

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

<b>GHS Product identifier:</b>	Sanygen Swimming Pool Anti-Freeze; Calcium Chloride
<b>Other means of identification:</b>	Item codes: S-W4-04, S-W4-55, CACL29, CACL32, CACL38
<b>Synonyms:</b>	Liquid calcium chloride, Calcium chloride
<b>Recommended use:</b>	Prevents freezing of PVC pipes in outdoor swimming pools. Can also be used as a pre-wet agent for rock salt during ice/snow removal.
<b>Restriction on Use:</b>	Do not use as an anti-freeze when metal pipes are involved.
<b>Manufacturer:</b>	Address: Miami Products & Chemical Co. 520 Lonoke St. Dayton, OH 45403 Tel: (800) 776-1313 Fax: (937) 253-1559
<b>24 Hour Emergency Telephone Number:</b>	CHEMTREC: (800) 424-9300 within the United States CHEMTREC: (703) 527-3887 if international CHEMTREC Contract No: CCN14419

**SECTION 2: HAZARD IDENTIFICATION**

**OSHA REGULATORY STATUS:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**GHS Classification in accordance with 29 CFR 1910 (GHS HCS)**

Skin corrosion/irritation	Category 2
Serious eye damage/irritation	Category 2A

**GHS label elements, including precautionary statements**



**Pictogram(s):**

**Signal Word: WARNING**

**GHS Hazard Statements:**

**Physical hazard statements:** Not applicable.

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**Health hazard statements:** H315: Causes skin irritation.  
H319: Causes serious eye irritation.

**Environmental hazard Statements:** Not applicable.

### GHS Precautionary Statements:

**General Precautionary Statements:** P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children.  
P103: Read label before use.

**Prevention Precautionary Statements:** P264: Wash all affected areas thoroughly after handling.  
P280: Wear protective gloves and eye/face protection.

**Response Precautionary Statements:** P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical attention.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P362: Take off contaminated clothing and wash before reuse.  
P332+P313: If skin irritation occurs: Get medical attention.  
P321: Specific treatment (see First Aid information on product label and/or Section 4 of the SDS).

**Storage Precautionary Statements:** Not applicable.

**Disposal Precautionary Statements:** P501: Dispose of contents/container in accordance with local, regional, and national regulations.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** None identified.

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Common Chemical Name	Percent (%)	CAS Number
Water	53-72	7732-18-5
Calcium chloride	28-42	10043-52-4
Potassium chloride	< 3	7447-40-7
Sodium chloride	< 2	7647-14-5

**Notes:** Potassium chloride and sodium chloride are impurities from the naturally occurring source material, brine solution.

## **SECTION 4: FIRST-AID MEASURES**

**General advice:** If in immediate danger, move out of the affected areas. Show this Safety Data Sheet (SDS) to the attending medical personnel and make sure they are aware of the material(s) involved.

**Inhalation:** Move the effected person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration. If breathing is difficult, give oxygen. Get medical attention for any irritation or discomfort.

**Skin Contact:** Remove contaminated clothing. Flush skin with plenty of fresh water for at least 15 minutes. If irritation persists, seek medical attention.

**Eye Contact:** Immediately flush with plenty of fresh water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes and then continue rinsing eyes. Seek medical attention immediately.

**Ingestion:** If the effected person is able to swallow, have them sip a glass of water or milk. DO NOT Induce vomiting. DO NOT give anything by mouth to an unconscious person. Call a poison control center or physician for medical advice.

### **Most Important Symptoms and Effects (Both Acute and Delayed)**

#### **Acute Symptoms/Effects:**

- Inhalation:** May cause irritation to the upper respiratory tract. Nasal mucosal and oropharyngeal erythema.
- Skin:** Skin irritation. Direct abrasion of skin from solid, erythema and burn from reacting with water. Prolonged contact and occlusion may cause more severe symptoms. Damage is localized to contact areas.
- Eye:** Eye irritation. Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjunctiva swelling and cornea opacification from hypertonic solution and heat. Corneal eye pain, redness, acute corneal thickening and whitening.
- Ingestion:** Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.

**Delayed Symptoms/Effects:** Chronic exposures to skin and mucous membranes that cause irritation may cause a chronic dermatitis or mucosal membrane problem.

**Medical Conditions Aggravated by Exposure:** Any skin condition that disrupts the skin, such as abrasions, cuts, psoriasis, fungal infections, etc. Any upper respiratory conditions that compromise mucosa can increase local damage from dust contact. Any eye condition that compromises tear production, conjunctiva, or normal corneal homeostasis.

**Protection of First-Responders:** Protect yourself by avoiding contact with this material. Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. Use personal protective equipment (PPE). Refer to Section 8 for specific personal protective equipment recommendations.

