

QINGDAO TOP-GAIN INDUSTRY AND TRADE CO., LTD
ROOM 402, UNIT 3, BUILDING 2, NO. 267 QING SHAN ROAD,
LICANG DISTRICT, QINGDAO, CHINA
www.top-gain.cn

MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Information

Product Name : SODIUM DICHLORO ISOCYANURATE DIHYDRATE
Company : QINGDAO TOP-GAIN INDUSTRY AND TRADE CO., LTD

Section 2 - Hazards Identification

Health Hazards : Irritant, Harmful(Oral), Oxidizer

- Eye contact

Dust or vapor can cause irritation, redness, tearing and burns

- Skin contact

Dry crystalline material is nonirritating initially, prolonged contacted will probably induce chemical burn.
Burns are induced when moisture is added.

- Effect of overexposure:

Cause eye, nose, throat and pharynx irritation developed from exposure to the dust

- Toxicology

The phenomena caused by the usage of this product will not be revealed for example sensitization, carcinogenicity, reproductive effects, teratogenicity and mutagenicity.

Symptoms of exposure (Acute effects) : No data

Symptoms of exposure (Longer term effects) : No data

Medial conditions aggravated by exposure

Known synergists

Explosion & fire hazards

- Flash point : N/A

- Autoignition temperture:

Fume after decomposing at 225oC ,Keep inflammable materials away from this product.

- Special fire fighting procedures:

Quench with massive quantities of water to extinguishe thermal docomposing products.if possible,isolate them to an open area,wearing selfcontained breathing apparatus with full facepiece and protective clothing.

- Unusual fire and explosion hazards:

Highly reactive oxidizing material may result in fire.

- Corrosive hazards : Corrosive same as chlorine against metals.

Section 3 - Composition and Information on Ingredient

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Substance Name	CAS #
SODIUM DICHLOROISOCYANURATE DIHYDRATE	51580-86-0

Formula	$C_3N_3O_3Cl_2Na \cdot 2H_2O$
Synonyms	1-Sodium-3,5-dichlorotriazine-2,4,6-trione

Section 4 - First Aid Measures

Eye Contact

Immediately flush with copious amount of water for at least 15 minutes and have eyes examined and treated by medical personnel.

Skin Contact

Wash material off the skin with copious amount of soap and water.

Inhalation

Remove victim to fresh air. If cough or respiratory symptoms develop, consult medical personnel.

Ingestion

DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Section 5 - Fire and Explosion Data

Suitable Extinguishing Media: Flood with plenty of water. Do not use dry chemicals, carbon dioxide or halogenated extinguishing agents.

Fire and Explosion Hazards: Fire hazards from this compound are negligible. In case of combustion or heat by an outside source (temperatures > 240 °C), the product will release under a self-sustaining decomposition dense noxious gases (e.g. hydrogen oxide, nitrous oxides) without visible flame. Wet material may generate nitrogen trichloride, an explosion hazard.

Fire Fighting: Do not inhale explosion or combustion gases. In case of combustion use an approved/certified respirator or equivalent. Wear protective clothing. Isolate hazard area and deny entry. Consider evacuation of personnel located downwind. Collect contaminated firefighting water separately. Do not discharge contaminated water into drains. Dispose contaminated drums and damaged or damp material in a proper manner. Contact company for further instructions.

Section 6 - Accidental Release Measures

Personal Precautions and Protection of staff: Isolate hazard area and keep unnecessary people away. Wear chemical safety goggles. Have suitable clothing and gloves, avoid exposing skin.

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A self-contained breathing apparatus should be used, if working in contaminated area. Remove clothing immediately after work. Wash hands thoroughly before eating, drinking, smoking or using the toilet.

Environmental Precautions and Clean up methods: Stop leak if without risk. Do not get water inside container. Avoid raising dust. Ensure ventilation and circulation of air. Prevent entry into sewers, water supplies and confined areas. Damp material/product should be neutralized to a non-oxidizing state. When material is being removed, follow the directions under HANDLING AND STORAGE. Call for further assistance on disposal.

Section 7 - Handling and Storage

Handling: Do not get in eyes, on skin, and or on clothing. Avoid breathing dust and vapors when opening product containers. Ensure adequate ventilation. Wash thoroughly after handling. Never add water to this product; always add the product to large quantities of water. Use clean and dry utensils.

Storage: Follow all current regulations and standards. Keep properly labeled product container tightly closed and dry in a cool, well ventilated area. Keep away from heat and direct sunlight. Keep away from food, drink, animal feed. Keep away from potential sources of ignition and any incompatible substances.

