MATERIAL SAFETY DATA SHEET

CHIAPHUA INDUSTRIES LIMITED Unit A, 2/F, CHIAPHUA INDUSTRIES BUILDING NOS. 8-10 SIU LEK YUEN ROAD SHA TIN, NEW TERRITORIES, HONG KONG PHONE: 2686-6270 MSDS DATE: 30-04-2019 REPLACES: 22-02-2019

IDENTIFICATION

PRODUCT NAME: GERMAGIC

COMPOSITION: ENCAPSULATED ACTIVATED CHLORINE DIOXIDE SOLUTION

CAS NO.	%Wt.	PEL-OSHA	TLV-ACGIH
10049-04-4	3-6%	None Established	None Established
7631-86-9	≤8%	None Established	None Established
9003-11-6	2-5%	None Established	None Established
10125-13-0	0.1-1%	None Established	None Established
	10049-04-4 7631-86-9 9003-11-6	10049-04-43-6%7631-86-9≤8%9003-11-62-5%	10049-04-43-6%None Established7631-86-9≤8%None Established9003-11-62-5%None Established

PHYSICAL DATA

APPEARANCE: Blue green milky solution

ODOR: Chlorine like odor

FIRE AND EXPLOSION DATA

FLAMMABILITY:Contact with acids, reducing agents or chlorine donors will produce
chlorine dioxide gas and heat. The lower explosive limit (LEL) for
chlorine dioxide is 10%. Maintain well ventilation to keep chlorine
dioxide concentration below 10%.EXTINGUISHING MEDIA:Flood with water. Apply water from a protected location or from a
safe distance.UNUSUAL FIRE AND
EXPLOSION HAZARDS:Oxidizing material. Increases flammability of combustible, organic
or other readily oxidable materials.

NFPA HAZARD RATING: Health 2; Flammability 1; Reactivity 0

HEALTH HAZARD DATA

- Causes eyes, skin and respiratory tract irritation.
- May cause burns.
- Harmful if swallowed. May cause irritation of the gastrointestinal tract, dizziness, nausea, vomiting and/or diarrhea.
- Oxidizing material. Increases flammability of combustible or readily oxidable material.
- Heat, and contact with acids, reducing agents or chlorine donors will accelerate chlorine dioxide gas production. The lower explosive limit (LEL) for chlorine dioxide is 10%. The Occupational Safety and Health Adminstration permissible exposure limit time-weighted average (OSHA PEL TWA) is 0.1 ppm. Maintain well ventilation to keep chlorine dioxide concentration below 10% and 0.1ppm.
- Exposure to chlorine dioxide gas may cause irritation of eyes, nose, throat and lungs, coughing and wheezing.

EMERGENCY & FIRST AID PROCEDURES

- **EYE CONTACT:** Immediately flush with plenty of water for at least 15 minutes. Hold eyelids open while flushing. If irritation persists, call a physician.
- **SKIN CONTACT:** Immediately wash off in flowing water or shower. To prevent fire, rinse contaminated clothing until chemical is fully removed. If irritation persists, get medical attention.
- **INGESTION:** If person is conscious and able to swallow, give large amounts of water to dilute. If vomiting occurs, keep head below hips to prevent aspiration. Get medical attention immediately.
- **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention immediately.

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	A NIOSH/MSHA-approved respirator, suitable for use in a chlorine or chlorine dioxide atmosphere, as necessary. If respiratory protection is used, follow all requirements for respiratory programs set forth in OSHA regulations (29 CFR 1910.139).
VENTILATION SYSTEM:	General; local exhaust ventilation as necessary to control any air contaminants to within their PELs or TLVs during the use of this product.
SKIN PROTECTION:	Body protection as necessary to prevent skin contact.
PROTECTIVE GLOVES:	Rubber or neoprene gloves.

REACTIVITY DATA

INCOMPATIBLE MATERIALS:	Contact with acids, reducing agents and chlorine donors will release toxic chlorine dioxide gas.
STABILITY:	Product is stable.
POLYMERIZATION:	Product will form gel upon aging.
DECOMPOSITION PRODUCTS:	Thermal decomposition will produce toxic chlorine dioxide gas.

SPILL OR DISPOSAL PROCEDURES

- **SPILL:** See Emergency/First Aid Procedures and Special Protection Information for hazards and exposure controls. Flush with water to dilute. Do not allow contact with rags, paper or other oxidable materials. For large spills, evacuate area, contain liquid and transfer to closed polyethylene drums. Prevent contact with oxidizers and acids. Flush area with water after liquid is removed.
- **DISPOSAL:** Small quantities can be disposed of in the drainage system after dilution with large volumes of water.

Consult the public authorities for information in the event of major volumes of waste.

TRANSPORTATION

UN Number: Not Regulated

DOT Classification: Not Regulated

Consult the public authorities for any applicable state and local regulations.

STORAGE

Store in cool and dark place. Avoid direct sunlight.