

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200)

Revision: January 19, 2022

1 Identification

- **Product identifier** EPA Registration No. 93113-2
- **Trade name:** DoxyKlor™
- **Product code:** DK5G-500
- **Other means of identification:** Aqueous Chlorine Dioxide 0.05%
- **Recommended use and restriction on use**
- **Recommended use:** Sanitizer, Disinfectant, Deodorizer, Biocide
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
 PI Industries, Inc.
 8275 S. Eastern Avenue, Suite #200 – 882
 Las Vegas, NV 89123-2545
 USA
 (858) 736-6617
- **Emergency telephone number:**
 For chemical spill information call CHEMTREC: 1-800-424-9300
 For emergency medical information, call the National Pesticide Information Center: 1-800-858-7378



2 Hazard(s) identification

- **Classification of the substance or mixture**
 The product is not classified as hazardous according to the Globally Harmonized System (GHS).
- **Label elements**
 The product is not classified as hazardous according to OSHA GHS regulations within the United States.
- **GHS label elements** None.
- **Hazard pictograms:** None.
- **Signal word:** None
- **Hazard statements:** None
- **Precautionary statements:**
- **Other:** NOTE: Product is below threshold for OSHA GHS classification. See section 3 and section 16.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures

- **Components:**

10049-04-4	Chlorine dioxide	0.05%
	Water	99.95%

- **Additional information:**

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:**
Rinse affected area with water. If skin irritation is experienced, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; contact poison control or seek medical help.
- **Most important symptoms and effects, both acute and delayed:** No relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**
Formation of minimal amount of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Chemical resistant gloves provide the best protection
- **Environmental precautions** Avoid release to the environment.
- **Methods and material for containment and cleaning up**
Wipe up small spills with paper towel and discard.
For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.
Dispose of the collected material according to regulations.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**

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Open and handle receptacle with care.
 Keep out of reach of children.
 Avoid contact with the eyes and skin.
 Do not intentionally inhale or huff.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Store in cool, dry conditions in well sealed receptacles.
 Do not allow product to freeze.
 Avoid storage near extreme heat.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.
 Do not store together with acids.
 Do not store together with alkalis (caustic solutions).

- **Further information about storage conditions:** Protect from exposure to the light.

- **Specific end use(s)** Fogging applications may require respiratory protection.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

If fogged, see section 16.

- **Exposure controls**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Avoid contact with the eyes and skin.

- **Engineering controls:** No relevant information available.

- **Breathing equipment** See section 16.

- **Protection of hands:**



Chemically resistant gloves provide the best protection.
 Glove material should be impermeable and resistant to the product.

- **Eye protection:**



Safety glasses provide the best protection.
 Follow relevant national guidelines concerning the use of protective eyewear.

- **Limitation and supervision of exposure into the environment** Avoid release to the environment.

- **Risk management measures** No special requirements. See section 16 for exposure information.

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid
Color: Yellow

· Odor: Characteristic

· Odor threshold: Not determined.

· pH-value: 5.1

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: 100 °C (212 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Non-oxidizing.

· Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

· Density:

Relative density: 1.0

Vapor density: Not determined.

Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Not determined.

Kinematic: Not determined.

· Other information: No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.

· **Chemical stability:** Stable under normal temperatures and pressures.

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point. Reacts with strong acids.

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- **Conditions to avoid**

Avoid acids.
Protect from sunlight.

- **Incompatible materials**

Acids.
Alkalis.

- **Hazardous decomposition products** Chlorine compounds

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

- **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Other adverse effects** No relevant information available.

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13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- **Uncleaned packagings**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- DOT, ADR/RID/ADN, IMDG, IATA Not regulated.

- **UN proper shipping name**

- DOT, ADR/RID/ADN, IMDG, IATA Not regulated.

- **Transport hazard class(es)**

- DOT, ADR/RID/ADN, IMDG, IATA

- Class Not regulated.

- **Packing group**

- DOT, ADR/RID/ADN, IMDG, IATA Not regulated.

- **Environmental hazards**

- Marine pollutant: No

- **Special precautions for user**

- Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

- Not applicable.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- United States (USA)

- SARA

- **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

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· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes mild to moderate eye irritation. Avoid contact with eyes, skin, or clothing. Harmful if swallowed, absorbed or inhaled. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, smoking, or using the toilet.

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

· May cause an allergic skin reaction

· Causes mild to moderate eye irritation if sprayed directly in eyes.

· Harmful if inhaled in large quantities.

· Harmful to aquatic life in large quantities

· **Date of preparation / last revision** January 19, 2022

· **Abbreviations and acronyms:**

ADR: 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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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Monitored air concentration data for workers in 7 industry SIC codes indicate air concentrations of aqueous chlorine dioxide below level of concern for non-fogging uses of chlorine dioxide such as open pouring of aqueous solutions, wipe, mopping or general spray application, thus no additional mitigation is deemed necessary.

Inhalation Risks from Fogging Applications

Inhalation exposure to the release of chlorine dioxide gas during the mixing/loading/application of products producing or generating chlorine dioxide on-site may occur. There is a greater potential for chlorine dioxide gas formation from fogging than aqueous-based application. Therefore, people must vacate the premises during fogging treatments and a one-hour restricted entry interval (REI) is required to address this risk.

Please refer to OSHA for guidance on PPE for fogged (airborne) applications:

Depending on airborne concentrations, NIOSH approved, cartridge respirator with specific cartridge(s) for chlorine dioxide, NIOSH approved, full faceplate respirator with specific cartridge(s) for chlorine dioxide, or NIOSH approved, supplied-air respirator with full faceplate, operated in continuous flow mode or powered air-purifying respirator with specific cartridge(s) for chlorine dioxide may be required.

Exposure Limits: *(Note: Exposure limits are for concentration in fogged or gaseous chlorine dioxide, not aqueous solution general spray, wipe, or mop application.) Open air or standard room ventilation is normally adequate for safe use of this product.*

Occupational exposure limits for airborne (fogged) chlorine dioxide.

Airborne concentrations of chlorine dioxide above the detection threshold below require the use of protective personal equipment and limited exposure times.

Permissible Exposure Limit (California State / OSHA) Table Z-1. As of 12/19/2016. (29 CFR 1910.1000)

PEL = 0.3 mg/m³ time weighted average over any 8-hour work-shift of a 40-hour work-week.

Short Term Exposure Limit (California State / OSHA) Table Z-1. As of 12/19/2016. (29 CFR 1910.1000)

STEL = 0.9 mg/m³, 15 minute period, as long as time weighted average is not exceeded during workday.

Recommended Exposure Limit (NIOSH). As of 07/07/2016.

REL = 0.3 mg/m³ time weighted average over 10-hour work-shift.

Short Term Exposure Limit (NIOSH). As of 07/07/2016.

STEL = 0.9 mg/m³, 15 minute period, as long as time weighted average is not exceeded during workday.

ACGIH Threshold Limit Value 2017.

TLV = 0.28 mg/m³, time weighted average over any 8 hour work shift.

ACGIH Short Term Exposure Limit 2017.

STEL = 0.83 mg/m³, 15 minute period as long as time weighted average is not exceeded during a workday.

SOURCES:

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

P.I. Industries, Inc.