Section 8 - Exposure Controls/Personal Protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits

N/A

Section 9 - Physical and Chemical Properties

Appearance and odor:	White granular and slight chlorine odor
Boiling point °C:	N/A
Melting point °C:	225 °C
Flash point °C:	N/A
Flammability:	N/A
Oxidizing property:	N/A

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Vapor pressure MPa :	N/A
Density at 20°C(kg/m3):	0.951.05(bulk density)
Solubility :	25g/100ml H2O at 25 °C
Specific gravity (Water = 1):	1.05
Evaporation rate (Butylacetate = 1):	N/A
Partition coefficient(Octanol/Water):	N/A
PH value lf 1% solution:	5.57.0
Gross molecular formula:	256.50
Viscosity :	N/A
Explosion limits :	N/A

Section 10 - Stability and Reactivity Data

Stability : Stable under dry and normal conditions.

Incompatibility:

- Contact with most organic matter or easily chlorinated or oxidized materials may result in fire.
- Contact with ammonia, ammonium salts, urea or similar compounds which contain nitrogen may form nitrogen trichloride, a highly explosive compound.
- Contamination with oils and greases may cause decomposition with formation of CO₂, Cl₂.

This product may form an explosive mixture with calcium hypochlorite.

- In a formulation containing this material as the major component, alkaline materials such as soda ash (Na₂CO₃) in the presence of moisture may cause violent decomposition and fire.
- And it is dangerous to contact alcohols, others, biuret and solvents (toluene, xylene, turpentine etc.)

Hazardous decomposition products : Nitrogen trichloride, chlorine, cyanuric acid

Hazardous polymerization: Will not occur.

Section 11 - Toxicological Information

Eye and Skin irritation: Very hazardous in case of eye contact and contact with wet skin.

Acute Toxicity: Oral-rat LD₅₀ = 735 mg/kg; dermal-rabbit LD₅₀ = 2,000 mg/kg.

Health Effects: Direct contact on wet skin may cause severe irritation, pain and potential burns. Direct eye contact may cause severe irritation, pain, burns, and permanent damage including blindness. The product granules should not cause any respiratory problems. If ground or in powdery form, inhaling can cause mucous membrane irritation with coughing and shortness of breath. Ingestion may cause immediate pain and severe burns of the mucous membranes in the mouth, esophagus and gastrointestinal tract.

Section 12 - Ecological Information

Ecotoxicity: The product is highly toxic to fish (Bluegill Sunfish - *Lepomis macrochirus* LC₅₀ = 0.40 ppm, and Rainbow Trout - LC₅₀ = 0.24 ppm), and invertebrates (*Daphnia magna*: 0.05 ppm < EC₅₀ < 0.1 ppm).

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Fate and Transport: The product is subject to hydrolysis within minutes, forming cyanuric acid and halogen moieties, which is inherently biodegradable. The material degrades relatively fast and is not considered to bioaccumulate.

Persistence: The product is unstable in the environment because the available chlorine is rapidly reduced. Hydrolysis occurs within minutes. None of the hydrolysis products are persistent.

Section 13 - Disposal Considerations

Add this product into dilute solution of sodium hydroxide or soda ash with stirring gradually and neutralize that solution with reduction agents such as sodium sulfite and sodium thiosulfate. Adjust PH with sulfuric acid or hydrochloric acid to make neutral solution and dispose.

Section 14 - Transport Information

Land Transport - ADR/RID

Proper Shipping Name: Sodium Dichloro-s-triazinetriene Dihydrate

ID Number: UN 3077

Hazard Class: 9

Packaging Group: III

Hazard ID Number: 90

Label Requirements: 9

Marine Transport - IMDG/GGV

Proper Shipping Name: Sodium Dichloro-s-triazinetriene Dihydrate

ID Number: UN 3077

Hazard Class: 9 + MP

Packaging Group: III

Air Transport - ICAO/IATA

Proper Shipping Name: Sodium Dichloro-s-triazinetriene Dihydrate

ID Number: UN 3077

Hazard Class: 9

Packaging Group: III

Section 15 - Other Regulatory Information

(EEC regulatory information)

EC Supply labeling

Label name : Oxidizing agent , Harmful, Irritant

Risk Phrases

R 8 Danger of fire in contact with combustible materials.

R 22 Not to be taken (digested).

R 31 Releases toxic gases in contact with acids.

R 36/37 Irritable to eyes and respiratory tracts.

Safety Phrases

S 8 Keep the container in a dry place.

S 26 In case of contact with the eyes rinse immediately with plenty of water and see a doctor.

S 41 In case of fire or explosion do not inhale fumes.

IN CASE OF AN ACCIDENT OR DISCOMFORT CONSULT A DOCTOR IMMEDIATELY

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(showing him the label if possible).
Do not mix with other chemical products.

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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