SAFETY DATA SHEET

1. Chemical Product and Company Identification

Product Name: Dimethylaminopropylamine

Synonyms: N, N-Dimethyl-1, 3-propanediamine，3- DIMETHYLAMINOPROPYLAMINE

Company Identification:

Company Name: Dalian Hefu Trading Co., Ltd.

Address: Room 1003 Yihua Building, No. 215 Huanghai Xisi Road, Dalian F.T.Z., Liaoning, China

Telephone: 0086 0411 39552835

Emergency telephone number : 0086 0411 39552835

Email address: great@dlwawoo.com

Recommended use: Oxidizing agents polymerization initiators

2. Composition, Information on Ingredients

Name	CAS #	Percent, %
DIMETHYLAMINOPROPYLAMINE	109-55-7	99.5min

3. Hazards Identification

ROUTES OF EXPOSURE

Eye Contact; Skin Contact; Ingestion; Inhalation; Skin Absorption

EXPOSURE STANDARDS

See Section 2 for exposure standards on ingredients. Maintain air contaminant concentrations in the workplace at the lowest feasible levels.

HEALTH HAZARDS

Toxic (ANSI Z129.1 1988) by skin absorption.

Harmful if swallowed.

Corrosive to eyes.

Corrosive to respiratory system.

Corrosive to skin.

Severe eye irritant.

Severe respiratory tract irritant.

Severe skin irritant.

May cause skin sensitization.

TARGET ORGANS

Eye; Skin ; Respiratory system

SIGNS AND SYMPTOMS OF EXPOSURE (Acute effects)

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 may give rise to a perception of 'blue haze'' or 'fog'' around lights. The effect is transient and has no known residual effect. Burns of the eye may cause blindness. Contact of undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury.

Inhalation of vapors may severely damage contacted tissue and produce scarring. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring. Product is absorbed through the skin and may cause malaise, discomfort, injury and death unless treated promptly.

SIGNS AND SYMPTOMS OF EXPOSURE (Possible Longer Term Effects)

Repeated and/or prolonged exposure may cause allergic reaction/sensitization. Repeated and/or prolonged exposures may result in: adverse respiratory effects (such as cough, tightness of chest or shortness of breath), adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as rash, irritation or corrosion). Effects from inhalation of vapors may be delayed. Repeated and/or prolonged exposure to low concentrations of vapor may cause: sore throat which are transient.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Asthma

Chronic respiratory disease (e.g. Bronchitis, Emphysema)

Eye disease

Skin disorders and Allergies

CARCINOGENS UNDER OSHA, ACGIH, NTP, IARC, OTHER

This product contains no carcinogens in concentrations of 0.1 percent or greater.

4. First Aid Measures

EYE CONTACT

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

SKIN CONTACT

Remove product and immediately flush affected area with water for at least 15 minutes. Remove contaminated clothing and shoes. Destroy contaminated leather apparel. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care. DO NOT APPLY **GREASES OR OINTMENTS.**

Control shock, if present. Launder contaminated clothing prior to reuse.

INHALATION

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Prevent aspiration of vomit. Turn victim's head to the side.Seek medical advice.

In the event of ingestion, administer 3-4 glasses of milk or water. DO NOT INDUCE VOMITING. Seek medical advice.

