



ACTIVE INGREDIENTS:	
Sodium dichloro-s-triazinetriene dihydrate.....	99%
OTHER INGREDIENTS.....	1%
	100%

Provides 56% Available Chlorine


When used as directed, this product is a high performance chlorine microbiocide which aids in the control of organic slimes of algae, bacteria and fungi in water systems.

KEEP OUT OF REACH OF CHILDREN

DANGER

FIRST AID	
If in eyes	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-733-3665 for 24 hour emergency medical treatment information.	
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage.	

See side panel for *Directions for Use*.

 Occidental Chemical Corporation
Dallas, Texas 75380
972-404-3800

EPA Reg. No. 935-68
EPA Est. No. 58401-IL-1

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe dust, vapor or spray mist. Wear goggles, face shield or safety glasses. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARD - This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARD - STRONG OXIDIZING AGENT. Contact with water slowly liberates irritating and hazardous chlorine containing gases. Decomposes at temperatures above 460°F 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.

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 for a violent reaction.

IN CASE OF CONTAMINATION OR DECOMPOSITION: DO NOT reseal container. Follow disposal instructions on label.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

STORAGE: Keep material dry and in a dry area. Store in original container where temperatures do not exceed 125°F (52°C) for 24 hours. Keep container tightly closed.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction and fire. DO NOT transport wet or damp material. Neutralize material to a non-oxidizing state for safe disposal.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

HMIS Rating System: Health 3 Flammability 0 Reactivity 1

Towerchlor® is a registered trademark of Occidental Chemical Corporation

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FOR CONTROL OF BACTERIA, FUNGI AND ALGAE IN RECIRCULATING WATER SYSTEMS

FOR RECIRCULATING WATER SYSTEMS

This product is intended for use in the following aquatic sites: Air Washer Water Systems, Commercial/Industrial Water Cooling Systems, Evaporative Condenser Water Systems, Ornamental Ponds and Aquaria, Heat Exchange Water Systems, Lakes/Ponds/Reservoirs (Without Human or Wildlife Use), Industrial Process Water and Industrial Disposal Systems.

This product may be added to the system by direct placement into the water at a point where the product will be uniformly mixed with water. The frequency of feeding and duration of the treatment will depend on the severity of the contamination. Badly fouled systems must be cleaned before treatment begins.

Intermittent or slug method

INITIAL DOSE: When the system is noticeably fouled, add this product at the rate of 0.15 to 0.75 pounds per 1000 gallons (18 to 90 grams per 1000 liters) in the system to achieve 0.5-10 mg/L total available halogen as chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.
SUBSEQUENT DOSE: When microbial control is evident, add this product at the rate of 0.03 to 0.15 pounds per 1000 gallons (3.6 to 18 grams per 1000 liters) in the system to achieve 0.5-1 mg/L total available halogen as chlorine, as measured by a suitable test kit. Repeat periodically as needed to maintain control.

Continuous feed method

INITIAL DOSE: When the system is noticeably fouled, add this product at the rate of 0.15 to 0.75 pounds per 1000 gallons (18 to 90 grams per 1000 liters) in the system to achieve 0.5-10 mg/L total available halogen as chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.
SUBSEQUENT DOSE: When microbial control is evident, add this product at the rate of 0.03 to 0.15 pounds per day per 1000 gallons (3.6 to 18 grams per day per 1000 liters) in the system to maintain 0.5-1 mg/L total available halogen as chlorine, as measured by a suitable test kit.

Net Wt. 50 lbs. / 22.7 kg.

Lot No.:

CA - 5/29/02

Revision Date - 7/03

OCC No. 097

SAFETY DATA SHEET

M31037 - ANSI - EN



TOWERCHLOR® 56 GRANULES

SDS No.: M31037

SDS Revision Date: 11-May-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification:	Occidental Chemical Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, TX 75380-9050 1-800-752-5151
24 Hour Emergency Telephone Number:	1-800-733-3665 or 1-972-404-3228 (U.S.); CHEMTREC (outside U.S.): +1 703-527-3887
To Request an SDS:	MSDS@oxy.com or 1-972-404-3245
Customer Service:	1-800-752-5151 or 1-972-404-3700
Product Identifier:	TOWERCHLOR® 56 GRANULES
Synonyms:	Sodium dichloroisocyanurate dihydrate, Sodium dichloro-s-triazinetrione dihydrate, 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3-dichloro-, sodium salt dihydrate, Troclosene sodium, dihydrate, SDCC dihydrate, NaDCC dihydrate, Dichloroisocyanuric acid sodium salt
Product Use:	Algaecide, Disinfectant, Sanitizer, Bactericide, Fungicide, Microbiocide/microbiostat
Uses Advised Against:	None identified. This is a pesticide product, do not use it in a pesticide application that is not included on its label.