**Notes to Physician:** Swallowing may result in burns/ulcerations of the mouth, stomach, and lower gastrointestinal tract. Endotracheal/esophageal control if lavage is done. If burn present, treat as any thermal burn. Otherwise, treatment is symptomatic and supportive.

## **SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Use extinguishing agents appropriate for the surrounding fire.

**Specific hazards arising from the chemical:** None known.

**Special protective actions for fire-fighters:** Keep unnecessary people away, isolate the hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls/Personal Protection. Refer to Section 7, Handling and Storage, for additional precautionary measures.

**Environmental precautions:** Prevent spills from entering the soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Small and large spills: Contain spilled material if possible. Absorb spilled liquid with materials such as sand. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13, Disposal Considerations, for additional information.

## **SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS.

**Conditions for safe storage:** Protect from atmospheric moisture. Keep containers tightly closed when not in use. Keep separated from incompatible materials and/or conditions. Do not store this product in metal containers.

**Incompatibilities/conditions to avoid:** Avoid contact with: Sulfuric acid. Corrosive to some metals. Avoid contact with metals such as brass, ferrous metals, and mild steel. Avoid contact with: bromide trifluoride, 2-furan percarboxylic acid because calcium chloride is incompatible with those substances. Contact with zinc forms flammable hydrogen gas, which can be explosive. Catalyzes exothermic polymerization of methyl vinyl ether. May release flammable hydrogen gas. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Occupational exposure limit(s):** As listed below

**Regulatory Exposure Limits:**

Component	CAS Number	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PEL Ceiling
Particulates not otherwise regulated	Not assigned	TWA 15 mg/m <sup>3</sup> (total) TWA 5 mg/m <sup>3</sup> (total)	-----	-----

**Non-Regulatory Exposure Limits:**

Component	CAS Number	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Particles Not Otherwise Specified	Not Assigned	10 mg/m <sup>3</sup> (inhalable) 3 mg/m <sup>3</sup> (resp)	-----	-----	-----	-----	-----

**Appropriate engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures, such as personal protective equipment (PPE)**

**Eye/face protection:** Wear safety glasses with side-shields. For dusty operations or when handling solutions of the material, wear chemical goggles.

**Skin protection:** Wear clean clothing that covers the entire body.

**Hand protection:** Use gloves chemically resistant to this material. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Neoprene, Polyvinyl chloride (PVC), Nitrile/Butadiene rubber (Nitrile or NBR). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant

workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Respirator protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: High efficiency particulate air (HEPA) N95. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

**Thermal hazards:** Not applicable.

**General hygiene practices:** It is important to observe good personal hygiene measures, which should include washing immediately after handling this product and before eating, drinking, smoking, chewing gum, or using the toilet. Routinely wash work clothing to remove any residual contaminants.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	Liquid
Color	Clear
Odor	Odorless
Odor threshold	Not applicable
pH	~9 (undiluted solution)
Melting point/freezing point	-43 - +21° C (-46 - +69° F)
Initial boiling point and boiling range	110-122° C (230-252° F)
Flash point	Not applicable
Evaporation rate	No data available
Flammability limit – lower (%)	Not applicable
Flammability limit – upper (%)	Not applicable
Explosive limit – lower (%)	Not applicable
Explosive limit – upper (%)	Not applicable
Vapor Pressure	9-15 mmHg @ 25° C (77° F)
Vapor Density	No data available
Relative density	1.275-1.439 @ 25° C (77° F)
Solubility(ies)	Completely miscible
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	2-7 cp @ 25° C (77° F)

## **SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** Hygroscopic. Liberates large amounts of heat when mixed with water or aqueous acids.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Moisture may cause an exothermic reaction, which releases heat.

**Conditions to avoid:** None known. Avoid moisture.

**Incompatible materials:** Heat is generated when mixed with water or aqueous acids. Spattering and boiling can occur. Avoid contact with: Sulfuric acid. Corrosive when wet. Flammable hydrogen may be generated from contact with metals such as zinc. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates. This material attacks metals in the presence of moisture.

**Hazardous decomposition products:** Hydrogen chloride gas and calcium oxide may be released during fires.

**Hazardous polymerization:** Will not occur.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **TOXICITY DATA**

#### **Product Toxicity Data:**

<b>Chemical Name</b>	<b>Method</b>	<b>Species</b>	<b>Dose</b>
Liquid Calcium chloride	LD <sub>50</sub> (Oral)	Rat	2,282 mg/kg
	LD <sub>50</sub> ( Dermal)	Rat	6,013 mg/kg
	LD <sub>50</sub> ) Inhalation	N/A	No data available

#### **Component Toxicity Data:**

<b>Component</b>	<b>Method</b>	<b>Species</b>	<b>Dose</b>
Calcium chloride	LD <sub>50</sub> (Oral)	Rat	1,000 mg/kg
	LD <sub>50</sub> (Dermal)	Rat	2,630 mg/kg
Potassium chloride	LD <sub>50</sub> (Oral)	Rat	2,600 mg/kg
Sodium chloride	LD <sub>50</sub> (Oral)	Rat	3 g/kg
	LD <sub>50</sub> (Dermal)	Rabbit	10 g/kg
	LD <sub>50</sub> (Inhalation)	Rat	42 g/m <sup>3</sup> (1 hr)

#### **Information on likely routes of exposure**

**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause local mucosal damage to esophagus and stomach. Swallowing may result in gastrointestinal irritation or ulceration.

