SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

GHS Product identifier:	Sanygen Granular Chlorinating Compound	
Other means of identification:	Item codes: S-C9-2, S-C9-5	
Synanyma	Sodium dichlor; Sodium dichloroisocyanurate, dehydrate; Troclosene	
Synonyms:	sodium; Sodium dichloro-s-triazinetrione.	
Recommended use:	Sanitizer for swimming pool and spa/hot tub water.	
Restriction on Use:	None known.	
	Address: Miami Products & Chemical Co.	
	520 Lonoke St.	
Manufacturer:	Dayton, OH 45403	
	Tel: (800) 776-1313	
	Fax: (937) 253-1559	
24 Hour Emergency Telephone Number:	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)

Acute toxicity, oral	Category 4
Serious eye damage/irritation	Category 2A
Specific target organ toxicity, single exposure; Respiratory tract irritation	Category 3
Hazardous to the aquatic environment, acute toxicity	Category 1
Hazardous to the aquatic environment, chronic toxicity	Category 1

GHS label elements, including precautionary statements



Signal Word: WARNING

Preparation Date: April 17, 2015 Page 1 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

GHS Hazard Statements:

Physical hazard statements: Not applicable.

Health hazard statements: H302: Harmful if swallowed.

H319: Causes serious eye irritation.H335: May cause respiratory irritation.

Environmental hazard

Statements: H410: Very toxic to aquatic life with long lasting effects.

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: P261: Avoid breathing dust/fume/gas/vapors

P264: Wash all affected areas thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280: Wear eye/face protection.

Response Precautionary Statements: P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or physician

if you feel unwell. Rinse mouth.

P304+P340+P312: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or

physician if you feel unwell.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

insing.

P337+P313: If eye irritation persists: Get medical attention.

P391: Collect spillage.

Storage Precautionary Statements: P403+P233: Store in a well-ventilated place. Keep container tightly

closed.

P405: Store locked up.

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.

Preparation Date: April 17, 2015 Page 2 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Common Chemical Name	Percent (%)	CAS Number
Sodium dichloro-s-triazinetrione, dihydrate	99-100	51580-86-0
Sodium chloride	0-1	7647-14-5

Formula: NaCl₂(NCO)₃ X 2H₂O Molecular Weight: 255.98g/mol

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.

<u>Inhalation:</u> Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Do not use mouth-to-

mouth method if victim ingested or inhaled the substance: induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give CPR only if

there is no pulse AND no breathing. Obtain medical attention IMMEDIATELY.

Skin Contact: Under running water remove contaminated clothing, jewelry, and shoes. Immediately flush skin with

running water for at least 20 minutes. If irritation persists, repeat flushing. For burns, obtain medical attention. Discard heavily contaminated clothing and shoes in a manner which limits further exposure.

Otherwise, wash clothing separately before reuse.

Eye Contact: Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during

flushing. After the first 5 minutes of flushing remove contact lense, if present and easy to do, and continue rinsing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim until the recommended flushing period is completed unless flushing can be continued

during transport.

Ingestion: DO NOT INDUCE VOMITING. If swallowed, rinse mouth thoroughly with plenty of fresh water. If

spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus,

rinse mouth and administer more water. IMMEDIATELY transport victim to an emergency facility.

Most Important Symptoms and Effects (Both Acute and Delayed)

Acute Symptoms/Effects: Severe irritation and/or burns may occur following eye exposure. Contact may

cause vision impairment and corneal damage. Skin exposure can cause severe irritation and/or burns characterized by redness, swelling, and scab formation.

Preparation Date: April 17, 2015 Page 3 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

Irritating to the nose, mouth, throat and lungs when inhaled. It may also cause burns to the respiratory tract with the production of lung edema that can result in shortness of breath, wheezing, choking, chest pain, and impairment of lung function. When swallowed, this product may cause irritation and/or burns to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, and bleeding and/or tissue ulceration.

Delayed Symptoms/Effects:

Prolonged skin exposure may cause permanent damage.

Medical Conditions Aggravated by Exposure: May aggravate pre-existing conditions such as: eye disorders that decrease tear production or have reduced integrity, skin disorders that compromise the integrity of the skin and respiratory conditions including asthma and other breathing disorders.

