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Material Safety Data Sheet

Sodium Dichloroisocyanurate

Section 1: Chemical Product and Company Identification

Product Name : Sodium Dichloroisocyanurate

Chemical Formula : $C_3Cl_2N_3NaO_3$

Company Identification : Tradeasia International Pte Ltd

Address : contact@chemtradeasia.com

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS#	% by Weight
Sodium Dichloroisocyanurate	2893-78-9	60 (min)

Toxicological Data on Ingredients: Dichloroisocyanuric Acid Sodium Salt: ORAL (LD50): Acute: 1420 mg/kg [Rat]

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

D EVELOPMEN TAL TOXI C I TY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye C ontact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin C ontact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin C ontact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

I nhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious I nhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

I ngestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available

Flash Points: C LOSED C U P: 230°C (446°F).

Flammable Limits: Not available.

Products of C ombustion: Not available.

Fire H azards in Presence of Variou s Substances:

Slightly flammable to flammable in presence of heat, of combustible materials, of organic materials. Non-flammable in presence of shocks.

Fire Fighting Media and I nstructions:

Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic or combustible materials. Do not use dry chemical extinguishers containing ammonium compounds.

Special R emarks on Fire Hazards:

The material itself is not combustible, but if contaminated with a combustible or organic material (e.g. organic matter, wood, paper, oil, sawdust, floor sweepings, easily oxidized organics) ignition can result. It will accelerate the burning of combustible materials. Reaction with ammonium salts, or foreign substances may also increase fire hazard. Do not use dry chemical extinguishers containing ammonium compounds.

Special R emarks on Explosion H azards:

Reacts explosively with calcium hypochlorite in the presence of water. May explode from heat or contamination.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials.

Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

Section 8: Exposure C ontrols/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 an approved/certified respirator or equivalent. Gloves.

Personal Protection in C ase 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: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Powdered solid)

Odour: Chlorine-like

Taste: Notavailable.

Molecular Weight: 219.95 g/mole

C olour: White.

pH (1% soln/water): 6.5 [Acidic.]

Boiling Point: Not available.

Melting Point: Decomposition temperature: 240°C (464°F)

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapour Pressure: Not applicable.

Vapour Density: Not available.

Volatility: Not available.

Odour Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

D ispersion Properties: See solubility in water, acetone.

Solubility: Easily soluble in cold water, hot water. Partially soluble in acetone. Solubility in water: 227 g/l water @ 25^0 C Solubility in acetone: 0.5 g/100 g acetone @ 30^0 C.

Section 10: Chemical Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

C onditions of I nstability: Excess heat, dust generation, incompatible materials, water

Incompatibility with various substances: Reactive with reducing agents, combustible materials, organic materials. Slightly reactive to reactive with moisture.

C orrosivity: Not available.

Special R emarks on R eactivity: Reacts with ammonia or amines to produce nitrogen trichloride. Reacts with most reducing agents. Reacts with water, releasing chlorine gas and nitrogen trichloride. Reacts with combustible materials, ammonium salts. Reacts with sodium carbonate (soda ash) Reacts with other strong oxidizers such as calcium hypochlorite, hydrogen peroxide.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 1420 mg/kg [Rat].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose: LDL[Human] - Route: Oral; Dose: 3570 mg/kg. LDL[Rabbit] - Route: Skin; Dose: 3160 mg/kg

LDL[Rabbit] - Route: Oral; Dose: 2500 mg/kg

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Causes skin irritation which can be mild to severe. The irritation may be more severe if the skin is abraded or moist/wet.

Eyes: Causes moderate eye irritation.

Inhalation: Can cause respiratory tract (nose, throat) irritation with coughing and wheezing, and bronchospasm.

Ingestion: Causes gastrointestinal tract irritation with lacrimation, and diarrhea. May cause ulceration or bleeding from the stomach. May affect respiration(dyspnea, acute pulmonary edema), liver (liver dysfunction, congestion in liver), behavior/central nervous system (somnolence, coma, weakness).

Section 12: Ecological Information

Eco toxicity: Not available.

BOD5 and COD : Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 5.1: Oxidizing material.

Identification: Dichloroisocyanuric acid salt UNNA: 2465 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Dichloroisocyanuric Acid Sodium Salt Rhode I sland RTK hazardous substances: Dichloroisocyanuric Acid Sodium Salt Pennsylvania RTK: Dichloroisocyanuric Acid Sodium Salt Massachusetts

RTK: Dichloroisocyanuric Acid Sodium Salt New Jersey: Dichloroisocyanuric Acid Sodium Salt TSCA **8(b) inventory:** Dichloroisocyanuric Acid Sodium Salt

Other R egulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other C lassifications:

WHMIS (Canada):

CLASS C: Oxidizing material. CLASS D-2B: Material causing other toxic effects (TOXIC).

D SCL (EEC):

R8- Contact with combustible material may cause fire. R22- Harmful if swallowed. R31- Contact with acids liberates toxic gas.

R36/37- Irritating to eyes and respiratory system. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic S8- Keep container dry. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S41- In case of fire and/or explosion do not breathe fumes.

S60- This material and its container must be disposed of as hazardous waste.

S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

H MIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 1

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 2

Specific hazard:

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

Recommended use: Not available

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Tradeasia International Pte. Ltd. Be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Tradeasia International Pte. Ltd. has been advised of the possibility of such damages.