Material Safety Data Sheet

1.1 Identification of the substance/preparation

Product Name : Germ –O- Clean (Effervescent Disinfectant Tablet)

Generic Name : Sodium Dichloroisocyanurate Tablet

1.2 Company identification

Manufacturer : PRECISE FORMULATION

Prop. Precise Health Care Pvt.Ltd.

802,GIDC Estate Kerala (Bavla), Dist. Ahmedabad.

Gujarat, India.

Marketed By : TORREL COS. PVT. LTD.

C-2, Safal Profitaire, Ahmedabad -380015,

Gujarat, India

2. Composition/Information on Ingredients.

Chemical Name: Sodium Dichloroisocyanurate

CAS No : 2893-78-9

EPA NO : 524-106

3. Hazards Identification.

Most Important Hazards: Classification according to the European Directive on Classification of Hazardous Preparations 1999/45/EC (Conventional Method)
Contact with combustible material may cause fire Contacts with acids liberates toxic gas Irritating to eyes and respiratory system Very toxic to aquatic organisms, may cause long-term effects in the aquatic environment

SHORT TERM EXPOSURE (ACUTE)

INHALATION: Breathing dust or fumes is expected to be a primary route of exposure and may cause throat and respiratory tract irritation.

EYES: Contact can cause severe damage including burns and blindness

SKIN: On contact with moisture, this preparation readily hydrolyses to acid which may result

in burns if not promptly removed.

INGESTION: May cause burns to gastrointestinal tract.

REPEATED EXPOSURE (CHRONIC)

No known chronic effects

Chronic exposure to large amounts of this preparation has not yet been characterised and the irritating properties of the compound make such an exposure highly unlikely.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Pre-existing disorders affecting target organs.

4. First Aid Measures.

Inhalation: Move person to fresh air. If breathing is difficult have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. Get medical Attention Immediately.

Skin contact: Immediately brush off excess chemical and flush with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse.

Eye contact: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and tissue. Washing eyes within several seconds is essential to achieve maximum effectiveness. Get Medical Attention Immediately.

Ingestion: Never give anything by mouth to an unconscious person. If swallowed do not induce vomiting. Give large quantities of water. (If available give several glasses of milk) If vomiting occurs spontaneously, Keep airway clear and give more water. Get Medical Attention Immediately.

5. Fire-Fighting Measures.

Extinguishing Media

Do not attempt to extinguish the fire without a self-contained breathing apparatus. Do not let the fire burn. Flood with copious amounts of water. Do not use dry chemical extinguishers since there is potential for a violent reaction.

Fire-Fighting Techniques/Comments

Firefighters should wear full protective clothing and self contained breathing apparatus. Using a 10% solution of sodium carbonate, thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident

Fire and Explosion Hazard

This preparation when ignited will burn with the evolution of noxious chlorine containing gases and if heated by an outside source to temperatures above 240°C will undergo vigorous self-sustaining decomposition with the evolution of heat and dense noxious gases. In addition, when in contact with another combustible material, the product will increase the burning rate of the combustible material.

Nitrogen trichloride can be generated slowly by the reaction of small quantities of water with a high concentration of this product. Nitrogen Trichloride can present an explosion hazard.

Immediately after a fire has been extinguished, check for wet or damp material. Any spilled material from burned or broken containers should be assumed contaminated. Neutralize to a non-oxidising material for safe disposal. Do not attempt to re-close broken containers even for movement to the disposal area. They should be left open to disperse any nitrogen trichloride that may form.

Containers which appear undamaged except for being damp on the outside, should be opened and inspected immediately. If the product is damp it should be neutralised to a non-oxidising material for safe disposal.

Bulging containers require extreme care. Contact the fire service.

Material in the preparation glows on ignition and burns without a visible flame. Contact of molten material with limited amounts of water may result in steam explosion.

6. Accidental Release Measures.

Personal Protection

Avoid contact with skin and eyes. Wear chemical safety goggles and chemical resistant gloves.

Handle product in a well ventilated area.

Environmental Protection

Do not release into the environment.

Prevent flow of material into water source and begin monitoring available chlorine and pH immediately.

Notify all down stream users of possible contamination.

Methods for Cleaning Up

Contain spilled material. Any spillage should be cleaned up as soon as possible. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean, dry containers for disposal. Do not close drums containing wet or damp material. Do not transport wet or damp material.

7. Handling and Storage.

General Handling

Do not get in eyes, on skin or on clothing.

Avoid breathing airborne particulates; wear respiratory protection when exposure is possible Wear goggles or face shield and rubber gloves when handling.

Wash thoroughly with soap and water after handling.