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

Notes to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Treatment is symptomatic and supportive. There is no specific antidote for this product. In case of ingestion, do NOT induce vomiting.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Flood with copious amounts of water, DO NOT use ABC or other dry chemical extinguishers since there is a potential of a violent reaction.

Specific hazards arising from the chemical: When heated to decomposition, this product may release poisonous and corrosive fumes of nitrogen tri-chloride, chlorine, and Carbon Monoxide (CO).

Special protective actions for fire-fighters: Firefighters should wear protective equipment and NIOSH approved self-contained breathing apparatus (SCBA) with full face piece operated in positive pressure mode in a fire involving this material. Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away and notify the appropriate authorities. Avoid contact with skin, eyes and clothing and avoid breathing fumes, vapour, mist, or spray. Vacate the affected area as soon and as safely as possible and do not return until the odors have dissipated. Do not touch damaged containers or spilled material unless you are wearing the appropriate personal protective equipment (PPE), which can be found in Section 8 of this SDS.

Preparation Date: April 17, 2015 Page 4 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

Environmental precautions: Do not discharge into drains, sewers, water courses or onto the ground. Do not contaminate spilled material with any organic materials, ammonia, ammonium salts or urea. Clean up all spilled material with clean, dry dedicated equipment and place in a clean dry container. The appropriate agencies must be informed of all significant releases.

Methods and materials for containment and cleaning up: Sweep up the spilled product and place it in a clean, dry plastic container. Make sure to label the contents of this container. If you are unsure how to properly dispose of this product, contact the local branch of your Solid Waste Agency for instrunctions. Never dispose of spilled material down any indoor or outdoor drain and/or sewer. Comply with Federal, Provincial/State and local regulations on reporting releases to the environment.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Wear appropriate personal protective equipment (PPE). People working with this chemical should be properly trained regarding its hazards and its safe use. Avoid generating dust when handling this product. Use smallest possible amounts in designated areas with adequate ventilation. Keep containers closed when not in use. Empty containers may contain hazardous residues. Use corrosion-resistant transfer equipment when dispensing. Be sure to wash any exposed areas thoroughly after handling this material.

Conditions for safe storage: Keep in a tightly closed container, stored in a cool, dry, well-ventilated area away from incompatible materials. Protect against physical damage. Avoid dust formation and control ignition sources.

Incompatibilities/conditions to avoid: This product attacks metals in general. It reacts with water, oxidizing and reducing agents, acids, alkalis, nitrogen products, ammonium salts, urea, amines, quaternary ammonium derivatives, oils, fats, peroxides, cationic tensioactives, etc. Do not store at temperatures in excess of 60° C (140° F).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit(s): As listed below

Common Chemical Name	ACGIH-TLV Data	OSHA (PEL) Data
Sodium dichloro-s-triazinetrione, dihydrate	Not determined	Not determined
Sodium chloride	Not determined	Not determined

Appropriate engineering controls: Local exhaust ventilation should be applied wherever there is an incidence of point source emissions or dispersion of regulated contaminants in the work area. Ventilation control of the contaminant as close to its point of generation is both the most economical and safest method to minimize personnel exposure to airborne contaminants. The most effective measures are the total enclosure of processes and the mechanization of handling procedures to prevent all personal contact. Smoking should be prohibited in areas in which this product is stored or handled. Ensure that eyewash stations and safety showers are close to the work-station location(s).

Preparation Date: April 17, 2015 Page 5 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

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

Eye/face protection: Wear splash resistant chemical goggles and full face shield. Maintain eye was fountain

and quick-drench facilities in work area.

Skin protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain

jacket, pants or coveralls, as appropriate, to prevent skin contact. To protect the hands,

use neoprene gloves with a minimum thickness of 0.67 millimeters (mm).

Respiratory protection: When dusty conditions are encountered, wear a NIOSH/OSHA full-face respirator with

chlorine cartridges for protection against chlorine gas and dust/mist pre-filter. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever

workplace conditions warrant use of a respirator.

<u>Thermal hazards:</u> Not applicable.