5. Fire Fighting Measures

FLASH POINT (closed cup) 35.00℃ (95.00 F)
UPPER FLAMMABILITY LIMIT 12.30000 % (neat liquid)
LOWER FLAMMABILITY LIMIT 2.30000 % (neat liquid)
AUTOIGNITION TEMPERATURE 215.00 C (419.00 F) (neat liquid)
FIRE HAZARD CLASSIFICATION (OSHA/NFPA) Class IC
EXTINGUISHING MEDIA
Ignition will give rise to a Class B fire. In case of large fire use: water spray, alcohol foam. In case of small fire use: carbon dioxide (CO2), dry chemical, dry sand or limestone.
SPECIAL FIRE FIGHTING PROCEDURES
A face shield should be worn. Firefighters should wear butyl rubber boots, gloves, and body suit and a self-contained breathing apparatus. Water spray may be used to cool closed containers exposed to fire. Retain expended liquids from fire fighting for later disposal.
UNUSUAL FIRE AND EXPLOSION HAZARDS
May generate toxic or irritating combustion products. Vapors may travel along ground to a source of ignition and flash back. Vapors may collect in closed spaces such as sewers, caves or closed structures. Vapor may form explosive mixtures with air. Contact of liquid with skin must be prevented. Sudden reaction and fire may result if product is mixed with an oxidizing agent. May generate carbon monoxide gas. May generate toxic nitrogen oxide gases. May generate ammonia gas. Personnel in vicinity and downwind should be evacuated.

6. Accidental Release Measures

CONTAINMENT TECHNIQUES (Removal of ignition sources, diking etc)
Shut off or remove all ignition sources. Stop the leak, if possible. Ventilate the space involved. Reduce vapor spreading with a water spray. Construct a dike to prevent spreading (includes molten liquids until they freeze). Protect workers with water spray.
CLEAN-UP PROCEDURES
If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.
OTHER EMERGENCY ADVICE
Open enclosed spaces to outside atmosphere. Vapors tend to remain close to the ground and collect in out-of-the-way places. Use non-sparking blowers or ventilation facilities to remove potential explosive or toxic accumulations. Wear protective clothing, boots, gloves, and eye

protection.

7. Handling and Storage

STORAGE

Keep away from: acids, oxidizers, heat, flames, sparks. Keep in cool, dry, ventilated storage and in closed containers. Store away from ignition sources. Ground all containers during transfer. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Electrical installations should be in accordance with Article 501 of the National Electrical Code for Class I Division 2 locations. Do not store in reactive metal containers. Recommended suitable container materials include plastic, stainless, and carbon steels.

HANDLING

Avoid contact with skin or eyes. Avoid breathing of vapors. Handle in well ventilated work space. Keep containers closed when empty. Empty containers may contain explosive vapors. Flush empty containers with water to remove residual combustible or flammable liquid and vapors. Smoking in area is prohibited. Label empty tank cars 'Dangerous Empty''. See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protection Association, Boston, MA. Remove all equipment which may be a source of ignition from vicinity while handling. When handling, do not eat, drink, or smoke.

OTHER PRECAUTIONS

Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations (e.g. OSHA).

8. Exposure Controls, Personal Protection

EYE PROTECTION

Full face shield with goggles underneath.

HAND PROTECTION

Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves.

RESPIRATORY PROTECTION

Not required under normal conditions in a well-ventilated workplace. An organic vapor respirator National Institute for Occupational Safety and Health (NIOSH) approved for organic vapors is recommended under emergency conditions.

PROTECTIVE CLOTHING

Impervious clothing. Slicker Suit. Rubber boots. Full rubber suit (rain gear). Butyl or latex protective clothing.

ENGINEERING CONTROLS

Explosion proof and general local exhaust with 12-30 air changes per hour. Maintain air concentrations in work spaces in accord with standards outlined in Sections 2 and 3.

WORK AND HYGIENIC PRACTICES

Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.

9. Physical and Chemical Properties

PHYSICAL FORM	Mobile liquid
COLOR	Colorless
ODOR	Ammoniacal
pH	11.00
VAPOR PRESSURE (mm Hg at 21C (70F))	6.56
VAPOR DENSITY (Air = 1)	3.52
BOILING POINT	135.00 C (275.00 F)
MELTING POINT	No Data
SOLUBILITY IN WATER	Completely (100%)
SPECIFIC GRAVITY (Water = 1)	0.83
MOLECULAR WEIGHT	102

10. Stability and Reactivity

CHEMICAL STABILITY

Stable

CONDITIONS TO AVOID (if unstable)

Not applicable

INCOMPATIBILITY (Materials to Avoid)

Mineral acids (i.e. sulfuric, phosphoric, etc.). Organic acids (i.e. acetic acid, citric acid etc.). Oxidizing Agents (i.e. perchlorates, nitrates etc.). Sodium or Calcium Hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Heat. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or splattering of hot material.

