

SAFETY DATA SHEET
According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

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Emergency Phone Number: 1-800-535-5053 (Infotrac)
Information Phone Number: 1-479-271-7381

Material Name: PristineExtra 2™

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Revision Date

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Trade Name : NEO-CHLOR 55

Company : SHIKOKU CHEMICALS CORPORATION

Address : 8-537-1, Doki-cho-higashi, Marugame, Kagawa 763-8504

Telephone : +81-877-22-

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Emergency Phone Number : (CHEMTREC) +1-703-527-3887

E-mail Address : shikokumsds@shikoku.co.jp

Recommended Use of the Chemical and Restrictions on Use : Sanitizers, disinfectants for swimming pools, spas and hot tubs

2. HAZARDS IDENTIFICATION

GHS classification

Acute Toxicity (Oral) : Category 4
Acute Toxicity (Inhalation) : Category 2 *
Skin corrosion / irritation : Category 1C
Serious Eye Damage / Eye Irritation : Category 1
Specific Target Organ Toxicity : Category 3
Single Exposure
Hazardous to the Aquatic Environment : Category 1
(Acute Hazard)
Hazardous to the Aquatic Environment : Category 1
(Chronic Hazard)

Endpoints which are not classified, cannot be classified or are not applicable are not shown.

GHS label element

Symbol



Hazard statement

: Harmful if swallowed
: Fatal if inhaled *
: Causes severe skin burns and eye damage
: Causes serious eye damage
: May cause respiratory irritation
: Very toxic to aquatic life with long lasting effects

* See Section 11: TOXICOLOGICAL INFORMATION

SAFETY DATA SHEET

2. HAZARDS IDENTIFICATION

GHS label element

Precautionary Statements

[Prevention]

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

[Response]

- : Rinse mouth.
- : Collect spillage.
- : IF IN EYES: Rinse cautiously with water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- : Wash contaminated clothing before reuse.
- : IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- : Immediately call a POISON CENTER/doctor.

[Storage]

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

[Disposal]

- : Dispose of contents/container to in accordance with local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical Identify : Sodium dichloroisocyanurate dihydrate

Synonym : 1,3-dichloro-, 3,5-triazine-, 2,4,6(1H,3H,5H)-trione sodium salt dihydrate

Chemical Formula : $C_3H_4Cl_2N_3O_5Na$

CAS Number : 51580-86-0

Concentration : (Sodium dichloroisocyanurate dihydrate 99%
(Other) 1%)

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance.

: Nothing

SAFETY DATA SHEET

4. FIRST-AID MEASURES

- Inhalation : Move person to fresh air. If person is not breathing, give artificial respiration, preferable by mouth-to-mouth, if possible. Get medical attention for further treatment advice.
- Skin Contact : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Get medical attention for treatment advice.
- 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. Get medical attention for further treatment advice.
- Ingestion : Get medical advice IMMEDIATELY. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so.
- Note to Physician : Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

- Extinguishing Media : Large amounts of water. Do not use dry chemicals, carbon dioxide or halogenated extinguishing agents.
- Specific Hazards Arising from the Chemical : Chlorine, Nitrogen trichloride, Hydrogen chloride, Nitrogen oxide, and carbon monoxide.
- Protective Equipment and Precautions for Fire-fighters : Wear self-contained breathing apparatus in pressure-demand mode and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions : Avoid inhalation and contact with eyes and skin. Use personal protective equipment.
- Environmental Precautions : Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, and oceans. Do not flush into surface water or sanitary sewer systems.
- Methods and Material for Containment and Cleaning Up : Sweep up spills or leaks with dry broom into suitable container for disposal.

7. HANDLING AND STORAGE

- Handling : Wear proper protective equipments in order to avoid contact with skin or eyes. Remove and wash contaminated clothing before re-use. Do not breathe vapors/dust. Do not eat, drink or smoke when using this product. Uses only in area provided with appropriate exhaust ventilation.
- Storage : Keep product in tightly closed container when not in use. Store in a cool, dry, well-ventilated area away from heat or open flame. Keep room temperature under 40 degree C in store place. Do not store with water, oxidizing agents, alkalies, grease, reducing agents and acids. Keep out of reach of children.
- Incompatible Products : Strong bases. Strong oxidizing agents.

