

Chlorine Dioxide

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 6/7/2022 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Chlorine Dioxide

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Deodorizer

1.3. Supplier

PureLine Treatment Systems, LLC.
1241 N. Ellis Street
Bensenville, IL 60106
U.S.
T 847-963-8465

1.4. Emergency telephone number

Emergency number : (800)255-3924, +1 (813)248-0585 [ChemTel]

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 1

Harmful if swallowed

Causes skin irritation

Causes serious eye damage

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

Harmful if swallowed

Causes skin irritation

Causes serious eye damage

Precautionary statements (GHS US) :

Wash hands, forearms and face thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective clothing, eye protection, face 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.

Immediately call a POISON CENTER.

Rinse mouth.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
chlorine dioxide ... %	CAS-No.: 10049-04-4	< 5

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If breathing stops, give artificial respiration. Call 911, if available. Call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. Immediately call a poison center or doctor/physician.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
First-aid measures after ingestion	: Immediately call a poison center or doctor/physician. Give water to drink if victim completely conscious/alert. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: None known.

5.2. Specific hazards arising from the chemical

Fire hazard	: May cause fire or explosion; strong oxidiser. Reacts with : Organic materials. acids. chlorine. with the release of heat.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container closed when not in use.
Incompatible materials : Oxidizing agent. Strong acids. Combustible materials. Reducing agent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chlorine Dioxide	
No additional information available	
chlorine dioxide ... % (10049-04-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Chlorine dioxide
ACGIH OEL C [ppm]	0.1 ppm
Remark (ACGIH)	TLV® Basis: Resp tract irr; pulm edema
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Chlorine dioxide

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chlorine dioxide ... % (10049-04-4)	
OSHA PEL TWA [1]	0.3 mg/m ³
OSHA PEL TWA [2]	0.1 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Aqueous solution.
Color : Pale yellow
Odor : chlorine-like Ozone
Odor threshold : 0.2 – 1 ppm
pH : Not applicable
Melting point : Not applicable
Freezing point : -74 °F
Boiling point : 51 °F
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : Not applicable
Flammability (solid, gas) : Not applicable.
Vapor pressure : Not applicable
Relative vapor density at 20 °C : No data available
Relative density : 2.4 Relative density, gas (air=1)
Solubility : Water: 8 g/l
Partition coefficient n-octanol/water (Log Pow) : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available

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Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly reactive chemical in contact with incompatible materials
. May decompose under the influence of light.

10.2. Chemical stability

Chemically unstable gases.

10.3. Possibility of hazardous reactions

Reacts violently with combustible materials: risk of spontaneous ignition. Reacts vigorously with strong oxidizers and acids. Reacts with : Incompatible materials.

10.4. Conditions to avoid

Protect from sunlight.

10.5. Incompatible materials

Oxidizing agent. Acids. Strong reducing agents. Combustible materials.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Chlorine Dioxide	
ATE US (oral)	2000 mg/kg body weight
chlorine dioxide ... % (10049-04-4)	
ATE US (oral)	100 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.
pH: Not applicable
Serious eye damage/irritation : Causes serious eye damage.
pH: Not applicable
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after skin contact : Irritation.

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Symptoms/effects after eye contact : Serious damage to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

chlorine dioxide ... % (10049-04-4)	
Persistence and degradability	Biodegradability: not applicable.

12.3. Bioaccumulative potential

chlorine dioxide ... % (10049-04-4)	
Bioaccumulative potential	Does not contain bioaccumulative component(s).

12.4. Mobility in soil

chlorine dioxide ... % (10049-04-4)	
Ecology - soil	No (test)data on mobility of the component(s) available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Do not dispose of with domestic waste. Do not dispose of this product into the environment. Do not dispose of waste into sewer.
Ecology - waste materials : Contained plant-setting ponds or drains containing organic matter will generally provide an environment where residual chlorine dioxide will be reduced to harmless compounds quickly.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

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IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

chlorine dioxide ... %	CAS-No. 10049-04-4	< 5%
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15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
chlorine dioxide ... %(10049-04-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.