SAFETY DATA SHEET


Product name | Pristine Extra
Product id | AS_2007M_PE
Revision date | 05/01/2014
Supersedes | 15/08/2011

1. Identification of the substance & the company

Chemical name | Sodium dichloroisocyanurate, dihydrate
Synonym(s) | Sodium dichlor; Sodium dichloroisocyanurate, dihydrate; Sodium dichloro-s-triazinetrione dihydrate; CDB Clearon; Troclosene sodium, dihydrate; CDB 56
Chemical formula | NaCl₂(NCO)₃ x2H₂O
Chemical family | Chloroisocyanurate
Molecular weight | 256
Type of product and use | For disinfectant, sanitizers, fungicides, bactericides and algacides for pools, spas and hot tubs
Supplier | Clearon Corp.
| 95 MacCorkle Ave. SW,
| South Charleston, WV 25303,
| USA
| Toll Free Number: 1-800-811-2327
Emergency Telephone | Chemtrec: (800) 424-9300
| Medical: (800) 420-9236

2. Hazards identification

GHS

GHS classification | Acute Tox. 4, H302 Harmful if swallowed
| Eye Irrit. 2, H319 Causes serious eye irritation
| STOT SE 3, H335 May cause respiratory irritation
| Aquatic Acute 1, H400 - Very toxic to aquatic life
| Aquatic Chronic 1, H410 - Very toxic to aquatic life with long lasting effects

Labels and other form of warning

Symbol(s)
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Signal Word: WARNING

Hazard statements:
- H302 - Harmful if swallowed
- H319 - Causes serious eye irritation
- H335 - May cause respiratory irritation
- H410 - Very toxic to aquatic life with long lasting effects
- EUH031 - Contact with acids liberates toxic gas

Precautionary statements:
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P264 - Wash hands 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
- P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
- P337 + P313 - If eye irritation persists: Get medical advice/attention.
- P391 - Collect spillage
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P312 - Call a POISON CENTER or doctor/physician if you feel unwell
- P405 - Store locked up
- P501 - Dispose of contents/container in accordance with national and international regulations

NFPA Ratings (Scale 0-4):
- Health = 2, Fire = 0, Reactivity = 1. Special Hazard Warning: OXIDIZER.

HMIS Ratings (Scale 0-4):
- Health = 3, Fire = 0, Reactivity = 1.
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3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM DICHLOROIC CYANURATE, DIHYDRATE</td>
<td>51580-86-0</td>
<td>99-100</td>
</tr>
<tr>
<td>SODIUM CHLORIDE</td>
<td>7647-14-5</td>
<td>0-1</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye contact
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.

Skin contact
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. Get medical attention immediately.

Inhalation
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.

Ingestion
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.

Most important symptoms and effects, acute or delayed

- **Eye Contact**
  Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage.

- **Skin contact**
  Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.

- **Inhalation**
  Irritating to the nose, mouth, throat and lungs. 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. Inhalation of high concentrations can result in permanent lung damage from the corrosive action of the lung.
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<tr>
<td></td>
<td>15/08/2011</td>
</tr>
</tbody>
</table>

- **Ingestion**
  Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Ingestion causes severe damage to the gastrointestinal tract with the potential to cause perforation.

  **Note to physician**
  Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote. Treat symptomatically and supportively. In case of ingestion DO NOT induce vomiting.

5. **Fire - fighting measures**

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing media not to be used</td>
<td>Do not use dry chemical extinguisher containing ammonia compounds.</td>
</tr>
<tr>
<td>Unusual fire and explosion hazards</td>
<td>When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine and CO.</td>
</tr>
<tr>
<td>Fire fighting procedure</td>
<td>Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.</td>
</tr>
</tbody>
</table>

6. **Accidental release measures**

| Personal precautions | For small spills in a well-ventilated areas, wear a NIOSH approved half-face or full face tight fitting respirator or a loose fitting powered air purifying respirator equipped with chlorine cartridges. Chemical goggles should be worn when using a half-face respirator. In addition to respiratory protection, wear coveralls, chemical resistant gloves, chemical resistant footwear; and chemical resistant headgear for overhead exposure. For clean-up of large spills, or small dry spills in confined areas, wear full-face respirator with chlorine cartridges or a positive pressure supplied air respirator. Additionally, body protection should be impervious clothing covering entire body to prevent personal contact with material. CAUTION - Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist. |

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Methods for cleaning up
Hazardous concentrations in air may be found in local spill area and immediately downwind. If spill material is still dry, do not put water directly on this product as a gas evolution may occur.

Environmental precautions

- Soil
  Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

- Water
  This material is heavier than and soluble in water. Stop flow of material into water as soon as possible. Begin monitoring for available chlorine and pH immediately.

- Air
  Vapors may be suppressed by the use of water fog.

7. Handling and storage

Handling
Do not take internally. Avoid contact with skin, eyes, and clothing. Upon contact with skin or eyes, wash off with water.

Storage
Store in a dry, cool, well-ventilated area. away from incompatible materials (see "materials to avoid"). Do not store at temperatures above 60°C/140°F. Product has an indefinite shelf-life limitation.

8. Exposure controls / personal protection

Exposure Limits:

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH-TLV Data</th>
<th>OSHA (PEL) Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM DICHLOROISO CYANURATE, DIHYDRATE 51580-86-0</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>SODIUM CHLORIDE 7647-14-5</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Ventilation requirements
Use local exhaust ventilation to minimize dust and chlorine levels where industrial use occurs. Otherwise, ensure good general ventilation.

Personal protective equipment:
- 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. Neoprene gloves (0.67 mm)

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- Eye protection
  Use chemical safety glasses to avoid eye contact. Where industrial use occurs, chemical goggles may be required.

