ecogene

Company details
Vuzumart (Pty) Ltd
2012/047322/07
P.O. Box 66, Lanseria, 1748
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Material Data Safety Sheet

Poison Centre: 0860 155 5777

M90 Floater Plus

Section 1 - Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier:	**Identification on the lable/Trade name**: Sodium Dichloroisocyanurate Dihydrate **Additional identification**: Not available **Identification of the product**: CAS# 51580-86-0 **EC No.**: 220-767-7 **REACH registration No.**: Not available
1.2 Relevant identified uses of the substance or mixture and uses advised against:	**Recommended use**: Sodium dichloroisocyanurate dihydrate is used on disinfection water of swimming pool & spa. **Restrictions on use**: Not for disinfection of drinking water.
1.3 Details of the supplier of the safety data sheet:	**Supplier**: Shijiazhuang Aquaenjoy Environment Corporation Limited **Address**: Rm 2105, Bldg 3, Huachuang Plaza, No.19, Zhongwang Rd, Xinhua Dist Shijiazhuang, China **Telephone**: 86-311-67263001 **Fax**: 86-311-67263003 **Email**: info@aquaenjoy.com
1.4 Emergency telephone number:	86-139-31103882

Section 2 - Hazards Identification

2.1 Classification of the Hazardous Chemical:

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP):

Acute Toxicity Oral 4 - H302
Aspiration hazard - H335
Serious eye damage/eye irritation - H319
Hazardous to the aquatic environment (Long-term) - H410
EUH031: Contact with acids liberates toxic gas

2.1.2 Additional information: For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2 Label elements:

Hazard pictogram(s):



GHS Signal Word: WARNING

Hazard Statements:

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

Precautionary Statements:

Prevent:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P273: Avoid breathing dust/fume/gas/mist/vapours/spray.

Response:

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

Storage/Disposal:

P501: Dispose of contents/container to an approved waste disposal plant.

Supplemental Hazard information (EU): Not applicable.

2.3 Other Hazards: No information available.

Section 3 - Composition/Information on Ingredients

3.1 Substances: Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

3.2 Mixtures:

CAS NO.	EC NO.	REACH REGISTRATION NO.	WT%	NAME	CLASSIFICATION ACCORDING TO REGULATION (EC) NO 1278/2008 (CLP)
51580-86-0	220-767-7		100	Sodium dichloroisocyanurate, dihydrate	Acute Tox. 4 - H302 Aspiration Harzard - H335 Eye Irrit. - H319 Hazard. to Aqua. - H410 Contact with acids liberates toxic gas - EUH031

Section 4 - First Aid Measures

4.1 Description of first aid measures :

Immediately remove contaminated clothing. If danger of loss of consciousness, place patient in recovery position and transport accordingly. Apply artificial respiration if necessary. First aid personnel should pay attention to their own safety.

In case of eyes contact: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

In case of skin contact: Immediately remove all contaminated clothing, including footwear. Flush skin with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

In case of inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If irritation or discomfort persists seek medical attention.

In case of ingestion: Rinse mouth out with plenty of water. Seek medical attention immediately. Call a poison control center or doctor for treatment advice. Do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Avoid alcohol.

4.2 Most important symptoms and effects, both acute and delayed: Symptoms: Skin irritation, eye irritation, further symptoms are possible.

4.3 Indication of any immediate medical attention and special treatment needed: Treatment: Symptomatic treatment (decontamination, vital functions).

Section 5 - Firefighting Measures

5.1 Extinguishing media:

Suitable Extinguishing Media: Flood with water.

Unsuitable Extinguishing Media: Do not use dry chemicals containing ammonia compounds, carbon dioxide or halogenated extinguishing agents.

5.2 Special hazards arising from the substance or mixture:

Unusual Fire and Explosion Hazards: Above 240℃, this product will undergo self-sustaining decomposition with the evolution of heat and dense noxious gases but no visible flame. When wet material meets ammonium salts and ammonia, it may generate nitrogen trichloride, an explosion hazard.

Hazardous Combustion Products: Thermal decomposition products or combustion: chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, phosgene.

5.3 Advice for Firefighters: 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. 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.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Protective equipment: Use extreme caution in handling spilled material. Ventilate the area before entry. Use sparkproof tools and explosionproof equipment. Do not walk through spilled material. Do not mix this product with any other chemicals, including any other pool chemicals of any kind, such as other disinfection or "shock" pool products. Contamination with moisture, acids, organic matter, other chemicals (including, but not limited to cleaning chemicals and other pool chemicals), petroleum or paint products or other easily combustible materials may start a chemical reaction with generation of heat, liberation of hazardous gases and possible violent reaction leading to fire or explosion. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures: Do not put water directly on this product as a gas evolution may occur.

