chemical, CO_2 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 solution 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 HDPE or glass containers, solution may be corrosive to carbon steel. Containers of this material may be hazardous when empty since they contain product residue.

8. Exposure Controls/Personal Protection

Substance (CAS NO.)	ACGIH- TLV	ACGIH- STEL	OSHA- PEL	OSHA- STEL
Iodine (7553-56-2)	0.01 ppm (IFV)	0.1 ppm (V)	0.1 ppm	1 mg/m3 (C)
Potassium Iodide (7681-11-0)	Not Established			

IFV + Inhalable Fraction/ Vapor

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)……	Dark Brown Liquid
Odor……	Sharp, characteristic odor
Specific Gravity……	1.32 gm/mL
Vapor pressure……	Not available
Vapor density (Air=1)……	Not available
Evaporation……..	Not available
Boiling Point……	Not available
pH……	8-9 (saturated solution)
Water Solubility……	Highly soluble
Melting Point……	Not available

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 sublimate at increasing temperatures.

Incompatible Materials: Incompatible with ammonia, powered metals, alkali metals or strong reducing agents. Reaction can be violent or explosive with acetaldehyde and acetylene.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Substance (CAS No.)	Route(s) of Entry	Value	Critical Effects
Iodine (7553-56-2)	LCLo inhal (rat)	80 mg/m^3	Irritation
	LD_{50} oral (rat)	14,000 mg/kg	CNS
Potassium Iodide (7681-11-0)			
	TDLo oral (human)	2700 mg/kg	Reproductive
	LDLo ivn (rat)	167 mg/kg	CNS
	LDLo oral (mus)	1862 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	Not Regulated	Not Regulated
Hazard Class		
Identification Number		
Packing Group		
Shipping Label		
Additional Marking Requirement		

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

US Federal Regulations: TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States Inventory (TSCA 8b) : This material is listed

California Prop. 65: No products were found

Clean Air Act Section 112: Hazardous Air Pollutants (HAP's)	Not listed
Clean Air Act Section 602: Class 1 Substances Class II Substances	Not Listed
DEA List 1 Chemicals:	Listed, Chemical Code 6699, Iodine
SARA 302/304: Composition/Information On Ingredients	No products were found
SARA 304 RQ;	Not applicable
SARA 311/312: Classification	Immediate health hazard, Iodine

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: 117.14 GHS
Effective : 06/01/2015
Supercedes: None

For MSDS, Technical or Regulatory Information contact:

Deepwater Chemicals, Inc.
Regulatory Department
1210 Airpark Road
Woodward, Oklahoma 73801
(580)-256-0500