

MATERIAL SAFETY DATA SHEET

 Date Prepared:
 July 8, 2013

Version: 1

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	ZeroMold™
Synonyms:	None
Product Use:	Household, Institutional and Industrial Disinfectant
Manufacturer/ Vendor Information:	Supplier Identification: Biosenta Inc. 1120 Finch Avenue West Suite 503 Toronto, ON M3J 3H7 Canada Phone: (416) 410-2019 Fax: (416) 410-6703 Emergency Telephone Number: (416) 410-2019

SECTION 2 - HAZARDS IDENTIFICATION

Most Important Hazards:	Exercise caution when handling this material. May be corrosive to skin, eyes and metal objects. May be harmful if swallowed. May cause irritation to the respiratory tract. For more information refer to Section 11 of this MSDS. Target Organs: Eyes and skin.
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For more information refer to Section 11 of this MSDS.

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Substance or Preparation:			
CAS No.	Chemical Name	ACGIH (TLV) and OSHA (PEL) Exposure Limits	% by Weight
1305-62-0	Calcium hydroxide	ACGIH: (TLV-TWA): 5 mg/m ³ NIOSH: (REL-TWA): 5mg/m ³ PEL-TWA: Total dust: 15 mg/m ³ PEL-TWA: Respirable fraction: 5 mg/m ³	0.1-1%
7681-52-9	Sodium hypochlorite	None established	0.1-1%

ACGIH = American Conference of Governmental Industrial Hygienists

NIOSH = National Institute for Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

TLV = Threshold Limit Value, PEL = Permissible Exposure Limit, TWA= Time-Weighted Average,

REL = Recommended Exposure Limit

SECTION 4 - FIRST-AID MEASURES

Eyes:	Avoid direct contact. Wear chemical gloves if necessary. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 20-30 minutes, by the clock, while holding the eyelid(s) open. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting. Take care not to rinse contaminated water into the unaffected eye or onto face. If irritation persists, repeat flushing. Quickly transport victim to an emergency care facility.
Skin:	Avoid direct contact. Wear chemical gloves if necessary. Flush contaminated area with lukewarm, gently flowing water for at least 20-30 minutes by the clock. If irritation persists, repeat flushing. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Transport victim to an emergency care facility immediately. Discard contaminated clothing, shoes and leather goods.
Inhalation:	Remove source of contamination or move victim to fresh air.
Ingestion:	NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 240 to 300 mL (8 to 10 oz.) of water to dilute material in stomach. If milk is available, it may be administered AFTER the water has been given. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. Quickly transport victim to an emergency care facility.

SECTION 5: FIRE-FIGHTING MEASURES

Flash point:	Not available
Conditions of flammability:	Heat from fire can cause a build-up of pressure inside containers, which may cause explosive rupture.
Flammable Limits in Air Lower (LFL): Upper (UFL):	Not available Not available
Extinguishing Media:	Not combustible. Use extinguishing media suitable for surrounding fire.
Special Firefighting Procedures:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Firefighters should wear self-contained breathing apparatus and protective clothing to prevent inhalation and contact with skin and eyes.
Hazardous Combustion Products:	Calcium oxide, chlorine, sodium oxide and oxygen.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Evacuate non-essential personnel. Avoid contact with spilled material. Ensure clean-up personnel wear appropriate personal protective equipment. Provide adequate ventilation. Do not allow spilled materials to come into contact with incompatible materials (see Section 10).
Environmental Precautions:	Avoid contaminating sewers, streams, rivers and other watercourses with spilled material.

SECTION 7: HANDLING AND STORAGE

Handling:	Wear appropriate personal protective equipment. Avoid inhalation and contact with eyes and skin. Wash thoroughly after handling this product.
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Storage:	Store in cool, dry, well-ventilated area. Store away from incompatible and reactive materials (See Sections 5 and 10). Keep container tightly closed. Store away from heat and sources of ignition.
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SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

The selection of personal protective equipment varies, depending upon the conditions of use. Use equipment appropriate to use pattern.