HAZARDOUS DECOMPOSITION PRODUCTS (from burning, heating, or reaction with other materials).

Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm).

HAZARDOUS POLYMERIZATION

Will not occur

CONDITIONS TO AVOID (if polymerization may occur)

Not applicable

11. Toxicological Information

ACUTE ORAL TOXICITY (LD50, RAT)

>1640.00 mg/kg (Estimate)

ACUTE DERMAL TOXICITY (LD50, RABBIT)

>500.00 mg/kg (Estimate)

ACUTE INHALATION TOXICITY (LC50, RAT)

>21.00 mg/l / 1 hr (No deaths) (Estimate)

OTHER ACUTE EFFECTS

No Data

IRRITATION EFFECTS DATA

Corrosive to the skin of a rabbit.

CHRONIC/SUBCHRONIC DATA

Sensitization has occurred in laboratory animals after repeated exposures. This product may contain residual amounts of acrylonitrile and/or ethyl acrylate, which have been shown to cause cancer in laboratory animals.

12. Ecological information

ECOTOXICITY

No Data

ENVIRONMENTAL FATE

B.O.D.: 308,000 mg/l

C.O.D.: 140,000 mg/l

T.O.D.: 600,000 mg/l

ADDITIONAL INFORMATION

Waste from this product may present long term environmental hazards, thus landfill disposal must be considered less acceptable than incineration.

13. Disposal Considerations

WASTE DISPOSAL

Comply with all Federal, State and Local Regulations. Almost all disposal methods are subject to regulation under RCRA. In particular, review RCRA Land Disposal Restrictions. Under some conditions, material contaminated with this product may be landfilled at appropriately permitted facilities. When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste with the following characteristic(s): ignitable, hazardous waste number D001

14. Transport Information

DOT NON-BULK SHIPPING NAME: Amines, liquid, corrosive, flammable, n.o.s. (DIMETHYLAMINOPROPYLAMINE) // 8 // UN2734 // PG II // (3)

DOT BULK SHIPPING NAME Amines, liquid, corrosive, flammable, n.o.s. (DIMETHYLAMINOPROPYLAMINE) // 8 // UN2734 // PG II // (3)

IMO SHIPPING DATA Amines, liquid, corrosive, flammable, n.o.s. (DIMETHYLAMINOPROPYLAMINE) // 8 // UN2734 // PG II // (3)

ICAO/IATA SHIPPING DATA Amines, liquid, corrosive, flammable, n. o.s. (DIMETHYLAMINOPROPYLAMINE) // 8 // UN2734 // II // (3) // Shipment

EMS: F-E, S-C

15. Regulatory Information

US FEDERAL REGULATIONS

TOXIC SUBSTANCES CONTROL ACT (TSCA)-

All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es)

Corrosive. Sensitizer. Toxic by skin absorption. Flammable.

EPA SARA Title III Section 312 (40CFR370) hazard class

Immediate Health Hazard. Delayed Health Hazard. Fire Hazard.

EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "deminimis" level are None

STATE REGULATIONS

PROPOSITION 65 SUBSTANCES (component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986") Acrylonitrile

NEW JERSEY TRADE SECRET REGISTRY NUMBER(S)

None

16. Other Information

To the best of our knowledge, the information contained herein is accurate.However, neither the manufacturer, nor any of its affiliate, make any representative or warranties(expressed or implied), nor assumes any liability including liability for any direct, incidental,consequential, or the damages) with respect to the accuracy or completeness of the information contained herein. Such information may be (without limitation) invalid if the specification material is used in combination with another, in a particular process, or under unusual conditions.Determination of suitability of any material for any given purpose is the sole responsibility of the user who assumes all risk and responsibility therefore.

All material may present unknown hazards and should be used with appropriate caution.

The manufacturer cannot and does not guarantee that the hazards described herein are the only ones that exist.