

MSDS# 40101

Section 1 - Chemical Product and Company Identification

MSDS Name: Iodine Solutions 1N and Lugol
Catalog Numbers: SI102-500, SI78-500
Synonyms: None

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:
CAS#: 7553-56-2
Chemical Name: Iodine
%: 4.9-9.0
EINECS#: 231-442-4
Hazard Symbols:

Risk Phrases:
CAS#: 7681-11-0
Chemical Name: Potassium iodide
%: 9.8-19.0
EINECS#: 231-659-4
Hazard Symbols:

Risk Phrases:
CAS#: 7732-18-5
Chemical Name: Water
%: 72.0-85.3
EINECS#: 231-791-2
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: XN



Risk Phrases: 22

EMERGENCY OVERVIEW

Caution! May cause eye, skin, and respiratory tract irritation. Target Organs: Central nervous system, respiratory system, cardiovascular system.

Potential Health Effects

- Eye: May cause eye irritation.
- Skin: May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
- Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause gastric disturbances and electrolytic imbalance.
- Inhalation: May cause respiratory tract irritation.
- Chronic: Chronic exposure can lead to iodism characterized by headache, excess salivation, nasal discharge, conjunctivitis, laryngitis, bronchitis, stomatitis, enlarged submaxillary glands, and skin rashes.

Section 4 - First Aid Measures

- Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
- Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
- Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. Get medical aid if cough or other symptoms appear.
- Notes to Physician:

Section 5 - Fire Fighting Measures

- General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Material will not burn.
- Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.
- Autoignition: Not applicable.
- Temperature:
- Flash Point: Not applicable.
- Explosion Limits: Not available
- Lower:
- Explosion Limits: Not available
- Upper:
- NFPA Rating: health: 1; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

- General Information: Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Cover with sand, dry lime or soda ash and place in a closed container for disposal.

Section 7 - Handling and Storage

- Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation.
- Storage: Store in a cool, dry place.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Iodine	0.01 ppm (inhalable fraction and vapor); 0.1 ppm STEL (aerosol and vapor)	2 ppm IDLH	0.1 ppm Ceiling; 1 mg/m3 Ceiling

Potassium iodide	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Iodine: None listed Potassium iodide: None listed Water: None listed

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: dark amber

Odor: iodine-like

pH: Not available

Vapor Pressure: 14 mm Hg

Vapor Density: 0.7

Evaporation Rate: >1

Viscosity: Not available

Boiling Point: 100 deg C (212.00°F)

Freezing/Melting Point: 0 deg C (32.00°F)

Decomposition Temperature: Not available

Solubility in water: Soluble in water.

Specific Gravity/Density: 1.0

Molecular Formula: Not applicable.

Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Hydrogen iodide, iodine, iodide ions (I-).

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 7553-56-2: NN1575000
CAS# 7681-11-0: TT2975000
CAS# 7732-18-5: ZC0110000

RTECS:

CAS# 7553-56-2: Oral, mouse: LD50 = 22 gm/kg;

Oral, mouse: LD50 = 1000 mg/kg;

Oral, rabbit: LD50 = 10 gm/kg;

Oral, rat: LD50 = 14 gm/kg;

LD50/LC50:

.

RTECS:

CAS# 7681-11-0:

RTECS:

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity: Iodine - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Potassium iodide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

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

Section 14 - Transport Information

US DOT

Shipping Name: CORROSIVE LIQUIDS, N.O.S.

Hazard Class: 8

UN Number: UN1760

Packing Group: III

Canada TDG

Shipping Name: CORROSIVE LIQUID NOS (IODINE SOLUTION)

Hazard Class: 8

UN Number: UN1760

Packing Group: III

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 7553-56-2: 1

CAS# 7681-11-0: 1

CAS# 7732-18-5: Not available

Canada

CAS# 7553-56-2 is listed on Canada's DSL List

CAS# 7681-11-0 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2A, E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7553-56-2 is listed on Canada's Ingredient Disclosure List

CAS# 7681-11-0 is listed on Canada's Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7553-56-2 is listed on the TSCA Inventory.

CAS# 7681-11-0 is listed on the TSCA

Inventory.

CAS# 7732-18-5 is listed on the TSCA

Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
