MEDICAL CHEMICAL CORPORATION
SINCE 1954

SDS for Lugol's Iodine
Catalog # 652A

Creation date: 05-04-2015 **Revision date: 02-14-2024** **Revision number: 1.05**

Section I - Product Identification

Product: Lugol's iodine is an aqueous solution of Iodine and potassium iodide.

Intended Uses: An in-vitro diagnostic reagent that is also used as a general laboratory reagent.

Uses advised against: Not intended to be used as an antiseptic.

Country of manufacture: United States.

Manufacturer Identification

Medical Chemical Corp.
19430 Van Ness Ave.
Torrance, CA 90501

Customer Service: Phone (310)787-6800
Email. Customer service@med-chem.com
FAX (310)787-4464

Emergency Telephone Number

CHEMTREC Emergency Response Telephone Number: (800)424-9300. Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

Section II - Hazard Identification

This item is considered hazardous by 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Can cause skin burns and eye damage on contact.

Corrosive to metals: Category 1 (H290). May be corrosive to metals.
Acute toxicity (Oral): Category 4 (H302). Harmful if swallowed.
Skin corrosion/irritation/irritation: Category 2 (H315). Causes skin irritation.
Eye damage/eye Irritation: Category 2A (H319). Causes serious eye irritation.
Specific target organ toxicity, single exposure; Category 3 (H335). May cause respiratory Irritation.

Signal word: Warning

Hazard Statements: May cause skin and eye irritation. Harmful if swallowed.

Precautionary statements

P102 Keep out of reach of children.
P220 Keep away from clothing and other combustible materials.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.

Safety Ratings

Health: Hazardous *Flammability:* None *Reactivity*: Slight *Contact:* Slight
Recommended safety equipment: safety goggles, lab coat and proper gloves are recommended as part of good laboratory practice.

NFPA Ratings

Health = 2. Can cause significant irritation.
Flammability = 0. Will not burn.
Reactivity = 1. Normally stable but unstable at high temperature.

Potential Health Effects

The toxicology of this compound has not been completely examined. It is presumed that the toxicity of this item is similar to other dilute Iodine solutions.

Inhalation: May be Irritating to respiratory tract.

Ingestion: While the toxicity of this compound is low, large doses may cause nausea, vomiting, diarrhea, etc

Skin contact: Irritating and corrosive.

Eye contact: Irritating and corrosive.

Chronic Exposure: Repeated or prolonged contact with skin will cause ulceration.

Aggravation of preexisting conditions: Unknown.

Section III - Composition/Information on Components

Ingredient	CAS#	EC/List No.	% w/w
Iodine	7553-56-2	231-442-4	4.6% w/w
Potassium Iodide	7681-11-0	231-659-4	9% w/w

Section IV - First Aid Measures

Inhalation: Remove from source of exposure and get immediate medical attention.

Ingestion: Rinse mouth with water but do not induce vomiting. Get immediate medical attention.

Skin Contact: Wash affected area with soap and water. Get medical advice if needed.

Eye Contact: Remove contact lenses if possible and rinse well with water. Get medical attention.

Section V - Fire Fighting Measures

Fire: Not normally a fire hazard.

Explosion: Not normally an explosion hazard.

Fire Extinguishing Media: Any means suitable for surrounding fire.

Special information: Pyrolysis will release corrosive Iodine vapor.

Section VI - Accidental Release Measures

Absorb with a suitable absorbent and store in a suitable container for disposal.

Section VII - Handling and Storage

P403+P233+P102; Store in a well-ventilated place. Keep container tightly closed. Keep out of reach of children. Iodine is light sensitive.

Section VIII - Exposure Control/Personal Protection

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Iodine	0.1 ppm	0.1 ppm STEL Ceiling	2 ppm
Potassium Iodide	Not Applicable	Not Applicable	Not Applicable

Legend

ACGIH: American Conference of Governmental Industrial Hygienists.
OSHA*:* Occupational Safety and Health Administration.
NIOSH: National Institute for Occupational Safety and Health.
IDLH: Immediately dangerous to life or health.

Ventilation System: Usually not required. When required, Refer to the ACGIH document, “Industrial Ventilation, a Manual of Recommended Practices” for details about ventilation.

Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.

Skin protection: Protective gloves are required as part of good laboratory practice.

Eye Protection: Laboratory safety goggles or similar products are recommended as part of good laboratory practices

Section IX - Physical and Chemical Properties

Appearance and Odor: An opaque purple solution with an acrid odor.

Flash point: Not applicable.
Auto ignition temperature: No data
Boiling point range: No data

Flammable Limits: Not applicable.
Boiling Point: ~212 °F (100 °C)
Density: ~1.1 g/ml @ 22.5 °C

Decomposition temperature: No data
Melting point: ~ 0 °C (~ 32 °F)
pH: No data
Vapor pressure (mm Hg): 40 @ 20 °C
Viscosity: No data

Evaporation Rate (water = 1): 1
Partition coefficient (*n*-Octanol/Water): No data
Solubility: Miscible with water
Vapor density (air = 1): 0.6
Volatile organic carbon (VOC): Not applicable

Section X - Stability and Reactivity

Stability: Iodine solutions are light sensitive.

Hazardous Decomposition Products: Decomposes upon heating to produce corrosive and/or toxic fumes.

Hazardous polymerization: Will not occur.

Incompatibilities: Iodine solutions are strong oxidizers and react with many organic compounds.

Conditions to avoid: Heat and light.

Section XI - Toxicological Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iodine	315 mg/kg (Rat)	1,425 mg/kg (Rabbit)	4.6 mg/L 4h (Rat)
Potassium Iodide	285 mg/kg	No Data	No Data

Cancer lists

Ingredient	*Known Carcinogenicity?*	*NTP?*	*Anticipated?*	*IARC Category*
Iodine	No	No	No	3
Potassium Iodide	No	No	No	None

Section XII - Ecological Information

This product is not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption. The product biodegrades quickly and does not contain endocrine disrupters, persistent organic pollutants or ozone depleters.

Soil Mobility: Unknown
Environmental Fate: Biodegradable
Hazardous to the aquatic environment, acute hazard: Category 2 (H401). Toxic to aquatic life

For iodine
Toxicity to freshwater fish (rainbow trout):LC50 = 1.7 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 0.6 mg/l, 48 h
Toxicity to freshwater algae (green algae): EC50 = 0.13 mg/l, 72 h

For potassium Iodide
Toxicity to freshwater fish (rainbow trout):LC50 = 3,780 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 7.5 mg/l, 48 h
Toxicity to freshwater algae: No data

Section XIII - Disposal Considerations

Not normally restricted but ultimate authority resides with local government agencies. Insure compliance with all federal, state and local government regulations

Section XIV - Transportation Information

Not regulated by DOT or IATA.

Section XV - Regulatory Information

Chemical Inventory Status

Ingredient	*TSCA*	*EC*
Iodine	Yes	Yes
Potassium Iodide	Yes	Yes

Federal and State Regulations

	SARA 302		*SARA 313*		*RCRA*	*TSCA*	
Ingredient	*RQ*	*TPQ*	*List*	*Category*	*261.33*	*8(D)*	*Ca. Prop 65*

Iodine	No	No	No	No	No	No	No
Potassium Iodide	No	No	No	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312

Acute:	Yes
Chronic:	No
Fire:	No
Pressure:	No

Section XVI - Other Information

This information is believed to be correct at the time of publication but is not guaranteed as such, nor does it purport to be all inclusive. Medical Chemical Corp. assumes no liability for the accuracy or completeness of the information. The user assumes all responsibility for compliance with federal, state and local laws.

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