For emergency responders: Wear relevant protective equipment (NIOSH/MSHA approved respirator, protective clothing,

gloves and tightly fitting goggles).

6.2 Environmental precautions: This material is heavier than and soluble in water. Stop flow of material into water as soon a possible. Begin monitoring for available chlorine and pH immediately.

6.3 Methods and material for containment and cleaning up:

6.3.1 Containment Measures: Do not contaminate spill material with any organic materials, ammonia, ammonium salts, or urea.

6.3.2 Cleanup Measures: Clean up spills immediately. Sweep up, then place into a suitable container for disposal. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. 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. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

Section 7 - Handling and STORAGE

7.1 Precautions for safe handling:

Handling: Use extreme caution in handling spilled material. Use only with adequate ventilation. Keep away from combustible material. Strong oxidizer. Contact with other material may cause fire. Use sparkproof tools and explosionproof equipment. Do not mix this product with any other chemicals, including any other pool chemicals of any kind. Contamination with moisture, acids, organic matter, other chemicals (including, but not limited to cleaning chemicals and other pool chemicals), petroleum or paint products or other easily combustible materials may start a chemical reaction with generation of heat, liberation of hazardous gases and possible violent reaction leading to fire or explosion. Always add product to large quantities of water to fully dissolve product. Do not pour water into product, always add product to water. Use only a clean (new, if possible), dry scoop made of metal or plastic each time product is taken from the container. Do not add this product to any dispensing device containing remnants of any other product or pool chemical. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Empty containers retain product residue and can be hazardous. Do not reuse container. Residual material remaining in empty container can react to cause fire. Thoroughly flush empty container with water then destroy by placing in trash collection.

7.2 Conditions for safe storage, including any incompatibilities:

Storage: Ventilate enclosed areas. Keep only in the original container. Keep container closed. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 400 Hazardous Materials Code for further information. Store in a cool, dry, wellventilated place. If product becomes contaminated or decomposes do not reseal container. If possible isolate container in open air or wellventilated area.

Section 8 - Exposure Controls/Personal Protection

8.1 Control Parameters:

OSHA Vacated PELs: No OSHA Vacated PELs are listed for this chemical.

8.2 Exposure controls:

8.2.1 Appropriate Engineering Controls:

Engineering Measures/Controls: Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

8.2.2 Personal Protective Equipment:

Eye and face protection: Wear safety glasses or goggles.

Skin protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. HANDS: Chemicalresistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. GLOVES: Nitrile, neoprene, and butyl rubber.

Respiratory protection: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, airpurifying or airfed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal hazards: Not available.

8.2.3 Environmental Exposure Controls: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Material Description:

Physical Form: Solid.

Appearance/Description: White powder, granules or tablets.

Color: White.

Odor: Mild chlorine-like odor
Odor Threshold: No data available.
General Properties:
Boiling Point: 240 to 250 ℃, decomposes
Melting Point: Not data available
Decomposition Temperature: 240 to 250 ℃
pH: 5.5 to 7.0 (1% solution)
Relative Density: No data available
Bulk Density: 0.8 to 1.0 g/cm^3
Water Solubility: 25g/100mL @ 30℃
Viscosity: No data available
Volatility:
Vapor Pressure (kPa): N/A under standard conditions
Vapor Density (Air=1): N/A under standard conditions
Evaporation Rate: N/A under standard conditions
Volatiles (wt.): 0%
Volatiles (vol.): 0%
Flammability:
Flash Point: Not relevant
UEL: Not relevant
LEL: Not relevant
Autoignition: No data available.
Flammability (solid, gas): No data available.
Environmental:
Octanol/Water Partition Coefficient: No data available.

9.2 Other information: Not available.

Section 10 - Stability and Reactivity

10.1 Reactivity: No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability: Stable under normal temperatures and pressures. Hazardous Polymerization will not occur. Decomposes at approximately 240 to 250 ℃ releasing chlorine gas.

10.3 Possibility of hazardous reactions: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials, contact with acids/ammonia. Reactions may include the following: risk of causing or intensifying fire, liberation of toxic gas.