2. HAZARDS IDENTIFICATION

TOWERCHLOR® 56 GRANULES

SDS No.: M31037

SDS Revision Date: 11-May-2015

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

EMERGENCY OVERVIEW:

Color: White
Physical State: Solid
Appearance: Crystals, Granules
Odor: Slight chlorine odor

Signal Word: **DANGER**

MAJOR HEALTH HAZARDS: CORROSIVE. CAUSES SERIOUS EYE DAMAGE. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY BE FATAL IF INHALED. HARMFUL IF SWALLOWED.

PHYSICAL HAZARDS: OXIDIZING AGENT. Contact with water slowly liberates irritating and hazardous chlorine containing gases. Contamination with moisture, organic material, or other incompatible chemicals may start a reaction with generation of heat, liberation of hazardous gases, and possible fire and explosion. Contact with acids liberates toxic gas. Decomposes at temperatures above 464 °F with liberation of harmful gases. When ignited will burn with the evolution of chlorine and equally toxic gases. Do not get water inside container. Wet material may generate nitrogen trichloride, an explosion hazard.

AQUATIC TOXICITY: Very toxic to aquatic organisms. Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS: Do not get in eyes, on skin, or on clothing. Wear eye protection, face protection, protective gloves. Do not breathe dusts or mists. Use outdoors or in a well-ventilated area. Wash hands and affected skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not get water inside container, an explosion hazard. Oxidizer, keep separated from incompatible substances.

ADDITIONAL HAZARD INFORMATION: This material is corrosive. Product has strong buffering capability. Use dilution. May cause burns to moist skin if not promptly removed. There is no specific antidote.

GHS CLASSIFICATION:

GHS: CONTACT HAZARD - SKIN:	Category 1C - Causes severe skin burns and eye damage.
GHS: CONTACT HAZARD - EYE:	Category 1 - Causes serious eye damage
GHS: ACUTE TOXICITY - INHALATION:	Category 2 - Fatal if inhaled
GHS: ACUTE TOXICITY - ORAL:	Category 4 - Harmful if swallowed.
GHS: ACUTE TOXICITY - DERMAL:	Not acutely toxic by dermal exposure.
GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):	Category 3 - May cause respiratory tract irritation
GHS: CARCINOGENICITY:	This product is not classified as a carcinogen by NTP, IARC or OSHA.

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GHS: HAZARDOUS TO AQUATIC ENVIRONMENT - ACUTE HAZARD:	Category 1 - Very toxic to aquatic life
GHS: HAZARDOUS TO AQUATIC ENVIRONMENT - CHRONIC HAZARD:	Category 1 - Very toxic to aquatic life with long lasting effects

UNKNOWN ACUTE TOXICITY: Not applicable. 100% of this product consists of ingredient(s) of known acute toxicity.

GHS SYMBOL: Corrosion, Skull and Crossbones, Exclamation mark, Environmental hazard



GHS SIGNAL WORD: DANGER

GHS HAZARD STATEMENTS:**GHS - Health Hazard Statement(s)**

Causes severe skin burns and eye damage
 Causes serious eye damage
 Fatal if inhaled
 Harmful if swallowed
 May cause respiratory irritation

GHS - Environmental Hazard Statement(s)

Very toxic to aquatic life
 Very toxic to aquatic life with long lasting effects

GHS - Precautionary Statement(s) - Prevention

Do not breathe dust, fume, gas, mist, vapors, or spray
 In case of inadequate ventilation, wear respiratory protection
 Wear protective gloves, protective clothing, eye, and face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Avoid release to the environment

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GHS - Precautionary Statement(s) - Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

Specific treatment is urgent (see Section 4 of SDS or first aid information on this label)

IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower

Wash contaminated clothing before reuse

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

Continue rinsing

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)

Collect spillage

GHS - Precautionary Statement(s) - Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

GHS - Precautionary Statement(s) - Disposal

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations.