SAFETY DATA SHEET**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering Measures : Showers, eyewash stations, and ventilation systems

Exposure Limits (DUST)

: Limits for Air Contaminants (OSHA)
 Particulates not otherwise regulated
 Total dust TWA 15 mg/m³

: Limits for Air Contaminants (OSHA)
 Particulates not otherwise regulated
 Respirable fraction TWA 5 mg/m³

: Limits for Air Contaminants (ACGIH)
 Particulates (insoluble or poorly soluble)
 Respirable particles TWA 3 mg/m³

: Limits for Air Contaminants (ACGIH)
 Particulates (insoluble or poorly soluble)
 Inhalable particles TWA 10 mg/m³

(As chlorine gas concentration)
 0.5ppm, 1.5mg/m³ (2005year JAPAN)
 TLV-TWA(8hours): 0.5ppm(ACGIH.1993-1994)
 TLV-STEL(15minintes): 1ppm(ACGIH 1993-1994)

Personal Protective Equipment

Respirator : 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.

Gloves : Wear appropriate chemical resistant gloves.

Eye Protection : Wear chemical safety goggles.

Skin Protection : Wear impervious, long-sleeved clothing to minimize skin contact.

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

Hygiene Measures : When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (Physical State / Color) : Solid / White

Odor : Chlorine Odor

Molecular Weight : 255.98

pH : Approx. 6.6 (1% solution)

Melting Point : Not applicable

Boiling Point : Not applicable

Flash Point : Not applicable

Ignition Point : Not applicable

SAFETY DATA SHEET

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| Flammability (Solid, Gas) | : Not available |
| Explosive Limit | : Not available |
| Vapour Pressure | : Not available |
| Vapour Density | : Not available |
| Evaporation Rate | : Not available |
| Gravity | : 2.0 (Absolute Specific Gravity) |
| Water Solubility | : 26.25g/100g (25 degree C) |
| Partition Coefficient : n-octanol / water | : Not available |
| Decomposition Temperature | : 240 – 250 degree C May generate heat at 45 degree C or higher |

10. STABILITY AND REACTIVITY

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|----------------------------------|---|
| Stability | : Stable under recommended storage conditions. : Converted to Hypochlorous acid and Isocyanuric acid when dissolve product in water. |
| Condition to Avoid | : Heat (Keep product under 40 degree C), direct sunlight, water and moisture |
| Incompatible Products | : Acid, Alkali, Other chlorine agents, oils/fats and flammable materials |
| Hazardous Decomposition Products | : Chlorine, Nitrogen trichloride, Hydrogen chloride, Nitrogen oxide, carbon monoxide, carbon dioxide, and nitrogen |
| Hazardous Reactions | : None under normal processing |

11. TOXICOLOGICAL INFORMATION

| | | |
|-----------------------------|--------------|--|
| Acute Toxicity | (oral) | : Rat LD ₅₀ 1,823mg/kg |
| | (dermal) | : Rabbit LD ₅₀ >2000mg/kg |
| | (inhalation) | : Rat LC ₅₀ 0.27 – 1.17mg/L (4hr) 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. |
| Skin Corrosion / Irritation | | : Severe skin burns |

SAFETY DATA SHEET**11. TOXICOLOGICAL INFORMATION**

| | |
|---|---|
| Serious Eye Damage / Eye Irritation | : Serious eye damage |
| Respiratory Sensiation | : Not available |
| Skin Sensation | : Not available |
| Germ Cell Mutagenicity | : AMES Test; Negative (Test substance: monosodium cyanurate) (1) Mouse Lymphoma Assay; Negative (Test substance: monosodium cyanurate) (1) |
| Carcinogenicity | : This product is not classified as a carcinogen by NTP, IARC or OSHA. |
| Reproductive Toxicity | : Not available |
| Specific Target Organ Toxicity – Single Exposure | : Breathing dust or fumes is expected to be a primary route of exposure. May produce throat and respiratory tract irritation. |
| Specific Target Organ Toxicity – Repeated Exposure | : Not available |
| Aspiration Hazard | : Not available |
| Other Information | : Not available |