10.4 Conditions to Avoid: Incompatible materials, strong light, high temperature and moisture.

10.5 Incompatible materials: Highly reactive or incompatible with the following materials: moisture, combustible materials, organic materials, metals, acids, alkalis, oxidizing materials, reducing materials, Ammonia, Petroleum products, Paint products, Wood and paper, Pool chemicals. Acid or ammonia contamination will release toxic gases.

10.6 Hazardous Decomposition Products: Hydrogen chloride, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Section 11 - Toxicological Information

11.1 Information on toxicological effects:
Acute effects:
LD50 (rat, oral): 735 mg/kg
LD50 (rabbit, dermal): >2,000 mg/kg
LC50 (rat, inhalation, 1hr): > 50mg/m^3
Irritation:
Eye (rabbit): Corrosive
Dermal (rabbit): Corrosive
Sensitization:
Dermal (guinea pig): Not a sensitizer
Chronic Toxicity: Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.
Immediately Dangerous to Life or Health (IDLH): No level has been established for the components or the product itself.
Target Organ Toxicity: This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract. There are no known or reported effects from repeated exposure. Toxicological investigation indicates it does not produce significant effects from chronic exposure.
Reproductive and Development Toxicity: Sodium Dichloroisocyanuric acid, when given orally to pregnant mice form day 6 to day 15 of gestation, did not induce any significant teratogenic effects.
Carcinogenicity: Not known to be a carcinogen. Not included in NTP 8th Report on Carcinogens. Not classified by IARC, OSHA, or EPA.
Mutagenicity: Not mutagenic in five Salmonella strains with or without metabolic activation.

Section 12 - Ecological Information

12.1 Toxicity:
LC50 (Rainbow trout, 96 hr): 0.22 mg/L
LC50 (Bluegill sunfish, 96 hr): 0.28 mg/L
LC50 (Daphnia magna, 48 hr): 0.2 mg/L
LD50 (Bobwhite quail, oral): 730 mg/kg
LD50 (Mallard duck, oral): 3,300 mg/kg
LC50 (Mallard duck, dietary): >10,000 ppm
LC50 (Bobwhite quail, dietary): >10,000 ppm

12.2 Persistence and Degradability: Material data lacking.

12.3 Bioaccumulative potential: Material data lacking.

12.4 Mobility in Soil: Material data lacking.

12.5 Results of PBT and vPvB assessment: No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects: No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods:
13.1.1 Product/Packaging disposal: The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Spilled material that has been swept up and dissolved in water should be used immediately in the normal application for which this product is being consumed. If this is not possible, material may be neutralized. Only properly neutralized material should be flushed to sewer. Unneutralized material can cause environmental damage to receiving water or can interfere with treatment plant operation. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. Empty containers retain product residue and can be hazardous. Residual material remaining in empty container can react to cause fire. Thoroughly flush empty container with water then destroy by placing in trash collection. Disposal of this product, solutions and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
13.1.2 Waste treatment-relevant information: Neutralize with reducing agent.
13.1.3 Sewage disposal-relevant information: Neutralize with reducing agent.
Other disposal recommendations: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

14.1 UN Number: 3077

14.2 UN Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Sodium Dichloroisocyanurate Dihydrate), Marine Pollutant

14.3 Transport hazard class(es): 9

14.4 Packing Group: III

14.5 Environmental hazards: Hazardous to the aquatic environment (Long-term).

14.6 Special precautions for user: No information available.



Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
US Federal:
SARA Title III:
Section 311/312 Categorization (40CFR 370.2): This product is categorized as an immediate health hazard, and fire and reactivity physical hazard.
TSCA: Reported in the EPA TSCA Inventory.
Workplace Classification: This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).
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

hazardous waste under Subpart D.
Massachussets Right-to-Know Substance List: Listed
Pennsylvania Right-to-Know List: Listed
Adverse Human Health Effects: Harmful is swallowed
EEC: Reported in EINECS (No. 220-767-7) (Anhydrous product)

15.2 Chemical Safety Assessment: No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16 - Other Information

16.1 Indication of changes: Version 1.0.1

16.2 Abbreviations and acronyms: SDIC dihydrate, NaDCC dihydrate, Sodium dichloro-s-triazinetrione dihydrate

Key literature references and sources for data: Not applicable.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:
Respiratory Irrit. - H335: On basis of test data
Acute Tox. 3 - H302: Calculation method
Tox. to Aqua. - H410: Calculation method
Eye Irrit. - H319: On basis of test data
Contact with acids liberates toxic gas - EUH031: On basis of test data

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

16.6 Training instructions: Not applicable.

16.7 Further information: Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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