Hazards Not Otherwise Classified (HNOC)

Damp or wet material may generate nitrogen trichloride, an explosion hazard

Contact with acids liberates toxic gas

See Section 11: TOXICOLOGICAL INFORMATION**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms: Sodium dichloroisocyanurate dihydrate, Sodium dichloro-s-triazinetriene dihydrate, 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3-dichloro-, sodium salt dihydrate, Troclosene sodium, dihydrate, SDCC dihydrate, NaDCC dihydrate, Dichloroisocyanuric acid sodium salt

Component	Percent [%]	CAS Number
Sodium dichloroisocyanurate dihydrate	98 - 100	51580-86-0
Sodium Chloride	0.1 - 1	7647-14-5

4. FIRST AID MEASURES

INHALATION: If inhalation of dust occurs and adverse effects result, remove to uncontaminated area. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY. There is no specific antidote, treat symptomatically.

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SKIN CONTACT: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry and shoes. Wash contaminated areas with large amounts of water. GET MEDICAL ATTENTION IMMEDIATELY. Thoroughly clean and dry contaminated clothing before reuse.

EYE CONTACT: Immediately flush contaminated eyes with a directed stream of water for as long as possible. Remove contact lenses, if present, then continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

Most Important Symptoms/Effects (Acute and Delayed) :

Acute Symptoms/Effects: Listed below.

Inhalation (Breathing): Respiratory System Effects: Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

Skin: Skin Corrosion. Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns.

Eye: Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

Ingestion (Swallowing): Gastrointestinal Effects: Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.

Delayed Symptoms/Effects:

- Repeated and prolonged skin contact may cause a dermatitis

Interaction with Other Chemicals Which Enhance Toxicity: Contact with acids liberates toxic gas.

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

Protection of First-Aiders: Protect yourself by avoiding contact with this material. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. Avoid contact with skin and eyes. Do not ingest. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

Notes to Physician: Treat as a corrosive substance. This material is more irritating to the skin and eyes in the presence of water. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Cyanuric acid is readily removed from the body via the renal system, and is not bioaccumulated. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation.

5. FIRE-FIGHTING MEASURES

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Fire Hazard: Negligible fire hazard. If heated by outside source to temperatures above 240 C (464 F), this product will undergo decomposition with the evolution of noxious gases but no visible flame. Wet material may generate nitrogen trichloride, an explosion hazard.

Extinguishing Media: Flood with copious amounts of water. Do not use ABC fire extinguishers. Do not use dry chemicals, carbon dioxide, or halogenated extinguishing agents.

Fire Fighting: Consider evacuation of personnel located downwind. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. DO NOT attempt to reseal contaminated drums. Damp material should be neutralized to a non-oxidizing state. Contact OxyChem for instructions for handling and disposal of damp material.

Hazardous Combustion Products: Chlorine, Nitrogen, Nitrogen trichloride, Cyanogen chloride, Oxides of carbon, Phosgene

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Lower Flammability Level (air): Not flammable

Upper Flammability Level (air): Not flammable

Flash point: Not applicable

Auto-ignition Temperature: Not determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Keep unnecessary and unprotected persons away. Isolate hazard area and deny entry. Do not get in eyes, on skin or on clothing. Do not breathe dust, fume, gas, mist, vapors, or spray. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

Methods and Materials for Containment and Cleaning Up:

DO NOT add water to spilled material. DO NOT use floor sweeping compounds to clean up spills. Sweep and scoop spilled material into clean, dedicated equipment. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up. DO NOT attempt to reseal contaminated drums. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state. Contact OxyChem for instructions for handling and disposal of damp material.

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Environmental Precautions:

This material is toxic to aquatic life. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or dust when opening container. Avoid creation of dust. Wash thoroughly after handling. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS. NEVER add water to this product. Always add product to large quantities of water. Use clean, dry utensils. Do not add the product to any dispensing device containing residuals of other products.

Safe Storage Conditions:

Store and handle in accordance with all current regulations and standards. (NFPA Oxidizer Class 1). Store in original container and in a dry area where temperatures do not exceed 52 °C (125 °F) for 24 hours. Do not allow water to get in container. If liner is present, tie after each use. Keep container tightly closed and properly labeled. Store containers on pallets. Keep away from food, drink and animal feed. Keep separated from incompatible substances (see Section 10 of the Safety Data Sheet). Product has an indefinite shelf life if stored in original container in a cool, dry place.