<u>General hygiene practices:</u> 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	Solid
Color	White granules
Odor	Mild chlorine
Odor threshold	No data available
pH	6.0-7.0 (1% solution)
Malting point /fragging point	240-250° C (464-482° F) (decomposition
Melting point/freezing point	occurs at this temperature)
Initial boiling point and boiling range	Not applicable
Flash point	No data available
Evaporation rate	No data available
Flammability limit – lower (%)	No data available
Flammability limit – upper (%)	No data available
Explosive limit – lower (%)	No data available
Explosive limit – upper (%)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative density	No data available
Solubility(ies)	29g/100g @ 25°C (77°F)
Partition coefficient: n-octanol/water	LogP = -0.0056 (estimated)
Auto-ignition temperature	Not self-ignitable
Decomposition temperature	240-250° C (464-482° F)
Viscosity	Not applicable

Preparation Date: April 17, 2015 Page 6 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

SECTION 10: STABILITY AND REACTIVITY

Reactivity: This product begins to lose one mole of water at approximately 50° C (122° F).

Chemical stability: This product is stable under normal conditions.

Possibility of hazardous reactions: When this product is combined with various incompatible materials and/or conditions, it may decompose and give off a great quantity of heat, chlorine, nitrogen tri-chloride, chlorine oxides, etc. with subsequent danger of explosion.

Conditions to avoid: Heating above the decomposition temperature (See Section 9: PHYSICAL AND CHEMICAL PROPERTIES). Do not package this material in paper or cardboard.

Incompatible materials: This product attacks metals in general. It reacts with water, oxidizing and reducing agents, acids, alkalis, nitrogen products, ammonium salts, urea, amines, quaternary ammonium derivatives, oils, fats, peroxides, cationic tensioactives, etc.

Hazardous decomposition products: Nitrogen tri-chlorine, chlorine gas, carbon monoxide (CO).

Hazardous polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA

Common Chemical Name	Method	Species	Dose
Sodium dichloro-s-triazinetrione,	LD ₅₀ (oral)	Rat	1,671 mg/kg
dihydrate	LD ₅₀ (dermal)	Rat	> 5,000 mg/kg

Information on likely routes of exposure

Ingestion: Not a likely route of exposure in a workplace setting. Ingestion may cause gastrointestinal

irritation, nausea, vomiting and diarrhea. Ingestion may product burns to the lips, oral cavity,

upper airway, esophagus and possibly the digestive tract.

Inhalation: Inhalation may cause coughing, choking, irritation, chemical burns, shortness of breath, and

pulmonary edema.

Skin contact: Skin contact may be irritating and skin burns may result.

Eye contact: Eye contact may result in serious eye irritation. Eye exposure may cause burns to the eye lids,

conjunctivitis, and corneal damage.

Preparation Date: April 17, 2015 Page 7 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

Symptoms related to the physical, chemical and toxicological characteristics: Symptoms may include nausea, vomiting, coughing, skin irritation, redness, swelling, burning and/or watery eyes.

Respiratory sensitization: Not a respiratory sensitizer.

Skin sensitization: Not a skin sensitizer.

Germ cell mutagenicity: This product was not mutagenic in five Salmonella strains with or without metabolic activation.

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: When given orally to pregnant mice from day 6 to day 15 of gestation, sodium dichloro-striazinetrione, dihydrate did not induce any significant teratogenic effects.

Specific target organ toxicity – single exposure: May cause respiratory irritation.

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

Aspiraton hazard: No data available.

Chronic effects: None known.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY DATA

Aquatic Toxicity:

Common Chemical Name	Method	Dose	Duration	Species
Codium diablere e triezinatriane	LC ₅₀	0.28 mg/L	96 hours	Bluegill sunfish
Sodium dichloro-s-triazinetrione, dihydrate	LC ₅₀	0.22 mg/L	96 hours	Rainbow trout
diriydrate	LC ₅₀	0.20 mg/L	48 hours	Daphnia magna

Avian Toxicity:

Common Chemical Name	Method	Dose	Species
	LD ₅₀ (oral)	730 mg/kg	Bobwhite quail
Sodium dichloro-s-triazinetrione,	LD ₅₀ (oral)	3,300 mg/kg	Mallard duck
dihydrate	LC ₅₀ (dietary)	> 10,000 ppm	Mallard duck
	LC ₅₀ (dietary)	> 10,000 ppm	Bobwhite quail

Preparation Date: April 17, 2015 Page 8 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

Persistence and degradability: Not readily biodegradable. Rapidly hydrolyses in water into Cyanuric acid.

