

Section 1: Identification

Product Name Dimethylaminoethanol (2) Liquid
Commercial Name Not available
Product Use Not available
Restrictions On Use Not available

Product Code 50-1986

Company PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: Flammable liquids (Category 3), H226 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation
CFR 1910.1200 (Category 3), H331 Acute toxicity, Dermal (Category 4), H312 Skin corrosion (Category 1B), H314 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Short-term (acute) aquatic hazard (Category 3), H402

Signal Word DANGER

Hazard Statement(s) Flammable liquid and vapour. Harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage. Toxic if inhaled. May cause respiratory irritation. Harmful to aquatic life.

Pictogram(s) or Symbol(s)



Precautionary Statement(s):

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

Section 3: Composition/Information on Ingredients

Substance/Mixture	Substance
Components	{N,n-} Dimethylethanolamine
% By Weight	100
CAS#	108-01-0
Molecular Weight	89.14 g/mole
Chemical Formula	C4H11NO
Synonym(s)	Amietol M 21 * Bimanol * Deanol * Dimethylaethanolamin (German) * Dimethylaminoethanol (German) * Dimethylaminoethanol * beta-Dimethylaminoethanol * N-Dimethylaminoethanol * N,N-Dimethylaminoethanol * 2-(Dimethylamino)ethanol * beta-Dimethylaminoethyl alcohol * N,N-Dimethylethanolamine * N,N-Dimethyl-N-(2-hydroxyethyl)amine * N,N-Dimethyl-2-hydroxyethylamine * DMAE * 2-Dwumetyloaminoetanolu (Polish) * beta-Hydroxyethyl-dimethylamine * Kalpur P * Liparon * Norcholine * Propamine A * Texacat DME

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
{N,n-} Dimethylethanolamine	108-01-0	100	Not available.	ORAL (LD50):Acute: 2000mg/kg [Rat].DERMAL (LD50):Acute: 1370mg/kg [Rabbit].VAPOR (LC50):Acute: 891.4ppm 4 hour(s) [Mouse]. 1641ppm 4 hour(s)[Rat].

Section 4: First-Aid Measures

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Eye Contact Flush eyes with water as a precaution. Continue rinsing eyes during transport to hospital.
Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Symptoms/Effects

Acute Not available
Delayed Not available

Immediate Medical Attention

Not available.

Section 5: Fire-Fighting Measures**Suitable Extinguishing Media**

Dry powder Dry sand

Unsuitable Extinguishing Media

Do NOT use water jet.

Products of CombustionCarbon oxides, Nitrogen oxides (NO_x) Combustible.**Firefighters Special Equipment and Precautions**

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Methods and materials for containment and cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Section 7: Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2. Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Handle and store under inert gas. Storage class (TRGS 510): 3: Flammable liquids

Section 8: Exposure Controls/Personal Protection

Exposure Limits Not available.

Engineering Controls Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal Protection

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Body Protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

Appearance	Liquid. Color: clear, colourless		
Odor	amine-like		
Odor Threshold	Not available		
Melting Point	-70 °C (-94 °F) - lit.	pH	10.5 - 11 at 100 g/l at 20 °C (68 °F)
Freezing Point	Not available	Vapor Pressure	6.12 hPa at 20 °C (68 °F)
Boiling Point/Range	134 - 136 °C 273 - 277 °F - li	Vapor Density	3.03 (Air = 1)
Decomposition temperature	Not available	Viscosity	ca.3.58 mm ² /s at ca.21.6 °C (ca.70 °F)
Partition Coefficient: n-octanol/water	log Pow: -0.55 at 23 °C (73 °F)	Evaporation Rate	Not available
Flash Point	40 °C (104 °F) - Seta closed	Autoignition temperature	230 °C (446 °F) at 1,013 hPa - DIN
Flammability	Not available	Flammability or Explosive Limits:	
		Lower	1.4%
		Upper	12.2%
Solubility(ies)	soluble		
Other	Relative density 0.886 g/cm ³ at 20 °C (68 °F) Surface tension 28.2 mN/m at 20 °C (68 °F) Relative vapour density 3.03 - (Air = 1.0)		

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Stable under recommended storage conditions.
Hazardous Polymerization	Not available.
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	Strong oxidizing agents, Copper, Zinc, Iron, Do not store near acids.
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides (NO _x)

Section 11: Toxicological Information**RTECS** KK6125000**Acute Toxicity**

LD50 Oral - Rat - male and female - 1,182 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - 6 mg/l (OECD Test Guideline 403) Inhalation: Corrosive to respiratory system. LD50 Dermal - Rabbit - 1,220 mg/kg Remarks: (External MSDS)

Skin Corrosion/Irritation

Causes burns.

Serious Eye Damage/Irritation

Causes serious eye damage.

Respiratory or Skin Sensitization

Not available.

Germ Cell Mutagenicity

Not available

Carcinogenicity

Not available

Reproductive Toxicity

Not available

Routes of Entry

Skin. Eye.

Symptoms Related to Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Not available

Target Organ(s) Stomach - Irregularities - Based on Human Evidence

Section 12: Ecological Information**Ecotoxicity**

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - > 100 - 220 mg/l - 96 h static test LC50 - Leuciscus idus (Golden orfe) - 146.6 mg/l - 96 h (DIN 38412 T15) Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 98.37 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - 35 mg/l - 72 h Remarks: (External MSDS) static test EC50 - Desmodesmus subspicatus (green algae) - 66.08 mg/l - 72 h Toxicity to bacteria static test EC20 - activated sludge - > 1,000 mg/l - 0.5 h (OECD Test Guideline 209)

Persistence and Degradability

aerobic - Exposure time 28 d Result: > 60 % - Readily biodegradable. (OECD Test Guideline 301C)

Bioaccumulative Potential

Not available

Mobility in Soil

Not available

Other Adverse Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life. No data available

Section 13: Disposal Considerations**Waste Disposal**

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Disposal of Container

Dispose of as unused product.

Other Considerations

Not available

Section 14: Transport Information**DOT Classification**

UN number: 2051 Class: 8 (3) Packing group: II Proper shipping name: 2-Dimethylaminoethanol Reportable Quantity (RQ): Poison Inhalation Hazard: No

Section 15: Regulatory Information**Regulations**

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazard Massachusetts Right To Know Components 2-Dimethylaminoethanol CAS-No. 108-01-0 Revision Date 1993-04-24 No components are subject to the Massachusetts Right to Know Act. Pennsylvania Right To Know Components 2-Dimethylaminoethanol CAS-No. 108-01-0 Revision Date 1993-04-24 New Jersey Right To Know Components 2-Dimethylaminoethanol CAS-No. 108-01-0 Revision Date 1993-04-24

Other

WHMIS CLASS B-3: Combustible liquid with a flash (Canada) point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS E: Corrosive liquid.;DSCL (EEC) R10-Flammable. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R37/38- Irritating to respiratory system and skin. R41- Risk of serious damage to eyes.;Gloves.;Full suit.;Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.;Face shield.

Section 16: Other Information

DISCLAIMER For R&D use only. Not for drug, household or other uses. **WARRANTY** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.