



MSDS

For RICCA, SpectroPure, Red Bird, and Solutions Plus Brands
 Emergency Contact(24 hr) -- CHEMTREC®
 Domestic: 800-424-9300
 International: 703-527-3887

GRAM'S IODINE STAIN (DILUTE LUGOL'S IODINE SOLUTION)

Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Catalog Number: 3450	
Product Identity: GRAM'S IODINE STAIN (DILUTE LUGOL'S IODINE SOLUTION)	
Manufacturer's Name: RICCA CHEMICAL COMPANY LLC	Emergency Contact(24 hr) -- CHEMTREC® Domestic: 800-424-9300 International: 703-527-3887
CAGE Code: 4TCW6, 0V553, 4XZQ2	
Address: 448 West Fork Dr Arlington, TX 76012	Telephone Number For Information: 817-461-5601
Date Prepared: 6/22/98	Revision: 4 Last Revised: 12/19/2010 Date Printed: 07/10/2012 3:03:12 pm

Section 2. Composition/Information on Ingredients

Component	CAS Registry #	Concentration	ACGIH TLV	OSHA PEL
Iodine	7553-56-2	< 1	C 0.1 ppm C 1 mg/m3	C 0.1 ppm C 1 mg/m3
Potassium Iodide	7681-11-0	< 1	Not Available Not Available	Not Available Not Available
Water, Deionized	7732-18-5	Balance	Not Available Not Available	Not Available Not Available

Section 3: Hazard Identification

Emergency Overview: Does not present any significant health hazards. Stronger concentrations of Iodine solutions are used as topical solutions. Wash areas of contact with water.

Target Organs: eyes, skin, respiratory system, central nervous system, cardiovascular system.

Eye Contact: May cause slight irritation.

Inhalation: May cause irritation of the respiratory tract.

Skin Contact: May cause irritation and temporary discoloration of skin.

Ingestion: May cause nausea, vomiting, diarrhea and cramps.

Chronic Effects/Carcinogenicity: Chronic ingestion of large amounts may result in thyroid disease.

IARC - No.

NTP - No.

OSHA - No.



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Reproductive Information: Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Potassium Iodide. Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Iodine. Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for **Teratology (Birth Defect) Information:** Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Potassium Iodide. Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Potassium Iodide.

Section 4: First Aid Measures - In all cases, seek qualified evaluation.

Eye Contact: Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.
Skin Contact: Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.
Ingestion: Dilute immediately with water or milk. Induce vomiting. Call a physician.

Section 5: Fire Fighting Measures

Flash Point: Not Available. **Method Used:** Not Available.
LFL: Not Available. **UFL:** Not Available.
Extinguishing Media: Use any means suitable for extinguishing surrounding fire.
Fire & Explosion Hazards: Not considered to be a fire or explosion hazard.
Fire Fighting Instructions: Use normal procedures/instructions.
Fire Fighting Equipment: Use protective clothing and breathing equipment appropriate for the surrounding fire.

Section 6: Accidental Release Measures

Absorb with suitable material and dispose of in accordance with local regulations. Solution may be neutralized with Sodium Thiosulfate solutions until colorless, then flushed down the drain with excess water.

Section 7. Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.
Safety Storage Code: General

Section 8: Exposure Control/Personal Protection

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.
Respiratory Protection: Normal room ventilation is adequate.
Skin Protection: Chemical resistant gloves.
Eye Protection: Safety glasses or goggles.

Section 9: Physical and Chemical Properties

Appearance: Dark brown liquid **pH:** Not Available.
Odor: characteristic weak iodine odor **Boiling Point(°C):** Approximately 100
Solubility in Water: Infinite **Melting Point(°C):** Approximately 0
Specific Gravity: Approximately 1.01 **Vapor Pressure:** Not Applicable.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.
Incompatibility: Powdered Aluminum, Active metals (Lithium, Potassium, Sodium), Ammonia, Acetylene, Acetaldehyde, strong Oxidizers.
Hazardous Decomposition Products: When heated to decomposition, emits irritating smoke and fumes including iodine vapors and iodide.
Hazardous Polymerization: Will not occur.



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Section 11. Toxicological Information

LD50, Oral, Rat: (Iodine) 14 gm/kg, details of toxic effects not reported other than lethal dose value.

Section 12. Ecological Information

Ecotoxicological Information: There is insufficient information available to evaluate the long-term effects of Iodine on aquatic life, birds, plants or terrestrial animals.

Chemical Fate Information: Iodine is highly persistent in the aquatic environment, with a half-life of between 20 and 200 days. The concentration of Iodine found in fish tissues is expected to be much higher than the average concentration of Iodine in water from which the fish was taken.

Section 13. Disposal Considerations

Dilute solution with water. Neutralize with Sodium Thiosulfate solutions until colorless. Neutralize this resulting solution with Sodium Carbonate or dilute Hydrochloric Acid solutions, then wash down the drain with excess water if local regulations allow. If not allowed, save for recovery or recycling with a RCRA approved waste disposal facility.

Section 14. Transport Information

Part Numbers:

This product is not regulated.

Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)

OSHA Status:The above items either do not contain any specifically hazardous material or the potentially hazardous material is present in such low concentration that the items do not present any immediate threat to health and safety. These items do not meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

TSCA Status:All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

Sara Title III:

Section 302 Extremely Hazardous Substances:Not Applicable.

Section 311/312 Hazardous Categories:No

Section 313 Toxic Chemicals:Not Applicable.

California: None Reported.

Pennsylvania: None Reported.

RCRA Status: Not Applicable.

CERCLA Reportable Quantity: None Reported.

WHMIS: Not Applicable.

Section 16. Other Information

NFPA Ratings:

Health: 2

Flammability: 0

Reactivity: 0

Special Notice Key:None

HMIS Ratings:

Health: 2

Flammability: 0

Reactivity: 0

Protective Equipment:B (Protective Eyewear, Gloves)

Rev 1, 10-19-98: (Section 16) removed periods from NFPA and HMI, added ® to HMIS.

Rev 2, 9-21-2000: Reformatted from WordPerfect® to Microsoft Word®; (Section 1) Revised emergency telephone number to CHEMTREC® 800-424-9300; (Section 3) added Potassium Iodide to mutation and reproductive effects; (Section 7) added storage code; (Section 15) added Florida state reference.

Rev 3, 10-09-2001: Reformatted to electronic data format.

Rev 4, 12-19-2010: Reviewed and approved for distribution.



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When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.