- Skin and body protection
  Impervious body covering clothes, boots and neoprene apron

Hygiene measures
Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White granules</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild chlorine-like</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate (ether=1)</td>
<td>Not applicable under standard conditions</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammable/Explosion limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable under standard conditions</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable under standard conditions</td>
</tr>
<tr>
<td>Density</td>
<td>tap density= 0.974 g/mL; pour density= 1.083 g/mL</td>
</tr>
<tr>
<td>Solubility:</td>
<td>- Solubility in water: 24-25 g/100g</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>LogP - -0.0056 (estimated)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not self-ignitable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Begins to lose 1 mole water at approximately 50°C; second mole water at 95°C; Decomposes at 240-250°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidising</td>
</tr>
<tr>
<td>Particle size</td>
<td>Non- inhalable</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Begins to lose one mole of water at approximately 50°C.</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable under normal conditions</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.</td>
</tr>
</tbody>
</table>
# SAFETY DATA SHEET


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</tbody>
</table>

## Conditions to avoid

- Heating above decomposition temperature. Do not package in paper or cardboard.

## Materials to avoid

- Organic materials, reducing agents, nitrogen containing materials, other oxidizers, acids, bases, oils, grease, sawdust, dry fire extinguishers containing monoammonium compounds.

## Hazardous decomposition products

- Nitrogen trichloride, chlorine, carbon monoxide

### 11. Toxicological information

#### Likely Routes of Exposure

- Skin
- Inhalation
- Ingestion
- Eye contact

#### Acute toxicity:

- Rat oral LD50: 1671 mg/kg
- Rat dermal LD50: >5000 mg/kg
- Eye irritation (rabbit): Severe irritant
- Dermal irritation (rabbit): Severe irritant
- Dermal sensitization: Not a sensitizer

#### Specific Target Organ Toxicity (STOT) - Single exposure

- No data available

#### Specific Target Organ Toxicity (STOT) - Repeat exposure

- Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. In the 28 day extended to 59 day study drinking water study (rat): NOAEL = 115 mg/kg bw/day.

#### Immediately Dangerous to Life or Health (IDLH)

- No level has been established for the components or the product itself.

#### Chronic toxicity

- Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.

#### Mutagenicity

- Not mutagenic in five Salmonella strains with or without metabolic activation.

#### Carcinogenicity

- Not classified by IARC, OSHA, EPA.
- Not included in NTP 13th Report on Carcinogens
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Reproductive toxicity | Sodium dichloroisocyanuric acid when given orally to pregnant mice from day 6 to day 15 of gestation, did not induce any significant teratogenic effects.

12. Ecological information

Aquatic toxicity :
- 96 Hour-LC50, Fish 0.22 mg/l (rainbow trout)
  0.28 mg/l (bluegill sunfish)
- 48 hour-LC50, Daphnia magna 0.2 mg/l

Avian toxicity:
- Oral LD50, Bobwhite quail 730 mg/kg
- Oral LD50, Mallard duck 3300 mg/kg
- Dietary LC50, Mallard duck >10,000 ppm
- Dietary LC50, Bobwhite quail >10,000 ppm

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

13. Disposal considerations

Waste disposal | Care must be taken to prevent environmental contamination from the use of this material. Observe all federal, state and local environmental regulations when disposing of this material.

Disposal of Packaging | Empty containers should be disposed of in accordance with all applicable laws and regulations
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14. Transportation information

DOT
Not regulated for non bulk shipments
For bulk shipments regulated as:
UN No. 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s
(Sodium Dichloroisocyanurate,dihydrate)
Class: 9 - Miscellaneous Hazardous Material
Label: 9
Marking: Marine Pollutant
Packing Group: III
Note: Certain shipping modes or package sizes may have exceptions from the transport regulations and may be classified as Consumer Commodity and Limited Quantity. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

IMDG
UN No. 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s
(Sodium Dichloroisocyanurate,dihydrate)
Class: 9 - Miscellaneous Dangerous Substances and Articles
Label: 9
Mark: MARINE POLLUTANT
Packing Group: III

ICAO/IATA
UN No. 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s
(Sodium Dichloroisocyanurate,dihydrate)
Class: 9
Hazard label(s): Miscellaneous
Packing group: III
Marking: Environmentally hazardous substance

15. Regulatory information

USA
All the components of this substance are listed on or are exempt from the inventory
This product is registered under FIFRA

- EPA Registration no.
69470-20-64962
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**- Emergency overview in accordance to EPA Master Label**

DANGER
Hazards to humans and domestic animals
Corrosive
Causes irreversible eye damage
May be fatal if inhaled
Harmful if swallowed or absorbed through skin
Strong oxidizing agent
This pesticide is toxic to fish and aquatic organisms.

**- SARA (311, 312)**
This product is categorized as an immediate health hazard, and fire and reactivity physical hazard

**- Massachusetts Right-to-Know Hazardous Substances list**
Listed

**- Pennsylvania Right-to-Know Hazardous Substances list**
Listed

**- California-Prop 65**
This product does not contain any ingredient known to the State of California to cause cancer or reproductive toxicity as listed under the State drinking Water and Toxic Enforcement Act of 1986.

**- Waste Classifications**
If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

**- Workplace Classification**
This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

**EU**
Reported in EINECS

**Japan**
ENCS no. (5)-1043
ISHL no. (5)-1043

**Australia**
Listed in AICS

**New Zealand Inventory**
Listed in NZIoC

**China**
- China inventory
  Listed

**Philippines**
Listed in PICCS
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16. Other information

This data sheet contains changes from the previous version in section(s) 2, 12, 13, 14, 15

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, Clearon Corp. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will Clearon Corp. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

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End of safety data sheet