

Issue Date 02-Feb-2017

Revision Date 29-May-2019

Version 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name Curoxide™

Other means of identification

SDS# JC-046-001

EPA Reg. No. 93324-1

Details of the supplier of the safety data sheet

Company Name CURIS® System, LLC
Inc. 1713 Kennedy
Point Suite 1001
Oviedo, FL 32765
800-928-8708

Emergency telephone number

Emergency Telephone 800-928-8708

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Not classified
Acute toxicity - Dermal	Not classified
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation



Appearance Clear

Physical state Liquid

Odor Odorless

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS)

IF IN EYES: 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

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

Precautionary Statements - Disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations

Hazards not otherwise classified (HNOC)**Other Information**

Unknown Acute Toxicity

0.47% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Hydrogen Peroxide	7722-84-1	7.0

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures****Skin Contact**

Wash off immediately with plenty of water. Wash skin with soap and water.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Inhalation

Remove to fresh air.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed**Symptoms**

Any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No Information available.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions** Ensure adequate ventilation, especially in confined areas.**Environmental precautions****Environmental precautions** See Section 12 for additional ecological information.**Methods and material for containment and cleaning up****Methods for containment** Prevent further leakage or spillage if safe to do so.**Methods for cleaning up** Pick up and transfer to properly labeled containers.**7. HANDLING AND STORAGE****Precautions for safe handling****Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.**Conditions for safe storage, including any incompatibilities****Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.**Incompatible materials** None known based on information supplied.**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen Peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³ (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m ³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m ³
Proprietary	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³
Proprietary	STEL: 6 mg/m ³ inhalable particulate matter TWA: 2 mg/m ³ inhalable particulate matter	-	-

*NIOSH IDLH Immediately Dangerous to Life or Health***Other Information**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Avoid contact with eyes.
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Colorless
Odor	Odorless
Odor threshold	No Information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2.5 - 3.5	
Specific Gravity	1.015	
Viscosity	<25 cP @ 25°C	
Melting point/freezing point	0 °C / 32 ° F	
Flash point	Above 200°F	
Boiling point / boiling range	>= 100 °C / 212 ° F (at 760 mm Hg)	
Evaporation rate	No Information available	
Flammability (solid, gas)	No data available	
Flammability Limits in Air		
Upper flammability limit:	No Information available	
Lower flammability limit:	No Information available	
Vapor pressure	No Information available	
Vapor density	No Information available	
Water solubility	Complete	
Partition coefficient	No Information available	
Autoignition temperature	No Information available	
Decomposition temperature	No Information available	

Other Information

Density Lbs/Gal	8.46
VOC Content (%)	No Information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

Inhalation	No data available. May cause irritation of respiratory tract. May cause possibly severe irritation of the respiratory tract.
Eye contact	Severely irritating to eyes.
Skin Contact	Irritating to skin.
Ingestion	No data available. May cause gastro intestinal irritation. Harmful if swallowed. Ingestion may cause digestive tract irritation or corrosion, nausea and possibly bloody vomiting, bloody diarrhea and abdominal pain.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen Peroxide 7722-84-1	= 1518 mg/kg (Rat)	= 4060 mg/kg (Rat) = 2000 mg/kg (Rabbit)	= 2 g/m ³ (Rat) 4 h

Information on toxicological effects**Symptoms** No Information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Sensitization No Information available.
Germ cell mutagenicity No Information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP
Hydrogen Peroxide 7722-84-1	A3	Group 3	-

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 -Not classifiable as a human carcinogen

Reproductive toxicity No Information available.
STOT - single exposure No Information available.
STOT - repeated exposure No Information available.
Target organ effects EYES, Respiratory system, Skin.
Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0.47% of the mixture consists of ingredient(s) of unknown toxicity
 The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 61.959.00 ma/ka
ATEmix (inhalation-dust/mist) 82.00 ma/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.47% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hydrogen Peroxide 7722-84-1	2.5: 72 h Chlorella vulgaris mg/L EC50	10.0 - 32.0: 96 h Oncorhynchus mykiss mg/L LC50 static 16.4: 96 h Pimephales promelas mg/L LC50 18 - 56: 96 h Lepomis macrochirus mg/L LC50 static	18 - 32: 48 h Daphnia magna mg/L EC50 Static 7.7: 24 h Daphnia magna mg/L EC50
Proprietary	-	3 - 3.5: 96 h Gambusia affinis mg/L LC50	4.6: 12 h Daphnia magna mg/L EC50
Proprietary	-	1020: 72 h Carassius auratus mg/L LC50 flow-through	115 - 153: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No Information available.

Bioaccumulation

No Information available.

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Hydrogen Peroxide 7722-84-1	Toxic Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen Peroxide 7722-84-1	-	1000 lb	-

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrogen Peroxide 7722-84-1	X	X	X
Proprietary	X	X	X
Proprietary	X	-	-

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 1	Flammability 0	Instability 0	Physical Properties
<u>HMIS</u>	Health hazards 1	Flammability 0	Physical hazards 0	Personal

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Revision Note

No Information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet