



bioPURE CLEAN Ready to Use Solution

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).
Revision Date: 12/15/2017 Date of Issue: 01/05/2016 Version: 2.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: bioPURE CLEAN Ready to Use Solution

Product Code: BC1GALK-2, BC1GALP-25, BC32OZK-12, BC32OZP-12, BC5GALP-12

Intended Use of the Product

Disinfectant/Sanitizer/Tuberculocide/Virucide/Fungicide/Algaecide/Slimicide/Deodorizer

Name, Address, and Telephone of the Responsible Party

Company

bioPURE Services LLC
6221 Riverside Drive, # 1N
Dublin, OH 43017
(844)800-PURE
biopureservice.com

Emergency Telephone Number

Emergency Number : US: (800) 424-9300; International: (703) 527-3887 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS-US/CA Classification

Not classified

Label Elements

GHS-US/CA Labeling

No labeling applicable

Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Under normal conditions of use, when fully reacted and in solution, the solution is not considered hazardous. However, if the bioPURE CLEAN product is altered, or directions for use are not properly followed, the solution may evolve chlorine dioxide gas. At high concentrations chlorine dioxide gas can be explosive, and may be fatal if inhaled. If chlorine dioxide concentrations in solution reach $\geq 0.3\%$ w/w this product may be irritating to the eyes, skin, and respiratory tract. At concentrations of 1-5% it will cause skin irritation and eye damage, and at concentrations $> 5\%$ it will cause skin burns.

Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% *
Chlorine dioxide	(CAS-No.) 10049-04-4	0.000025 - 0.01

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

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Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Symptoms may be delayed. If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures. Contains an oxidizing material which may accelerate fire.

Explosion Hazard: Product is not explosive but may evolve explosive chlorine dioxide gas when pressurized or heated.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition. Remove containers from fire area if this can be done without risk.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Chlorine oxides. Chlorine gas.

Other Information: Risk of explosion if heated under confinement.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

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SECTION 7: HANDLING AND STORAGE

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. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, and spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Reducing agents. Organic materials.

Specific End Use(s)

Disinfectant/Sanitizer/Tuberculocide/Virucide/Fungicide/Algaecide/Slimeicide/Deodorizer

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Chlorine dioxide (10049-04-4)		
Mexico	OEL TWA (mg/m ³)	0.3 mg/m ³
Mexico	OEL TWA (ppm)	0.1 ppm
Mexico	OEL STEL (mg/m ³)	0.9 mg/m ³
Mexico	OEL STEL (ppm)	0.3 ppm
USA ACGIH	ACGIH TWA (ppm)	0.1 ppm
USA ACGIH	ACGIH STEL (ppm)	0.3 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.3 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	0.1 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.3 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.1 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	0.9 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	0.3 ppm
USA IDLH	US IDLH (ppm)	5 ppm

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental Exposure Controls: Avoid release to the environment.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Not available
Odor	: Chlorine
Odor Threshold	: Not available
pH	: Not available

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Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Relative Density	: Not available
Specific Gravity	: Not available
Solubility	: Not available
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Reducing agents. Organic materials.

Hazardous Decomposition Products: None expected under normal conditions of use. Thermal decomposition generates: Chlorine dioxide. Chlorine gas. Oxygen.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Chlorine dioxide (10049-04-4)	
LD50 Oral Rat	93.86 mg/kg (0.2% gas in water)
LC50 Inhalation Rat	32 ppm/4h

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SECTION 12: ECOLOGICAL INFORMATION

This section is not required according to the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations SOR/2015-17. The information commonly reported under other competent authorities in this section may require separate reporting. Contact the manufacturer for more information.

SECTION 13: DISPOSAL CONSIDERATIONS

This section is not required according to the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations SOR/2015-17. The information commonly reported under other competent authorities in this section may require separate reporting. Contact the manufacturer for more information.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

In Accordance with DOT, IMDG, IATA, TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

This section is not required according to the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations SOR/2015-17. The information commonly reported under other competent authorities in this section may require separate reporting. Contact the manufacturer for more information.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest : 12/15/2017

Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

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.

NA GHS SDS 2015 (Can, US, Mex)