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- Inhalation:** Vapors are unlikely due to the physical properties of this product. Mist may cause irritation to upper respiratory tract (nose and throat.)
- Skin contact:** Brief contact is essentially non-irritating to the skin. Prolonged exposure may cause skin irritation, and possibly a burn. Calcium chloride is not classified as corrosive to the skin according to DOT guidelines. May cause more severe response if skin is wet, abraded (scratched or cut), or covered by clothing, gloves, or footwear.
- Eye contact:** May cause serious eye irritation. May cause slight corneal injury. Effects may be slow to heal.

**Symptoms related to the physical, chemical and toxicological characteristics:** Eye irritation and possible skin irritation with long exposure times.

**Skin corrosion/irritation:** Slight irritation. Prolonged contact may cause more severe symptoms. Damage is localized to contact areas.

**Serious eye damage/eye irritation:** Eye irritation. Eye exposure may cause serious eye irritation and pain. May cause conjunctival swelling and cornea opacification from hypertonic solution. Corneal eye pain, redness, acute corneal thickening or whitening.

**Respiratory sensitization:** Inhaling mist may cause irritation to upper respiratory tract (nose and throat).

**Skin sensitization:** No data available.

**Germ cell mutagenicity:** Not classified as a mutagen per GHS criteria. The data presented are for the following material: Calcium chloride (CaCl<sub>2</sub>)—In vitro genetic toxicity studies were negative. The data presented are for the following material: Potassium chloride—In vitro genetic toxicity studies were positive. However, the relevance of this to humans is unknown. For the minor component(s): Sodium chloride—In vitro genetic toxicity studies were predominantly negative.

### Carcinogenicity

- IARC:** No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
- ACGIH:** No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP:** No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.
- OSHA:** No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Not classified as a reproductive toxin per GHS guidelines. For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

**Specific target organ toxicity – single exposure:** No data available.

**Specific target organ toxicity – repeated exposure:** No data available.

**Aspiraton hazard:** No data available.



**Chronic effects:** For the minor component(s): Potassium chloride – In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, heart, and kidneys. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **ECOTOXICITY DATA**

- **AQUATIC TOXICITY:** Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50>100 mg/L in the most sensitive species tested)
- **FRESHWATER FISH TOXICITY:**
  - Calcium chloride: LC50, bluegill (*Lepomis macrochirus*): 8,350-10,650 mg/L.
  - Potassium chloride: LC50, rainbow trout (*Oncorhynchus mykiss*), 96h: 4,236 mg/L.
  - Sodium chloride: LC50, fathead minnow (*Pimephales promelas*): 10,610 mg/L.
- **INVERTEBRATE TOXICITY:**
  - Calcium chloride: LC50, water flea *Daphnia magna*: 759-3,005 mg/L.
  - Potassium chloride: EC50, water flea *Daphnia magna*, 24h, immobilization: 590 mg/L.  
LC50, water flea *Ceriodaphnia dubia*, 96h: 3,470 mg/L.
  - Sodium chloride: LC50, water flea *Daphnia magna*: 4,571 mg/L.
- **MICROORGANISM TOXICITY:**
  - Sodium chloride: IC50, OECD 209 Test; activated sludge, respiration inhibition: >1,000 mg/L.

**Persistence and degradability:** Calcium chloride is believed NOT to persist in the environment because it readily dissociates into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into water in the form of calcium and chloride ions. Calcium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions naturally exist in nature, and their concentrations in surface water will depend on various factors, such as geological parameters, weathering, and human activities.

**Bioaccumulative potential:** Calcium chloride and its dissociated forms (calcium and chloride ions) are ubiquitous in the environment. Calcium and chloride ions can also be found as constituents in organisms. Considering its dissociation properties, calcium chloride is not expected to accumulate in living organisms.