Bioaccumulative potential: Not expected to bioaccumulate.

Mobility in soil: The degradation product, Cyanuric acid, is weakly adsorbed to and highly mobile in all soils.

Other adverse effects: This product is very toxic to aquatic life. Do not pour directly into rivers, lakes, streams, and/or ponds. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: Collect and reclaim or dispose in sealed containers a at 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 for non-bulk shipments; however, if a bulk shipment is being made, use the following United Stated Department of Transportation shipping information:

UN NUMBER: UN 3077

UN PROPER SHIPPING NAME: Environmentally hazardous substance, solid, n.o.s. (Sodium

Dichloroisocyanurate, dehydrate)

TRANSPORT HAZARD CLASS: 9
PACKING GROUP: |||

ENVIRONMENTAL HAZARDS: Marine Pollutant

REPORTABLE QUANTITY (RQ): N/A

SPECIAL PRECAUTIONS FOR USER: Read safety instructions, SDS and emergency procedures before handling.

NOTE: Certain shipping modes or package sizes may have exceptions from the transport regulations and may be classified as Consumer Commodity or Limited Quantity. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

Preparation Date: April 17, 2015 Page 9 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

<u>SARA 313:</u> This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazard Categories:

Acute health hazard: Yes

U.S. STATE REGULATIONS

Right To Know State	Common Chemical Name	CAS No.	Revision Date
Massachusetts	Troclosene sodium, dihydrate	51580-86-0	4-24-1993
Pennsylvania	Troclosene sodium, dihydrate	51580-86-0	4-24-1993
New Jersey	Troclosene sodium, dihydrate	51580-86-0	4-24-1993

<u>CALIFORNIA PROPOSITION 65:</u> This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

FIFRA REGULATIONS: Registered pesticide under 40 CFR 152.10, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

<u>FIFRA LABELING REQUIREMENTS:</u> This chemical is a pesticide product registered by the United States Environmental Protection Agency (USEPA) 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

- FIFRA Signal Word Danger
- Corrosive
- Causes irreversible eye damage
- May be fatal if inhaled.
- Harmful if swallowed or absorbed through skin.
- This pesticide is toxic to fish and aquatic invertebrates.
- STRONG OXIDIZING AGENT
- Contact with water slowly liberates irritating and hazardous chlorine containing gases.
- Decomposes at temperatures above 464 °F (240°C) with liberation of harmful gases.
- When ignited, will burn with the evolution of chlorine and equally toxic gases.
- NEVER add water to product. Always add product to large quantities of water.
- Use clean, dry utensils. DO NOT add this product to any dispensing device containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion.
- Contamination with moisture, organic material, or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible fire and explosion.

Preparation Date: April 17, 2015 Page 10 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

• IN CASE OF FIRE OR SMOKE: Call the fire department. Do not attempt to extinguish the fire without a self-contained breathing apparatus (SCBA). Do not let the fire burn. Flood with copious amounts of water. DO NOT use ABC or other dry chemical extinguishers since there is the potential of violent reaction.

SECTION 16: OTHER INFORMATION

SDS Preparation Date:	April 17, 2015
SDS Revision Date:	April 17, 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 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 Transport Information (See Section 14)
- Updated FIFRA Regulations (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

EN = European Norm

EPCRA = Emergency Planning & Community Right to Know Act (1986)

EU = European Union

GHS = Global Harmonization System

Preparation Date: April 17, 2015 Page 11 of 12

SAFETY DATA SHEET

SDS ID: SC9

Revision Date: April 17, 2015

Revision No.: 1

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

PPM = Parts Per Million

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

Preparation Date: April 17, 2015 Page 12 of 12