

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : PUMA[®] 2330
Common Chemical Name : N,N - dimethylethanolamine
Supplier : ExpoMix Corporation
1099 Brown Street, Unit 203
Wauconda, IL 60084
USA
Ph: (847) 487-0730
Fx: (847) 487-0217
Emergency Telephone : 800-424-9300 - CHEMTREC

SECTION 2 - INGREDIENTS

Chemical Name	CAS	EINECS	Amount
N-(2-dimethylamino)ethanol	108-01-0	203-542-8	99%
Chemical Family	: Alkylalkanolamine		
Empirical Formula	: C4 H11 N O		

Occupational Exposure Limit(s), if available, are listed in section 8.

SECTION 3 - HEALTH HAZARDS

HMIS HEALTH 3 FLAMMABILITY 2 REACTIVITY 0

Hazards : Flammable. Corrosive. Severe eye irritant. Harmful or fatal if swallowed. Causes respiratory tract irritation and can cause damage. Causes severe pain and burning sensation when in contact with body tissues. Can cause blindness.

Routes of Exposure : Eye, inhalation, ingestion and skin contact. Ingestion. Skin absorption.

Exposure Standards : Maintain air contaminant concentrations in the workplace at the lowest possible levels.

SECTION 3 - HEALTH HAZARDS (CONT.)

Human Health Hazards

- Acute Overexposure Effects** : Corrosive to the body tissues. Skin contact with the liquid may result in dermatitis and deep burns. Eye contact may result in burns and permanent injury. Product is extremely irritant to the skin and eyes. Direct contact with the liquid may be highly irritating and corrosive to the skin. Acute inhalation exposures at high concentrations have been known to produce respiratory difficulties, loss of coordination and decreased motor activity in rats.
- Chronic Overexposure Effects** : Repeated skin contact with product may result in sensitization. Repeated inhalation has been known to produce effects on the eyes and nasal mucosa as well as respiratory and olfactory lesions in experimental animals.
- Medical Conditions Generally Aggravated by Exposure** : Dermatitis, asthma, bronchitis, inflammatory or fibrotic respiratory disease.
- Carcinogens Under OSHA ACGIH, NTP, IARC, Other** : No data.

SECTION 4 - FIRST AID

Effects and Symptoms

- Ingestion** : If swallowed drink plenty of water. Do NOT induce vomiting. Consult a physician immediately. Never give anything by mouth to an unconscious person. Do NOT apply mouth-to-mouth respiration.
- Inhalation** : Move patient to fresh air. If breathing has stopped or is labored give assisted respiration. Supplemental oxygen may be indicated. Seek medical advice. Prevent aspiration of vomit. Turn victim's head to the side.
- Skin Contact** : Remove contaminated clothing and shoes. Remove product and immediately wash affected area with water and soap for at least 15 minutes. Launder contaminated clothing prior to use.
- Eye Contact** : Hold eye lids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

SECTION 5 - FIRE AND EXPLOSION DATA

- Extinguishing Media** : In case of large fire use: alcohol foam, water fog. In case of small fire use: carbon dioxide (CO₂) or dry chemical.
- Protection of Fire-Fighters** : Wear self-contained breathing apparatus and chemical protective clothing to prevent contact with skin and eyes. Contact of liquid with skin must be prevented. May generate carbon monoxide gas, carbon dioxide gas, nitrogen oxide gases and ammonia gas. Retain expended liquids from fire fighting for later disposal. Do not allow to reach sewer or effluent system.
- Fire Hazard Classification (OSHA/NFPA)** : Class II

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Containment Techniques** : Stop the leak, if possible. Reduce vapor spreading with water spray. Shut off and remove all ignition sources. Construct a dike to prevent spreading. Protect workers with water spray. Spills should be contained, solidified and placed in suitable containers for disposal in a RCRA licensed facility. This material is RCRA hazardous due to its properties.
- Personal Precautions** : Evacuate all personnel downwind from the spill. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Evacuate the area.
- Environmental Precautions** : Do NOT release product to drain or waterways. Observe all Federal, State and local environmental regulations for appropriate product disposal. Product can be incinerated or buried in a RCRA licensed facility. Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing or other means to prevent unauthorized reuse. Other containers may be disposed of in a RCRA licensed facility.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (CONT.)

Methods for Cleaning up

: If recovery is not feasible, absorb product with dry soil, sand or non-reactive absorbent and place it in an appropriate waste chemical container for disposal. Flush area with water. Do not spray water directly over the product. Transfer to containers by suction. Place in metal containers for recovery and disposal. Ventilate area and wash spill site after material pickup is complete. 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. This product is alkaline. Before discharging sewage into treatment plants neutralization is generally required.

SECTION 7 - HANDLING AND STORAGE

Handling

: Avoid contact with skin or eyes. Avoid breathing of vapors. Handle product in a well ventilated work space and do not eat or drink. 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.

Storage

: Keep product away from acids, electrostatic charges, excessive heat, flames and sparks. Keep in cool, dry ventilated storage and in tightly closed containers. Ground all containers during transfer. Store in steel containers.