Engineering Measures:	For normal application, special ventilation is not necessary. Either local exhaust or general room ventilation is usually adequate.
Eye Protection:	As a minimum, safety glasses with side shields should be worn when handling this material.
Hand Protection:	If this material may come in contact with the hands during handling and use, recommend wearing gloves. Consult PPE provider for breakthrough times and the specific glove that is best based on use patterns.
Skin and Body Protection:	If this material may come into contact with the body during handling and use, recommend wearing appropriate protective clothing to prevent contact with the skin.
Respiratory Protection:	With correct and proper use, and under normal conditions, breathing protection is not required. In the absence of adequate ventilation workers should use appropriate NIOSH approved respiratory protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Physical State:	Clear colorless liquid
Melting Point:	Not available
Boiling Point:	100.7-101 °C
Decomposition Temperature:	Not available
Auto-ignition Temperature:	Not available
Explosion Properties- Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Density/Specific Gravity:	1.003-1.005 g/mL
Odour/Odour Threshold:	Not available
Evaporation Rate:	Not available
pH:	12.1 - 12.6
Octanol/ Water Partition Coefficient	Not available
Vapour Pressure:	13 mmHg or (2.33×10 ³ Pa) at 20 °C
Vapour Density:	Not available
Solubility in Water:	Soluble

SECTION 10: STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Avoid heat sources, sparks or flames and static discharge.
Materials to avoid:	None
Hazardous Decomposition Products:	Calcium oxide. Thermal decomposition: Chlorine, sodium oxide, oxygen, oxides of chlorine,

	sodium chlorate, and hydrogen.
Hazardous Polymerization:	Will not undergo hazardous polymerization under normal conditions of storage and use.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry:	Skin contact, Inhalation, Eye contact, Skin Absorption, Ingestion		
Acute Toxicity			
<i>Product data:</i>	Not available.		
<i>Ingredient data:</i>			
<u>Chemical</u>	<u>CAS#</u>	<u>Route & Species</u>	<u>Value</u>
Calcium hydroxide	1305-62-0	Rat (oral):	LD ₅₀ : 7340 mg/kg
Sodium hypochlorite	7681-52-9	Mouse (oral)	LD ₅₀ = 5800 mg/kg
		Rat (oral):	LD ₅₀ : 8910 mg/kg (undiluted)
		Rabbit (dermal):	LD ₅₀ : >10 000 mg/kg (undiluted)
		Rat (inhalation):	LC ₅₀ : >5250 mg/m ³ /4hr
Eye Irritation:	May cause eye damage. This product contains ingredients at ≥ 0.1% that are corrosive.		
Skin Irritation:	Irritating to skin. This product contains ingredients at ≥ 0.1% that are corrosive.		
Skin Sensitization:	This product is not known to contain any components at ≥ 1% that have been shown to cause skin sensitization.		
Respiratory Tract Sensitization:	This product is not known to contain any components at ≥ 0.1% that have been shown to cause respiratory tract sensitization.		
Chronic Toxicity			
Carcinogenicity:	This product does not contain any chemicals at ≥ 0.1% that are listed as Group A1 or A2 carcinogens by ACGIH, that are listed as Group 1, 2A, or 2B carcinogens by IARC or that are listed as carcinogens by NTP or OSHA.		
Mutagenicity:	This product is not known to contain any components at ≥ 0.1% that have been shown to cause mutagenicity.		
Reproductive Toxicity:	This product is not known to contain any components at ≥ 0.1% that have been shown to cause reproductive toxicity.		
Teratogenicity/Embryotoxicity:	This product is not known to contain any components at ≥ 0.1% that have been shown to cause teratogenicity and/or embryotoxicity.		
Other Chronic Effects:	None Known		
Target Organ Effects:	Eyes, Skin		
Toxicologically Synergistic Materials:	None Known		

SECTION 12: ECOLOGICAL INFORMATION

Mobility:	No data available
Persistence/ Degradability:	No data available
Bioaccumulation:	No data available
Ecotoxicity:	No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Place used and contaminated material and packaging into suitable containers. Review and follow all local, state and national regulations before disposal.
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SECTION 14 - TRANSPORT INFORMATION

	Shipping name	UN Number	Hazard Class	PG
TDG Canada	Not regulated for transport.	Not applicable	Not applicable	Not applicable
DOT (USA)	Not regulated for transport.	Not applicable	Not applicable	Not applicable

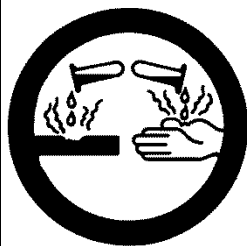
SECTION 15 - REGULATORY INFORMATION

Canada: This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: (Workplace Hazardous Materials Information System – Hazardous Products Act/Controlled Products Regulations)

E: Corrosive

WHMIS Symbols for Labelling Purposes:

**OSHA Classification: (OSHA Hazard Communication Standard (29 CFR §1910.1200))**

Corrosive

SECTION 16 - OTHER INFORMATION

Disclaimer: The information given is based on data currently available to us and is believed to be correct. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. No responsibility is assumed for injury or damage from the use of the products described herein.