

SAFETY DATA SHEET

Lugol's Solution

1. Product and Company Identification

Product Name: Lugol's Solution

Product Use: Contrast medium

Restrictions: Hypersensitivity to iodine

Contact:

Premier Dental Products Company

1710 Romano Drive

Plymouth Meeting, PA 19462

Phone: 610-239-6000 Fax: 610-239-6171

Emergency Phone: 610-239-6000

2. Hazard(s) Identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2

Eye Irrit. 2A

Skin Sens. 1

Aquatic Acute 2

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

Warning

Hazard statement (GHS-US)

Causes skin irritation

May cause serious skin reaction

Causes serious eye irritation

Toxic to aquatic life

Precautionary statements (GHS-US) Avoid breathing mist, vapors, spray.

Wash exposed skin thoroughly after handling.

Contaminated work clothing should be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves, eye protection.

If on skin: Wash with plenty of soap and water.

If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation persists: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container to comply with local, state and federal regulations.

2.3. Other hazards

Other hazards not contributing to the classification

None

2.4. Unknown acute toxicity (GHS-US)

No data available

3. Composition / Information on Ingredients

3.1. Substance

Not applicable

Full text of H-phase: see section 16

3.2. Mixture

CAS No.	Description	% Range	GHS-US classification
CAS: 7732-18-5	Water	85%	Not classified
CAS: 7681-11-0	Potassium Iodide	10%	Eye Irrit. 2B, H320
CAS: 7553-56-2	Iodine	5%	Acute Tox. 3 (Dermal) Acute Tox. 4 (Inhalation) Skin Corr. 1C Eye Dam. 1 Skin Sens. 1B Aquatic Acute

4. First Aid Information

4.1. Description of the first-aid measure

First-aid measures general	Never give anything by mouth to an unconscious person. If person feels unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/ attention.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	May cause an allergic skin reaction
Symptoms/injuries after skin contact	Causes skin irritation
Symptoms/injuries after eye contact	Causes serious eye irritation

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance

5. Fire-Fighting Information

5.1. Extinguishing media

Suitable extinguishing media	Any type
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	Not flammable
Explosion hazard	Not applicable

5.3. Advice for firefighters

Firefighting instructions

Use water spray of fog for cooling exposed containers.
Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting

Use self-contained breathing apparatus and protective equipment.

6. Accidental Release Information

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

Safety glasses, medical gloves and lab coat

Emergency procedures

Evacuate unnecessary personnel

6.1.2. For emergency responders

Protective equipment

Equipment cleanup crew with proper protection

Emergency procedures

Ventilate area

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public water. Avoid release to the environment.

6.3. Methods and material for containment and clean up

Methods for cleaning up

Soak up spills with inert solids. Collect spillage. Wash area with water/bleach solution, detergent or silver chloride solution.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

7. Handling and Storage

7.1. Precautions for safe handling

Precautions for safe handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist, vapors and spray. Keep out of reach of children.

Hygiene measures

Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage including any incompatibilities

Storage conditions

Keep only in the original amber glass container in a cool, dry space. Keep container closed when not in use.

Incompatible products

Do not store in aluminum, carbon steel, copper, copper alloys, zinc or nickel containers.

Incompatible products

Sources of ignition and strong sunlight

7.3. Specific end use(s)

No additional information available

8. Exposure Controls / Personal Protection

8.1. Control parameters

Iodine (CAS - 7553-56-2)

USA ACGIH

ACGIH TWA (mg/m³)

0.1 mg/ m³ Inhalable fraction

USA ACGIH	ACGIH TWA (ppm)	0.01 ppm Inhalable fraction
USA ACGIH	ACGIH STEL (mg/ m ³)	1 mg/ m ³
USA ACGIH	ACGIH STEL (ppm)	0.1 ppm
USA OSHA	OSHA PEL (Ceiling) (mg/ m ³)	1 mg/ m ³
USA OSHA	OSHA PEL (Ceiling) (ppm)	0.1 ppm

Potassium Iodine (CAS 7681-11-0)

USA ACGIH	ACGIH TWA (ppm)	0.01 ppm Inhalable fraction
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8.2. Exposure controls

Appropriate engineering controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.
Personal protective equipment	Avoid all unnecessary exposure.
Hand protection	Wear protective gloves.
Eye protection	Goggles or safety glasses
Skin and body protection	General work/lab wear
Respiratory protection	Wear appropriate mask.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid	Color	Dark brown or purple
Boiling point	100°C	Specific gravity (H ₂ O=1)	N/D
Vapor Pressure (mmHg)	Equal to water	Percent volatile by volume (%)	N/A
Vapor density (air-1)	1	Evaporation Rate (nBuOAc-1)	10%
Order threshold	N/A	Freezing point	-15°C or lower
Coefficient of water/oil distribution	N/A	pH (1% solution)	“neutral”
Scooped density	N/A	Solubility in water	Completely miscible
Odor	Acidic iodine (pungent) odor	Reserve alkalinity	N/D

10. Stability and Reactivity

Stability:	This product is stable under ordinary use and storage conditions.
Possible Hazardous Reactions/Conditions:	None known
Conditions to Avoid:	Avoid strong oxidizing agents or any metal.
Incompatibility (Materials to Avoid):	Strong oxidizing agents and all fabrics.
Hazardous Decomposition/By Products:	None established
Other Recommendations:	Read and follow all directions for use.