Storage time: 15 months.

Other Precautions

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

SECTION 8 - PERSONAL PROTECTION AND EXPOSURE CONTROLS

Engineering Measures	: Explosion proof and provide area with 12-30 air changes per hour.
Hygienic Measures	: Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the bathroom. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.
Occupational Exposure Limits	: No data.
Personal Protective Equipment	
Respiratory System	: Not required under normal conditions in a well-ventilated area. Use appropriate NIOSH/MSHA-approved respirator during repair and cleaning of equipment, and during transfer or discharge of the product.
Skin and Body	: Impervious clothing. Slicker suit. Rubber boots. Full rubber suit (rain gear). Butyl or latex.
Hands	: Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.
Eyes	: Full face shield with goggles underneath.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Guaranteed Values

dimethylethanolamine : 99% min.
Water : 0.15% max.

Typical Values

Physical State : Liquid at processing temperature
Color : Colorless to light yellow at processing temperature
Odor : Ammonia-like
pH : 10.5
Boiling Point : 133.5 - 135.5 °C (272 - 276 °F)
Freezing Point : -59 °C (-74 °F)
Specific Gravity (Water = 1) : 0.887
Solubility in Water : Miscible
Viscosity : 3.85 mPa.s @ 20° C (68 °F)
Flash Point (Closed Cup) : 39 °C (102 °F)
Vapor Pressure : 4.59 mmHg @ 0 °C (32 °F)
Octanol/Water Part. Coefficient : -0.55 (log POW)
Auto Ignition Temperature : 245 °C (473 °F)
Upper Flammability Limit : 12.2 %
Lower Flammability Limit : 1.4 %

SECTION 10 - STABILITY AND REACTIVITY

Stability : Stable
Conditions to Avoid (if instable) : Not Applicable
Materials to Avoid : Mineral acids (i.e. sulfuric, phosphoric, etc.) and isocyanates.
Hazardous Decomposition : Carbon Monoxide, Carbon Dioxide and NOx.
Hazardous Polymerization : Will not occur.

SECTION 11 - TOXICOLOGICAL PROPERTIES

Acute Toxicity

Oral (Rat) LD50: 2130 mg/kg
Skin (Rabbit) LD50: 1220 mg/kg
Inhalation (Rat) Death, prolonged exposure (1 hr), 20 °C (68 °F).

Other Data

Industrial chemicals such as this material with acute toxicity values shown above and whose vapors or mists are not likely to be encountered by humans when used in any foreseeable manner would not require a toxic label according to U.S. domestic and international transport regulations. AMES TEST: Negative (activated and non-activated).

Target Organs

Eye
Skin
Respiratory Tract

Irritation Effects Data

Corrosive to the eyes of a rabbit. Corrosive to the skin of a rabbit.

Chronic/Subchronic Data

No delayed, subchronic or chronic test data are shown.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Effects**Biodegradability:**

In water >60%

Aquatic Toxicity:

LC 50: >500 mg/l
LC 50: 100 - 200mg/l
EC 50: 98.37 mg/l
EC/LC50: 35mg/l

Time:

48 hrs
96 hrs
48 hrs
72 hrs

Species:

Golden orfe
Golden orfe
Daphnia magna
Algae

Other Ecological Information

No data.

SECTION 13 - DISPOSAL CONSIDERATIONS

Methods of Disposal : Comply with all federal, state and local environmental regulations.
Incinerate or bury product in a licensed facility.

Please refer to the relevant EU regulations, in particular the guidelines / decisions of the Council regarding handling of wastes (e.g. 75/442/EEC, 91/689/EEC, 94/67/EC, 94/904/EC) as implemented in National regulations.

Must be disposed of by special means, e.g. suitable incineration, in accordance with local regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Non-Bulk Shipping Name : 2-dimethylaminoethanol // 8 (3) // UN2051 // PGII // NAERG Guide No. 132

DOT Bulk Shipping : Refer to Bill of Lading

IMO Shipping Data : Refer to Bill of Lading

ICAO/IATA Shipping Data : 2-dimethylaminoethanol // 8 // (3) // UN2051 // PGII

SECTION 15 - REGULATORY INFORMATION

US Federal Regulations**Toxic Substances Control Act (TSCA)**

Included in the EPA TSCA Chemical Substance Inventory.

Toxic Substances Control Act (TSCA) 12(b) Component(s)

None

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

Irritant. Corrosive

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

Immediate Health Hazard.

EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "de minimis" level

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")

None

New Jersey Trade Secret Registry Number(s)

None

EC Regulations

SECTION 16 - OTHER INFORMATION

The environmental, health and safety information contained herein is given in compliance with statutory obligations and relates only to the substance/preparation described in this material safety data sheet. This data sheet and the information it contains are not intended to supersede any terms and conditions of sale and does not constitute a specification, promise, representation, or warranty, whether express or implied, except to the extent required by applicable law. The environmental, health and safety information contained herein is believed to be accurate based on our current knowledge. It remains the responsibility of the customer to provide a safe workplace and to comply with all applicable laws and regulations.

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