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Material Safety Data Sheet

DBU MSDS

Section 1: Chemical Product and Company Identification

Product : 1,8-Diazabicyclo[5.4.0]undec-7-ene(DBU)
CAS Nr: 6674-22-2
EINECS: 229-713-7
Molecular weight: 152.24
Synonyms: DBU; 2,3,4,6,7,8,10-Octahydropyrimidol[1,2-a]azepine

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	%By Weight
{1,8-}Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	100

Toxicological Data on Ingredients: 1,8-Diazabicyclo[5.4.0]undec-7-ene: ORAL (LD50): Acute: 836 mg/kg [Rat].
DERMAL(LD50): Acute: 1233 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of skin contact (corrosive), of eye contact (corrosive). Slightly hazardous in case of skin contact (permeator). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance p. 2 may be toxic to upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

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 immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

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

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

Serious Inhalation: 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. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion: 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: CLOSED CUP: >96.111° C (205° F). 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 open flames and sparks, 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:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. 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. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Never add water to this product. 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: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Face shield. Full suit. Gloves. Boots.

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: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 152.24 g/mole

Color: Colorless.

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

Boiling Point: 259° C (498.2° F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 1.04 (Water = 1)

Vapor Pressure: <0.2 kPa (@ 20° C)

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.

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: Incompatible with organic acids (i.e. acetic acid, citric acid, etc.), mineral acids.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 836 mg/kg [Rat]. Acute dermal toxicity (LD50): 1233 mg/kg [Rabbit].

Chronic Effects on Humans:

May cause damage to the following organs: upper respiratory tract, skin, eyes. Other Toxic Effects on Humans: Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive). Slightly hazardous in case of skin contact (permeator).

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: Harmful if in contact with skin. Causes skin burns. It can be absorbed through the skin and cause systemic effects such as headache, dizziness, tiredness, nausea, vomiting. Eyes: Product vapor in low concentrations can cause lacrimation,

conjunctivitis, and corneal edema when absorbed into the tissue of the eye from the atmosphere. Corneal edema can cause the perception of "blue haze" or "fog" around lights. although this is a temporary effect and has no residual effect. Causes severe eye irritation or eye burns upon contact. It may cause blindness. Inhalation: Inhalation of the mist or aerosol may cause respiratory tract (nose, throat, and lung) irritation. Ingestion: Harmful if swallowed. It causes severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and stomach. Chronic Potential Health Effects: Prolonged or repeated contact may result in chemical burns and permanent damage. It may also cause sensitization, asthma, and eczemas

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 100 mg/l 96 hours [Fish (Golden Orfe (Leuciscus idus))]. 50 mg/l 48 hours [Daphnia (daphnia)].

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 8: Corrosive material

Identification: : Corrosive liquid, basic, organic, n.o.s (1,8-Diazabicyclo[5.4.0]undec-7-ene) UNNA: 3267 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: 1,8-Diazabicyclo[5.4.0]undec-7-ene

Other Regulations: 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 Classifications:

WHMIS (Canada): CLASS E: Corrosive liquid.

DSCL (EEC): R34- Causes burns. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection:

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

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Full suit. Wear appropriate respirator when ventilation is inadequate. Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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