

# SAFETY DATA SHEET

## Lugol's Solution

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### 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

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

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

<b>Symptoms/injuries after inhalation</b>	May cause an allergic skin reaction
<b>Symptoms/injuries after skin contact</b>	Causes skin irritation
<b>Symptoms/injuries after eye contact</b>	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

<b>Suitable extinguishing media</b>	Any type
<b>Unsuitable extinguishing media</b>	Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

<b>Fire hazard</b>	Not flammable
<b>Explosion hazard</b>	Not applicable

#### 5.3. Advice for firefighters

<b>Firefighting instructions</b>	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
<b>Protection during firefighting</b>	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.
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### 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/m <sup>3</sup> )	0.1 mg/ m <sup>3</sup> Inhalable fraction
USA ACGIH	ACGIH TWA (ppm)	0.01 ppm Inhalable fraction
USA ACGIH	ACGIH STEL (mg/ m <sup>3</sup> )	1 mg/ m <sup>3</sup>
USA ACGIH	ACGIH STEL (ppm)	0.1 ppm
USA OSHA	OSHA PEL (Ceiling) (mg/ m <sup>3</sup> )	1 mg/ m <sup>3</sup>
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

### 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 <sub>2</sub> 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

**Iodine, Lugol's, 5% w/v**

**LD50 oral rate** 4400 mg/kg

**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

<b>Skin corrosion/irritation</b>	Causes skin irritation
<b>Serious eye damage/irritation</b>	Causes serious eye irritation
<b>Respiratory of skin sensitization</b>	May cause an allergic skin reaction
<b>Carcinogenicity</b>	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:

11/05/2015

### Revision Number:

6

### Other Information

None

### NFPA health hazard

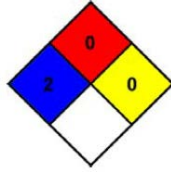
1 - Exposure would cause irritation with only minor residual injury.  
Classification system: NFPA ratings (scale 0-4)

**NFPA fire hazard**

**NFPA reactivity**

0 – Materials that will not burn

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



Health = 2

Fire = 0

Reactivity = 0

**HMIS III Rating**

Health

Flammability

Physical

Personal Protection

2 – Minor injury may occur.

0 – Minimal Hazard

0 – Minimal Hazard



**HMIS ratings (scale 0 – 4)**

Health = 2

Fire = 0

Reactivity = 0

Health	2
Fire	0
Reactivity	0

Supplier number: 092814

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