Incompatibilities/ Materials to Avoid:

acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Limit(s): None. This product does not contain any components that have regulatory occupational exposure limits (OEL's) established.

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): None. This product does not contain any components that have advisory (non-regulatory) occupational exposure limits (OEL's).

- *The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).*

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

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Additional Advice: Chlorine and chlorine compounds may be found in slight amounts in the head space of containers of this product.

ENGINEERING CONTROLS: Use only in well-ventilated areas. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear chemical safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Contaminated clothing should be removed and laundered before reuse.

Hand Protection: Wear appropriate chemical resistant gloves. Consult a glove manufacturer for assistance in selecting an appropriate chemical resistant glove.

Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC), Tyvek®

Respiratory Protection: A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face-piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. Acid gas cartridges with N95 filters are required when fumes or vapor may be generated. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Crystals, Granules
Color:	White
Odor:	Slight chlorine odor
Odor Threshold [ppm]:	Not Available.
Molecular Weight:	256
Molecular Formula:	C ₃ N ₃ O ₃ Cl ₂ Na.2H ₂ O
Decomposition Temperature:	486 °F (252 °C) - dehydrates at 104 - 212 °F (40 - 100 °C)
Boiling Point/Range:	Not applicable
Freezing Point/Range:	Not applicable.
Melting Point/Range:	Decomposes without melting @ 252 °C
Vapor Pressure:	Not available
Vapor Density (air=1):	Not applicable
Relative Density/Specific Gravity (water=1):	1.95 g/mL @ 25 °C
Density:	No data available
Bulk Density:	56 - 60 lbs/ft ³ (loose)
Water Solubility:	26.5 g/ 100 g @ 25 °C

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pH:	6 - 7 @ 25 °C (1% solution)
Volatility:	Not applicable
Evaporation Rate (ether=1):	Not applicable
Partition Coefficient (n-octanol/water):	Kow = 0
Flash point:	Not applicable
Flammability (solid, gas):	Not flammable
Lower Flammability Level (air):	Not flammable
Upper Flammability Level (air):	Not flammable
Auto-ignition Temperature:	Not determined
Viscosity:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal temperatures and pressures.

Chemical Stability: Stable at normal temperatures and pressures.

Possibility of Hazardous Reactions:

Do not get water inside container. Wet material may generate nitrogen trichloride, an explosion hazard. Avoid contact with easily oxidizable organic material. Contact with acids liberates toxic gas.

Conditions to Avoid:

(e.g., static discharge, shock, or vibration) - None known.

Incompatibilities/ Materials to Avoid:

acids. ammonia. bases. floor sweeping compounds. calcium hypochlorite. reducing agents. organic solvents and compounds.

Hazardous Decomposition Products: chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, phosgene

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

IRRITATION DATA: PRIMARY SKIN IRRITATION: Severe Irritation, Corrosive (rabbit, 24 hr)

PRIMARY EYE IRRITATION: Severe Irritation, Corrosive (rabbit, 24 hr)

TOXICITY DATA:**PRODUCT TOXICITY DATA: TOWERCHLOR® 56 GRANULES**

LD50 Oral: 1823 mg/kg (Rat)	LD50 Dermal: >2000 mg/kg (Rabbit)	LC50 Inhalation: 0.27 - 1.17 mg/L (4 hr - Rat)
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COMPONENT TOXICITY DATA:**Note:** The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Sodium dichloroisocyanurate dihydrate 51580-86-0	735 mg/kg (Rat)	2000 mg/kg (Rabbit)	50 mg/L (1 hr-Rat)
Sodium Chloride 7647-14-5	3 g/kg (Rat)	10 g/kg (Rabbit)	42 g/m ³ (1 hr-Rat)

POTENTIAL HEALTH EFFECTS:

- Eye contact:** Eye exposures may cause burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of eye.
- Skin contact:** Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns. Dry material is less irritating than wet material. This material is not a skin sensitizer based on studies with guinea pigs.
- Inhalation:** This material in the form as sold is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction is typically less than 0.1% by weight for the granular and extra granular grades. If ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngeospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.
- Ingestion:** Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to epiglottis, mucus membranes of the mouth, esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.
- Chronic Effects:** None identified for the parent chemical. Based on animal studies, exposure to concentrations of monosodium cyanurate at the solubility limit may cause cardiovascular, kidney and urinary bladder effects.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Respiratory System Effects: Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngeospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

Skin: Skin Corrosion. Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns.

