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Material Safety Data Sheet

Triisopropanolamine

Section 1: Chemical Product and Company Identification

Product Name: Triisopropanolamine

CAS#: 122-20-3

RTECS: UB8750000

TSCA: TSCA 8(b) inventory: Triisopropanolamine

CI#: Not applicable.

Synonym: 1,1',1''-Nitrilotripropan-2-ol; 1,1',1''-Nitrilotri-2-propanol

Chemical Name: Triisopropanolamine

Chemical Formula: C₉H₂₁NO₃

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS # %	By Weight
Triisopropanolamine	122-20-3	≥ 100.0%

Toxicological Data on Ingredients: Triisopropanolamine: ORAL (LD50): Acute: 2520 mg/kg [Mouse]. 11000 mg/kg [Rabbit]. 4730 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

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 Contact:

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 Contact:

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

Inhalation:

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

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

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

Auto-Ignition Temperature: 320°C (608°F)

Flash Points: OPEN CUP: 160°C (320°F) (Cleveland.).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. 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 oxidizing agents, acids.

Storage:

Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

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: Safety glasses. Synthetic apron. Gloves (impervious).

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Boots. Gloves. 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. (Waxy solid.)

Odor: Ammoniacal. (Slight.)

Taste: Not available.

Molecular Weight: 191.27 g/mole

Color: White to yellowish.

pH (1% soln/water): Not available.

Boiling Point: 306°C (582.8°F)

Melting Point: 45°C (113°F)

Critical Temperature: Not available.

Specific Gravity: 1 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:

Easily soluble in cold water, hot water. Soluble in ethanol. Slightly soluble in chloroform. Soluble in oxygenated and aromatic solvents.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, acids.

Corrosivity: Not available.

Special Remarks on Reactivity:

Hygroscopic. Avoid contact with nitrates

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): 2520 mg/kg [Mouse].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant). Slightly hazardous in case of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Moderately irritant to skin. It may cause a more severe response if confined to skin or if the skin is abraded (scratched or cut). Eyes: Moderately irritant to eyes. May cause corneal injury. Inhalation: At room temperature, vapors are minimal due to low vapor pressure. If material is heated or mist is produced, concentrations may be attained that may be hazardous on single exposure. May cause respiratory tract irritation. Ingestion: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing amounts larger than that may cause injury. May cause gastrointestinal tract irritation with diarrhea, hypermotility, nausea, vomiting. May also affect metabolism, behavior (muscle contraction, spasticity, somnolence), and urinary system. Chronic Potential Health Effects: Skin: Prolonged or repeated exposure may cause skin irritation and possibly a burn. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts.

Section 12: Ecological Information

Ecotoxicity: 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 product itself and its products of degradation are not toxic.

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: Not a DOT controlled material (United States).

Identification: : Corrosive Solid, n.o.s. (Triisopropanolamine) UNNA: UN1759 PG: III

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Triisopropanolamine Massachusetts RTK: Triisopropanolamine TSCA 8(b) inventory: Triisopropanolamine

Other Regulations:

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. Also on National Inventory Lists for China, Japan, Korea, and Philippines.

Other Classifications:

WHMIS (Canada): CLASS E: Corrosive solid.

DSCL (EEC):

R36/38- Irritating to eyes and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: C

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

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves (impervious). Synthetic apron. Not applicable. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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