12. ECOLOGICAL INFORMATION

| | |
|-------------------------------|---|
| Ecotoxicity | : LC50 0.42mg/l (ORYZIAS LATIPES, 96hour) |
| Persistence and degradability | : (As Isocyanuric Acid) Decomposable in the nature. 0% by BOD after 14 days, 7.8% by TOC after 14 days, 5.3% by HPLC after 14 days. (3) 100% in aerobic activated sludge after 8 hours, 100% in anaerobic sludge after 72 hours, 52–100% in some soils and sludges after 9–23 days. (4) |
| Bioaccumulation | : Not bioaccumulate as Isocyanuric acid (5) |
| Mobility in soil | : Not available |
| Other adverse effect | : Not available |

13. DISPOSAL CONSIDERATIONS

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|------------------------|---|
| Waste Disposal Methods | : Dissolve product in large amount of water and add reducing agent gradually. After decompose residual chlorine, adjust pH neutral and discharge into oceans or other waters. : Do not dispose of wastes into garbage can or garbage dump, which may cause fire. |
|------------------------|---|

14. TRANSPORT INFORMATION

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|------------------------|--|
| Transportation Methods | : Keep product dry in tightly closed container and load securely in order to avoid damages. : Avoid moisture, heat (keep product under 40 degree C), and direct sunlight. : Keep away from water, oxidizing agents, alcalies, grease, reducing agents and acids. |
|------------------------|--|

SAFETY DATA SHEET**14. TRANSPORT INFORMATION**US DOT

Status : Non-Bulk Packaging (less than 400kg): Not Regulated unless transported by vessel.
Bulk Packaging or Shipment by Vessel: Regulated as follows:

Proper Shipping Name : Environmentally hazardous substance, solid, n.o.s.
Hazard Class : 9
Subsidiary Risk : Marine Pollutant
UN No. : 3077
Packing Group : III

IMDG/IMO

Proper Shipping Name : Environmentally hazardous substance, solid, n.o.s.
Hazard Class : 9
Subsidiary Risk : Marine Pollutant
UN No. : 3077
Packing Group : III
EmS No. : F-A, S-F
Marpol : Marine Pollutant
Description : UN3077, Environmentally hazardous substance, solid, n.o.s. (Sodium dichloroisocyanurate dihydrate), 9, PG III

ICAO/ IATA

Proper Shipping Name : Environmentally hazardous substance, solid, n.o.s.
Hazard Class : 9
UN No. : 3077
Packing Group : III
ERG Code : 9L
Description : UN3077, Environmentally hazardous substance, solid, n.o.s. (Sodium dichloroisocyanurate dihydrate), 9, PG III
Additional Information : Marine Pollutant

15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA) : All components are listed on the TSCA inventory.
Clean Water Act (CWA) : None of the ingredients is listed.
OSHA: Hazardous by definition of Hazard : CAS no. 51580-86-0
Communication Standard (29 CFR 1910.1200)
SARA Section 302 (RQ) : None of the ingredients is listed.
SARA 311/312 : Hazard category Acute Health Hazards
SARA Section 313 : None of the ingredients is listed.
HAPS Hazardous Air Pollutants : None of the ingredients is listed.
Volatile organic compounds (VOC) : Value 0 pound / gallon
HMIS Classification : Health 3 Flammability 1 Physical Hazard 1 Personal Protection F
NFPA Rating : Health 3 Flammability 1 Physical Hazard 1
CARCINOGENICITY IARC : None of the ingredients is listed in group 1, 2A or 2B.
New Jersey Worker and Community Right to Know Act. : None of the ingredients is listed.
California Proposition 65. : None of the ingredients is listed.
Pennsylvania HAZARDOUS SUBSTANCE LIST : Following ingredients are listed: CAS no. 51580-86-0
FIFRA regulations : Registered pesticide under 40 CFR 152.10, Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), EPA Reg. No. 33980-3

SAFETY DATA SHEET

15. REGULATORY INFORMATION

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
- Do not contaminate water, flood or feed by storage or disposal.
- Flood with large volumes of water if necessary.
- 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 generation of fire and explosion

16. OTHER INFORMATION

Excerpt

- (1)[A Review of Toxicology Studies on Cyanurate and its Chlorinated Derivatives] Environmental Health Perspectives Vol. 69. 278 (1986)
- (2)[Biodegradation of Cyanuric Acid] Applied Microbiology.28(6)1004(1974)
- (3)OECD SIDS Initial Assessment Report for 9th SIAM (France, June 29-July1, 1999)
- (4)Ad Hoc Committee, EPA report 201-14660B (2003)
- (5)The Journal of Hygienic, Chemistry 24, (1) 49~59(1978)

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