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Eye: Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

Ingestion (Swallowing): Gastrointestinal Effects: Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.

TOXICITY:

Monosodium cyanurate was administered via drinking water to rats for 104 weeks at concentrations of 0, 400, 1200, 2400, and 5375 ppm (solubility limit). No compound-related effects on body weights, clinical signs of toxicity or food or water consumption were noted during the study. An increased incidence of gross lesions in the urinary tract, calculi in the kidney and lesions in the heart were observed in males receiving the highest dose level of 5375 ppm (solubility limit). The health effects seen in this study were due to precipitation of the test substance in the urinary tract when the test substance was fed at the solubility limit. Adverse health effects were not seen at lower doses where precipitation did not occur.

Interaction with Other Chemicals Which Enhance Toxicity: Contact with acids liberates toxic gas.

GHS HEALTH HAZARDS:

GHS: ACUTE TOXICITY - ORAL: Category 4 - Harmful if swallowed.

GHS: ACUTE TOXICITY - DERMAL: Not acutely toxic by dermal exposure.

GHS: ACUTE TOXICITY - INHALATION: Category 2 - Fatal if inhaled.

GHS: CONTACT HAZARD - SKIN: Category 1C - Causes severe skin burns and eye damage

GHS: CONTACT HAZARD - EYE: Category 1 - Causes serious eye damage

GHS: CARCINOGENICITY:
This product is not classified as a carcinogen by NTP, IARC or OSHA.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure):
Category 3 - Respiratory Tract Irritation

MUTAGENIC DATA:
Not classified as a mutagen per GHS criteria. Not mutagenic in 5 Salmonella strains and 1 E. coli strain with or without mammalian microsomal activation.

REPRODUCTIVE TOXICITY:
Not classified as a reproductive toxin per GHS criteria. There are no known or recorded effects on reproductive function or fetal development.

OTHER HAZARDS:
Contact with acids liberates toxic gas.

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12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:**Fish Toxicity:**

LC50 Bluegill sunfish: 0.25-1.0 mg/L (96 hour)

LC50 Rainbow trout: 0.13-0.36 mg/L (96 hour)

LC50 Inland silversides: 1.21 mg/L (96 hour)

Invertebrate Toxicity:

LC50 Water flea: 0.196 mg/L (48 hour)

LC50 Mysid shrimp: 1.65 mg/L (96 hour)

Other Toxicity:

LD50 Mallard duck (oral): 1,916 mg/kg

LD50 N. Bobwhite Quail (oral): 1,732 mg/kg

LD50 Mallard duck (diet): >10,000 ppm

LD50 N. Bobwhite Quail (diet): >10,000 ppm

FATE AND TRANSPORT:**BIODEGRADATION:** This material is subject to hydrolysis
Cyanuric acid produced by hydrolysis is biodegradable**PERSISTENCE:** This material is believed not to persist in the environment
Free available chlorine is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion
The stable degradation products are chloride ion and cyanuric acid**BIOCONCENTRATION:** This material hydrolyses in water liberating free available chlorine and cyanuric acid.
These products are not bioaccumulative.**ADDITIONAL ECOLOGICAL INFORMATION:** This product is very toxic to fish and aquatic organisms. This product is very toxic to aquatic life with long lasting effects. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of appropriate regulatory requirements (e.g. permit and the permitting authority has been notified in writing prior to discharge). Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your local or regional regulatory water boards and/or other appropriate regulatory offices.

13. DISPOSAL CONSIDERATIONS

Waste from material:Use or reuse if possible. This material is a registered pesticide. May be subject to disposal regulations. Dispose in accordance with all applicable regulations. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state. Contact OxyChem for instructions for handling and disposal of damp material.

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Container Management:

See product label for container disposal information. Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT**U.S. DOT 49 CFR 172.101:****Status:** Non-Bulk Packaging: Not Regulated unless transported by vessel.

Bulk Packaging or Shipment by Vessel: Regulated as follows:.

UN NUMBER: UN3077
PROPER SHIPPING NAME: Environmentally Hazardous Substance, Solid, n.o.s. (Sodium dichloroisocyanurate dihydrate), Marine Pollutant
HAZARD CLASS/ DIVISION: 9
PACKING GROUP: III
LABELING REQUIREMENTS: 9, Marine Pollutant
MARINE POLLUTANT: Sodium dichloroisocyanurate dihydrate

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**Status:** Non-Bulk Packaging: Not Regulated unless transported by vessel.