11. Toxicological Information

11.1. Information on toxicological effects

Acute toxicity	Not classified
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Iodine, Lugol's, 5% w/v

LD50 oral rate	4400 mg/kg
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Iodine (CAS 7553-56-2)

LD50 oral rate	14000 mg/kg
LD50 dermal rate	220 mg/kg
ATE (dermal)	1100.000 mg/kg bodyweight
ATE (dust, mist)	1.500 mg/I/4h

Potassium Iodine (CAS 7681-11-0)

LD50 oral rate 1000 mg/kg

Water (CAS 7732-18-5)

LD50 oral rate ≥ 90000 mg/kg

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/irritation

Causes serious eye irritation

Respiratory of skin sensitization

May cause an allergic skin reaction

Carcinogenicity

Not classified

12. Ecological Information**12.1. Toxicity****Ecology – water**

Toxic to aquatic life

Iodine, Lugol's, 5% w/v

EC50 Daphnia 1 4 mg/l

Iodine (CAS 7553-56-2)

LC50 fishes 1 1.7 mg/l

EC50 Daphnia 1 0.2 mg/l

Potassium Iodine (CAS 7681-11-0)

LC50 fishes 1 2190 mg/l 96 h

EC50 Daphnia 1 2.7 mg/l 24 h

12.2. Persistence and degradability**Iodine, Lugol's, 5% w/v**

Persistence and degradability Not established

Iodine (CAS 7553-56-2)

Persistence and degradability Not established

Potassium Iodine (CAS 7681-11-0)

Persistence and degradability Not established

Water (CAS 7732-18-5)

Persistence and degradability Not established

12.3. Bioaccumulative potential**Iodine, Lugol's, 5% w/v**

Bioaccumulative potential Not established

Iodine (CAS 7553-56-2)

Log Pow 2.49

Bioaccumulative potential Not established

Potassium Iodine (CAS 7681-11-0)

Bioaccumulative potential Not established

Water (CAS 7732-18-5)

Bioaccumulative potential Not established

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information Avoid release to the environment

13. Disposal Considerations**13.1. Waste disposal methods**

Waste disposal recommendation Wash area with water and drain into disposal system. Dispose of contents/containers to comply with all federal, state/provincial and local regulations.

Ecology – waste materials Avoid release to the environment.

14. Transport Information

DOT: Non-hazardous Observe normal precautions for transporting liquid-filled glass containers.

All ingredients are listed on the TSCA list.

Product does not contain any chemical required to be reported under SARA 313.

ADR

Transport document description

Transport by sea

No additional information available

Air transport

No additional information available

15. Regulatory Information**15.1. US Federal regulations****Iodine (CAS 7553-56-2)**

Listed on the United States TSCA inventory

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard
Delayed (chronic) health hazard

Potassium Iodine (CAS 7681-11-0)

Listed on the United States TSCA inventory

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard
Delayed (chronic) health hazard

Water (CAS 7732-18-5)

Listed on the United States TSCA inventory

15.2. US State regulations

No available information available

16. Other Information –

Premier's revision date: 09-17-2014
Revision Number: 5
Other Information None

NFPA health hazard

1 - Exposure would cause irritation with only minor residual injury.

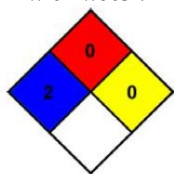
Classification system: NFPA ratings (scale 0-4)

NFPA fire hazard

0 – Materials that will not burn

NFPA reactivity

0 – Normally stable even under fire exposure conditions and are not reactive with water.



Health = 2

Fire = 0

Reactivity = 0

HMIS III Rating

Health 2 – Minor injury may occur.
Flammability 0 – Minimal Hazard
Physical 0 – Minimal Hazard
Personal Protection



HMIS ratings (scale 0 – 4)

Health = 2
Fire = 0
Reactivity = 0

Health	2
Fire	0
Reactivity	0

Revision Summary Replaces Rev 4 issued on September 28, 2014. Complies with GHS OSHA requirements.

Supplier's date: 07-22-2014

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