

SAFETY DATA SHEET

Lugol's Iodine Solution

Version 3 · issued 21 September 2026

1. IDENTIFICATION**Product Identifiers**

Product Name	Lugol's Iodine Solution
Other Names	N/A
Product Number(s)	26055-05, 26055-06, C26055-05, C26055-06
CAS Number	N/A

Recommended use of the chemical and restriction on use

Laboratory use only

Company Details

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2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

GHS08 Health hazard

Reproductive toxicity 1B H360-H362 May damage fertility or the unborn child. May cause harm to breast-fed children.

Specific target organ toxicity (single exposure) 2 H371 May cause damage to organs.

Specific target organ toxicity (repeated exposure) 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute toxicity - inhalation 4 H332 Harmful if inhaled.

Label Elements**Harmful / irritant • Health hazard**

Signal Words	Warning
Hazard Statement(s)	H360±H362: May damage fertility or the unborn child H332: May be harmful if inhaled H371: May cause damage to the central nervous system and the visual organs H373: May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)	Do not handle until all safety precautions have been read and understood. Do not breathe dusts or mists. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Get medical advice/attention if you feel unwell. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations
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Primary route(s) of entry

ingestion, with skin and eye contact as additional exposure routes.

Human Health**Inhalation**

Harmful if inhaled. Remove person to fresh air and keep comfortable for breathing.

Ingestion

May cause damage to organs. May damage fertility or the unborn child. May cause harm to breast-fed children. May cause damage to organs through prolonged or repeated exposure.

Eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing

Skin

Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention

Environment

Dispose of contents/container to an approved waste disposal plant. Store locked up.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	Content (w/w)	Classification
Potassium Iodine	7681-11-0	1-5%	Hazardous
Iodine	7553-56-2	0.1-1%	Hazardous

4. FIRST AID MEASURES**Ingestion**

If symptoms persist consult doctor.

Inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

Skin Contact

Generally the product does not irritate the skin.

Eye Contact

Rinse opened eye for several minutes under running water.

Other Information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

5. FIREFIGHTING MEASURES**Suitable extinguishing equipment****Fire**

Use fire fighting measures that suit the environment.

HAZCHEM

No further relevant information available

Special protective equipment and precautions for fire fighters

Mouth respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Wear protective clothing specified for normal operations.

Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Protective Action Criteria for Chemicals

· PAC-1:

7681-11-0 potassium iodide 1.3 mg/m³

7553-56-2 iodine 0.1 ppm

· PAC-2:

7681-11-0 potassium iodide 100 mg/m³

7553-56-2 iodine 0.5 ppm

· PAC-3:

7681-11-0 potassium iodide 620 mg/m³

7553-56-2 iodine 5 ppm

Methods and materials for containment and clean up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation

7. HANDLING AND STORAGE

Precautions for safe handling	Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols. Keep respiratory protective device available. Information about protection against explosions and fires: Keep respiratory protective device available
Conditions for safe storage	Store in a cool, well ventilated area, out of direct sunlight. Keep containers closed when not in use. Store in original container. Conditions for safe storage, including any incompatibilities Storage: Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Not required. Further information about storage conditions: Keep receptacle tightly sealed. Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
Potassium Iodide	0.1ppm	1 mg/m ³	-	-
Iodine	0.1ppm	1 mg/m ³	-	-

Engineering controls	Maintain concentration below recommended exposure limit. Local exhaust ventilation system may be required. General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately.
Personal protective equipment	
Eye and face protection	Goggles recommended during refilling.
Skin protection	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation
Body protection	Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Respiratory protection	In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information

Appearance	Red brown liquid
Odour	Mild characteristic odour (vinegar and iodine)
pH	Not available
Vapour Pressure	at 20 °C (68 °F): 23 hPa (17.3 mm Hg)
Density	at 20 °C (68 °F): 1.0819 g/cm ³ (9.02846 lbs/gal)
Boiling Point	100 °C (212 °F)

Melting Point	0 °C (32 °F)
Solubility	Fully miscible.
Specific Gravity of Density	Not available
Flash Point	Not available
Flammable (Explosive) Limits	Non combustible material
Ignition Temperature	Not available
Formula	Solvent content: Water: 97.0 % VOC content: 0.00 % 0.0 g/l / 0.00 lb/gal Solids content: 3.0 %

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available. Hazardous decomposition products: No dangerous decomposition products known
Chemical stability	Stable under normal use conditions Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. Possibility of hazardous reactions: No dangerous reactions known.
Possibility of hazardous reactions	No significant quantities of decomposition products are expected at temperatures normally achieved in a fire.
Conditions to avoid	No further relevant information available.
Incompatible materials	No further relevant information available.

11. TOXICOLOGICAL INFORMATION

Acute effects	No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. If mishandled or overexposed to this product the following symptoms or effects may occur. LD/LC50 values that are relevant for classification: 7553-56-2 iodine Oral LD50 14,000 mg/kg (rat)
Eye contact	No irritant effect
Skin contact	No irritant effect
Ingestion	No further relevant information available.
Inhalation	No further relevant information available.
Chronic effects	Carcinogenic categories · IARC (International Agency for Research on Cancer): None of the ingredients is listed. · NTP (National Toxicology Program): None of the ingredients is listed. · OSHA-Ca (Occupational Safety Health Administration): None of the ingredients is listed.
Toxicity and irritation	No further relevant information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	No further relevant information available. Remark: Harmful to fish
Persistence and degradability	No further relevant information available.
Bioaccumulative potential	No further relevant information available.
Other adverse effects	Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Harmful to aquatic organisms

13. DISPOSAL CONSIDERATIONS

General information

Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14. TRANSPORT INFORMATION

ADG label required	
HAZCHEM	No further relevant information available
UN Number	Void
Proper shipping name	Void
Transport hazard class	Void
Packing group	Void
Environmental hazard	Void
Special precautions for users	Void
Additional information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by road and rail.

15. REGULATORY INFORMATION

Poisons Schedule Number	Not scheduled. Safety, health and environmental regulations/legislation specific for the substance or mixture: No further relevant information available.
Other Information	Sara · Section 355 (extremely hazardous substances): None of the ingredients is listed. · Section 313 (Specific toxic chemical listings): None of the ingredients is listed. · TSCA (Toxic Substances Control Act): All components have the value ACTIVE. · Hazardous Air Pollutants: None of the ingredients is listed. · Proposition 65 · Chemicals known to cause cancer: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed. · Chemicals known to cause developmental toxicity: None of the ingredients is listed. · Carcinogenic categories · EPA (Environmental Protection Agency): None of the ingredients is listed. · TLV (Threshold Limit Value): 7553-56-2 iodine A4 · NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients is listed.

16. OTHER INFORMATION

SDS preparation date	21 September 2026
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Comments

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route
(European Agreement Concerning the International
Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute toxicity - inhalation 4: Acute toxicity – Category 4
Reproductive toxicity 1B: Reproductive toxicity – Category 1B
Specific target organ toxicity (single exposure) 2: Specific target organ toxicity (single
exposure) – Category 2
Specific target organ toxicity (repeated exposure) 2: Specific target organ toxicity
(repeated exposure) – Category 2.

References

Electron Microscopy Science SDS Lugol's Iodine solution, 11/08/2022.
https://www.emsdiasum.com/docs/technical/msds/26055-06.pdf?srsId=AU7gw4W9x-nYGIQ3JIPalf42HPSlpDzjB_i2DWGFE49sWVFB7s0-sFfx

This Safety Data Sheet (SDS) has been prepared in compliance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice February 2016. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this SDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.

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