Wash contaminated clothing before use.

Vapour space in a closed container may contain a slight amount of chlorine gas and compounds from decomposition of the product.

Special Mixing and Handling Instructions

Mix only with water. Use clean dry utensils. Do not mix this product with remnants of any other products. Such uses may cause a violent reaction leading to fire or explosion.

Contamination with moisture, organic matter or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible generation of fire and explosion.

Vapour space in a closed container may contain a slight amount of chlorine gas and other chlorine containing compounds from decomposition of the product. Exposure to chlorine gas may cause burning of the eyes, burning of the nose and mouth and irritation of the linings of the respiratory tract with coughing, a choking sensation, substernal pain, vomiting, nausea, headache, dizziness and fainting.

Storage

Store in original container and in a cool dry area where temperatures do not exceed 52°C. Keep container tightly closed and store away from incompatible materials.

Do not allow water to get into the container.

Keep out of reach of children.

8. Exposure controls/personal protection.

Personal Protective Equipment: Wear chemical safety goggles and chemical resistant gloves

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment

Ventilation: Use only in well-ventilated areas.

9. Physical and Chemical Properties.

Appearance : White/off white tablet

Odour : Slight chlorine odour.

Solubility : Soluble in Water

pH : 6.0 – 7.0

Thermal Decomposition Temp.: 225 - 250°C

10. Stability and Reactivity.

Stability Data: Stable

Incompatibility (Materials to avoid): Strong acids and/or alkalies. Reducing agents. Combustible material.

The active ingredient in this preparation is a strong oxidising agent. The preparation of concentrated solutions or slurries is not recommended. Avoid contact with water on concentrated material in the container. Also avoid contact with easily oxidisable organic material: ammonia, urea or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite and alkalis.

Hazardous Decomposition Products: Chlorine containing gases can be produce
Polymerisation - Avoid: Hazardous Polymerisation will not occur

11. Toxicological Information.

RTECS # CAS # 2893-78-9: XZ1900000

LD50/LC50 CAS # 2893-78-9: Draize test, rabbit, eye: 100mg/24H Mild; Draize test, rabbit, skin: 500mg/24H Mild: Draize test, rabbit, skin: 500mg Severe; Oral, rat: LD50= 1420mg/kg.

Carcinogenicity Sodium Dichloroisocyanurate not listed by ACGIH, IARC, NIOSH; NTP, or OSHA. See actual entry in RTECS for complete information.

12. Ecological Information.

Toxicity: This preparation is likely to be highly toxic to freshwater fish and invertebrates.

Species	**Sodium Dichloroisocyanurate acid**
Daphnia Magna	No Data Available
Rainbow Trout	LC50 (96 hr): 0.37ppm, Highly Toxic
Bluegill Sunfish	LC50 (96 hr): 0.43ppm, Highly Toxic

Mallard Duck	Oral LD50: 1916mg/Kg Slightly Toxic
Mallard Duck	8 day Dietary LC50: >10,000ppm Practically non-toxic

Bobwhite Quail	8 day Dietary LC50: >10,000ppm Practically non-toxic

Persistence: This preparation will readily biodegrade.

Bioaccumulation: This preparation is believed to be unlikely to bioaccumulate.

13. Disposal Considerations.

Product Disposal

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

Disposal of Packaging

Clean Container and dispose of according to local and national regulations

14. Transport Information.

Not Regulated

15. Regulatory Information.

EEC Directive: 93/112/EEC and 2001/58/EC.

EEC Classification/Labelling: 92/32/EEC.

EEC Safety Data Sheets Directive: 91/155/EEC

Indication of Danger: O - Oxidising

X_i – Irritant

N – Dangerous to the Environment.

Risk Phrases

R8 : Contact with combustible materials may cause fire

R31 : Contact with acids liberates toxic gases.

R36/37	: Irritating to eye and respiratory system.
R50/53	: Very toxic to the aquatic organisms, may cause long-term effects in the aquatic environment.

Safety Phrases

S2	: Keep out of reach of children.
S8	: Keep container dry.
S26 with	: In case of contact with eyes, rinse immediately plenty of water and seek medical advice.
S41	: In case of fire or explosion, do not breathe Fumes.
S61	: Avoid release to the environment.

16. Other Information.

The above information is intended to give general guidance as to health and safety. Whilst it is correct to the best of our knowledge and belief, no warranty can be given or implied that it will be adequate or applicable for all cases nor that the product will be suitable for any particular purpose since conditions of use are outside our control.

REVISION NO: 5 DATE 20.08.13

17. Revision History. Revision no. 1 – Update to risk and safety phrases.