Bulk Packaging or Shipment by Vessel: Regulated as follows:.

UN NUMBER: UN3077
SHIPPING NAME: Environmentally Hazardous Substance, Solid, n.o.s. (Sodium dichloroisocyanurate dihydrate), Marine Pollutant
CLASS OR DIVISION: 9
PACKING/RISK GROUP: III
LABELING REQUIREMENTS: 9, Marine Pollutant
CAN. MARINE POLLUTANT: Sodium dichloroisocyanurate dihydrate

MARITIME TRANSPORT (IMO / IMDG) :**Status - IMO / IMDG:** Shipment by Vessel: Regulated

UN NUMBER: UN3077
PROPER SHIPPING NAME: Environmentally Hazardous Substance, Solid, n.o.s. (Sodium dichloroisocyanurate dihydrate), Marine Pollutant
HAZARD CLASS / DIVISION: 9
Packing Group: III

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SDS No.: M31037

SDS Revision Date: 11-May-2015

LABELING REQUIREMENTS: 9, Marine Pollutant

MARINE POLLUTANT: Sodium dichloroisocyanurate dihydrate

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:

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

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

SARA EHS Chemical (40 CFR 355.30)

Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Fire Hazard, Reactive Hazard, Acute Health Hazard

EPCRA SECTION 313 (40 CFR 372.65):

Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated

FIFRA REGULATIONS: Registered pesticide under 40 CFR 152.10, Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), EPA Reg. No. 935-68 (Towerchlor® 56 Granules)

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FIFRA LABELING REQUIREMENTS: - This chemical is a pesticide product registered by the United States Environmental Protection Agency (EPA) 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 organisms
- Strong oxidizing agent
- Contact with water slowly liberates irritating and hazardous chlorine containing gases
- Decomposes at temperatures above 460 °F 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 only clean and 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 incompatible chemicals may start a reaction with generation of heat, liberation of hazardous gases, and possible fire and explosion

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.

STATE REGULATIONS**California Proposition 65:**

This product and its ingredients are 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. For additional information, contact OxyChem Technical Services at 1-800-733-1165.

Component	California Proposition 65 Cancer WARNING:	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Sodium dichloroisocyanurate dihydrate 51580-86-0	Not Listed	Not Listed	Not Listed	Listed	1694	Not Listed

Component	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List

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Sodium dichloroisocyanurate dihydrate 51580-86-0	Not Listed	Listed	Not Listed	Not Listed	Listed
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CANADIAN REGULATIONS

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

WHMIS - Classifications of Substances:

- Material is regulated as a pesticide, therefore is not regulated under WHMIS
- Pest Control Products Act Registration No. 25822 - (Towerchlor 56 Granules Microbiocide)

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 11-May-2015

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health Rating: 3

Flammability Rating: 0

Reactivity Rating: 1

NFPA 704 - Hazard Identification Ratings (SCALE 0-4)

Health Rating: 2

Flammability: 0

Reactivity Rating: 1

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SDS Revision Date: 11-May-2015

Reason for Revision:

- Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Updated the (M)SDS header
- Product Identifier has been added or updated: SEE SECTION 1
- Updated Uses Advised Against information: SEE SECTION 1
- Revised Hazard(s) Identification information: SEE SECTION 2
- Emergency Overview was revised: SEE SECTION 2
- Added GHS Information: SEE SECTION 2
- Updated First Aid Measures: SEE SECTION 4
- Updated 24 Hour Emergency Telephone Number: SEE SECTION 1
- Modified Fire Fighting Measure Recommendations: SEE SECTION 5
- Revised Accidental Release Measures: SEE SECTION 6
- Revised Handling and Storage Recommendations: SEE SECTION 7
- Physical State information has been revised: SEE SECTIONS 2 and 9
- Stability and Reactivity recommendations: SEE SECTION 10
- Toxicological Information has been revised: SEE SECTION 11
- Updated Disposal Considerations. SEE SECTION 13
- Updated FIFRA Regulations: SEE SECTION 15
- Added SDS Revision Date: SEE SECTION 16

IMPORTANT:

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

End of Safety Data Sheet