**Mobility in soil:** Calcium chloride is NOT expected to be absorbed in soil due to its dissociating properties and high water solubility. It is expected to dissociate into calcium and chloride free ions or it may form stable inorganic or organic salts with other counter ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

**Other adverse effects:** None known.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Disposal methods:** Collect and reclaim or dispose in sealed containers at a licensed waste disposal site. This material and its container must be disposed of as a hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

**Waste from residues / unused products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. See Disposal methods.

**Contaminated packaging:** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### **SECTION 14: TRANSPORT INFORMATION**

#### **U.S. DOT 49 CFR 172.101**

This product is not regulated.

### **SECTION 15: REGULATORY INFORMATION**

#### **U.S. REGULATIONS:**

- **OSHA REGULATORY STATUS:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- **SARA EHS Chemical (40 CFR 355.30):** Not regulated.
- **CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):** Not regulated.
- **EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):** Acute Health Hazard.
- **EPCRA SECTION 313 (40 CFR 372.65):** To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
- **OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):** Not regulated.

#### **NATIONAL INVENTORY STATUS:**

- **U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):** All components are listed or exempt.
- **TSCA 12(b):** This product is not subject to export notification.
- **Canadian Chemical Inventory:** All components of this product are listed on either the DSL or the NDSL.

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### STATE REGULATIONS:

- **California Proposition 65:** This product is not listed, but it may contain impurities/trace elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. **WARNING:** This product (when used in aqueous formulations with a chemical oxidizer such as ozone) may react to form calcium bromate, a chemical known to the State of California to cause cancer.

### **SECTION 16: OTHER INFORMATION**

SDS Preparation Date:	April 23, 2015
SDS Revision Date:	April 23, 2015
SDS Revision No.:	1

### REASONS FOR REVISION:

- Updated SDS header
- Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA HCS (29 CFR 1910.1200)
- Product identifier has been added or updated (See Section 1)
- Revised Hazards Identification information (See Section 2)
- Added GHS Information (See Section 2)
- Updated Composition/Information on Ingredients (See Section 3)
- Updated First-Aid Measures (See Section 4)
- Updated Fire Fighting Measures (See Section 5)
- Revised Accidental Release Measures (See Section 6)
- Revised Handling and Storage Recommendations (See Section 7)
- Updated Exposure Controls/Personal Protection (Section 8)
- Updated Physical and Chemical Properties (See Section 9)
- Updated Stability and Reactivity (Section 10)
- Updated Toxicological Information (Section 11)
- Updated Ecological Information (Section 12)
- Updated Disposal Considerations (See Section 13)
- Updated Regulatory Information (See Section 15)
- Added SDS Preparation Date, SDS Revision Date, and SDS Revision No. (See Section 16)
- Added "End of SDS Document" phrase
- Added a list of abbreviations that may have been used in the SDS

### ABBREVIATIONS (please note that not all abbreviations may appear on this SDS):

**ACGIH** = American Conference of Governmental Industrial Hygienist

**CAS** = Chemical Abstract Service

**CERCLA** = Comprehensive Environmental Response, Compensation, and Liability Act

**CFR** = Code of Federal Regulations

**DOT** = Department of Transportation (United States)

**DSL/NDSL** = Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** = European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

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**EN** = European Norm  
**EPCRA** = Emergency Planning & Community Right to Know Act (1986)  
**EU** = European Union  
**GHS** = Global Harmonization System  
**HMIS** = Hazardous Materials Information System  
**IARC** = International Agency for Research on Cancer  
**IATA** = International Air Transport Association  
**IDLH** = Immediately Dangerous to Life or Health  
**IMDG** = International Maritime Dangerous Goods (Code)  
**ICAO** = International Civil Aviation Organization  
**NFPA** = National Fire Protection Association  
**NIOSH** = National Institute for Occupational Safety and Health  
**N.O.S.** = Not Otherwise Specified  
**NTP** = National Toxicology Program  
**OSHA** = Occupational Safety and Health Administration  
**PBT** = Persistent Bioaccumulative and Toxic  
**PEL** = Permissible Exposure Limit;  
**pH** = A measure of the acidity or alkalinity of a solution  
**PSM** = Process Safety Management  
**RQ** = Reportable Quantity  
**SARA** = Superfund Amendments and Reauthorization Act  
**SDS** = Safety Data Sheet  
**STOT** = Specific Target Organ Toxicity  
**TLV** = Threshold Limit Value  
**TSCA** = Toxic Substance Control Act  
**TWA** = Time-weighted Average  
**UN** = United Nations

**DISCLAIMER:** This SDS generally complies with the requirements set forth in 29 CFR 1910.1200 and Annex 5, Fifth Edition (2014) Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Miami- Products & Chemical Co. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Miami Products & Chemical Co. be responsible for damages of any nature whatsoever resulting from the use of, misuse or reliance upon information. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure its activities comply with federal, State, Provincial, and local laws and regulations.

The information contained in this SDS is subject to revision as additional knowledge, information, and experience is gained.

### END OF SDS DOCUMENT