Material Safety Data Sheet

City University of Hong Kong

MSDS 1,6-HEXANEDIAMINE 0128

PRODUCT INFORMATION

Product Name: 1,6-Hexanediamine
Chinese Name: 己乙胺
Common Synonyms: Hexamethylenediamine
Chemical Family: Amines
Formula: \( \text{NH}_2(\text{CH}_2)_{6}\text{NH}_2 \)
Formula Wt.: 116.21
CAS No.: 124-09-4
Product Use: Laboratory Reagent

RISK SYMBOL

PHYSICAL DATA
Physical State: Solid
Boiling Point: 205 deg. C (401 deg. F) @ 760 mmHg
Melting Point: 39 deg. C (102 deg. F) @ 760 mmHg
Specific Gravity: 0.84 (H2O=1)
Solubility(H2O): Appreciable (>10%) (Butyl Acetate = 1)
Vapor Pressure (mmHg): 1.1 (20 deg. C)
Vapor Density (Air=1): N/A
Evaporation Rate: >1
% Volatiles By Volume: 100 (21 deg. C)
PH: N/A
Odor Threshold (ppm): N/A
Coefficient Water/Oil Distribution: N/A
Appearance & Odor: White to yellow crystals. amine-like odor.

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FIRE AND EXPLOSION DATA
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Flash Point (Closed Cup): 93 deg. C (200 deg. F)
Autoignition Temperature: N/A
Flammable Limits: Upper - 6.3 %  Lower - 0.7 %
Fire Extinguishing Media: Use alcohol foam, dry chemical or carbon dioxide. (water may be ineffective.)
Special Fire-Fighting Procedures:
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire & Explosion Hazards: None identified.
Toxic Gases Produced: Ammonia, oxides of nitrogen, carbon monoxide, carbon dioxide

========================================================================= REACTIVITY DATA
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Stability: Stable
Hazardous Polymerization: Will not occur
Conditions To Avoid: Heat, flame, other sources of ignition
Incompatibles: Strong oxidizing agents, strong acids, organic materials
Decomposition Products: Ammonia, oxides of nitrogen, carbon monoxide, carbon dioxide

========================================================================= HEALTH HAZARD DATA
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Inhalation: Severe irritation or burns of mucous membranes, irritation of upper respiratory tract
Skin Contact: Severe irritation or burns

The above information is believed to be accurate to the best of our knowledge.
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Eye Contact: Severe irritation or burns
Skin Absorption: May be harmful
Ingestion: None identified
Chronic Effects: None identified
Threshold Limit Value (TLV/TWA): Not established
Short-Term Exposure Limit (STEL): Not established
Permissible Exposure Limit (PEL): Not established
Toxicity Of Components:
Oral Rat LD$_{50}$ For 1,6-Hexanediamine 750 mg/kg
Carcinogenicity: NTP: No  IARC: No  Z LIST: No  OSHA REG: No

Reproductive Effects: None identified.
Carcinogenicity: None identified.
Target Organs: Eyes, skin
Medical Conditions Generally Aggravated By Exposure: None identified
Primary Routes Of Entry: Eye contact, skin contact, inhalation, absorption

FIRST AID MEASURES

Ingestion:
If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

Inhalation:
Call a physician. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before re-use.

Eye Contact: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

PREVENTATIVE MEASURES

Ventilation:
Use adequate general or local exhaust ventilation to keep fume or dust levels as low as possible.

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Respiratory Protection:
None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.

Eye/Skin Protection: Safety goggles, uniform, apron, rubber gloves are recommended.

Storage Requirements:
Keep container tightly closed. Store in a cool, dry, well-ventilated, flammable liquid storage area or cabinet.

ENVIRONMENTAL PROTECTION DATA

Steps To Be Taken In The Event Of A Spill Or Discharge:
Wear self-contained breathing apparatus and full protective clothing. Shut off ignition sources; no flares, smoking, or flames in area. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

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