**PRODUCT IDENTIFICATION**

<table>
<thead>
<tr>
<th>TRADE NAME:</th>
<th>DAMA 10 Amine</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMICAL NAME:</td>
<td>Didecylmethylamine</td>
</tr>
<tr>
<td>CHEMICAL FAMILY:</td>
<td>Tertiary Amine</td>
</tr>
<tr>
<td>CHEMICAL FORMULA:</td>
<td>( [\text{CH}_3(\text{CH}_2)_9]_2\text{NCH}_3 )</td>
</tr>
<tr>
<td>CAS NO.:</td>
<td>7396-58-9</td>
</tr>
</tbody>
</table>

**SUMMARY OF HAZARDS**

- Causes burns to the eyes.
- Causes delayed burns to the skin.

**HAZARDOUS COMPONENTS**

<table>
<thead>
<tr>
<th>COMPONENT NAME</th>
<th>CAS NO.</th>
<th>EXPOSURE LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didecylmethylamine</td>
<td>7396-58-9</td>
<td>Not established by OSHA/ACGIH.</td>
</tr>
</tbody>
</table>

**CHEMICAL AND PHYSICAL PROPERTIES**

<table>
<thead>
<tr>
<th>APPEARANCE/ODOR</th>
<th>Clear liquid/fatty amine odor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOILING POINT</td>
<td>( \sim 370^\circ\text{C}/698^\circ\text{F}. )</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>(&lt; 0.1\ \text{mm Hg} @ 25^\circ\text{C}/77^\circ\text{F}. )</td>
</tr>
<tr>
<td>VAPOR DENSITY</td>
<td>( \sim 10.7 )</td>
</tr>
<tr>
<td>SOLUBILITY IN WATER</td>
<td>(&lt; 1.0% )</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Ethyl Corporation - Chemicals Group

Ethyl Tower 451 Florida Blvd., Baton Rouge, LA 70801

REPRESENTING ETHYL FOREIGN SALES CORPORATION FOR EXPORT SALES
**TRADE NAME:** DAMA 10 Amine

**FIRE AND EXPLOSION HAZARDS**

**FLASH POINT (METHOD):** Greater than 93°C/200°F (PMCC).

**FLAMMABLE LIMITS:** Not established.

**EXTINGUISHING MEDIA:** Dry chemical, water spray (fog), foam or carbon dioxide.

**HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:** Include oxides of carbon and nitrogen.

**SPECIAL FIRE FIGHTING PROCEDURES:** Avoid breathing smoke and vapor.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None.

**REACTIVITY DATA**

**STABILITY:** Stable.

**CONDITIONS TO AVOID:** None.

**MATERIALS TO AVOID:** Copper and copper containing alloys.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**HEALTH HAZARDS**

**EYE CONTACT:** Expected to cause burns.

**SKIN IRRITATION:** Initially a moderate skin irritant. Prolonged skin contact may cause a severe effect progressing to a delayed burn within 48 hours. Transient contact may produce dermatitis, possibly delayed.

**CHRONIC EFFECTS OF OVEREXPOSURE:** None known.
TOXICITY DATA: ORAL LD₅₀ (rat) = 900 mg/kg. DERMAL LD₅₀ (rabbit) = > 5000 mg/kg.

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INHALATION: If symptoms occur, remove to fresh air.

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

SKIN CONTACT: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Clothing cannot be washed clean and should not be reused for any purpose.

INGESTION: If symptoms occur, give two glasses of water. Do not induce vomiting. Get medical attention.

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EXPOSURE LIMITS: Not established by OSHA or ACGIH.

EYE PROTECTION: Chemical goggles or face shield when splash may occur.

PROTECTIVE GLOVES: Resistant to chemical penetration.

RESPIRATORY PROTECTION: NIOSH approved supplied-air respirator when exposed to vapors from heated material.

MECHANICAL VENTILATION: Recommended.

LOCAL VENTILATION: At bulk vessel openings when handling heated materials.

10/14/85
Continued
OTHER:

If skin contact or contamination of clothing is likely, protective clothing should be worn.

SPILLS OR LEAKS:

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Take up small spills with dry chemical absorbent. Large spills may be taken up with pump or vacuum and finished off with dry chemical absorbent. May require excavation of contaminated soil.

ENVIRONMENTAL PROTECTION DISPOSAL METHODS:

Under the CERCLA/RCRA regulations in effect July 3, 1985, this product is not regulated as a hazardous waste or material. Therefore, it may be disposed of as an industrial waste in a manner acceptable to good waste management practice and in compliance with applicable local, state, and federal regulations.

STORAGE REQUIREMENT:

Store in steel or glass lined storage vessels.

REVISED: 10/14/85

SUPERSEDES: 09/16/81

T&H File Code: TX 00703-ND-0

MSDS prepared by: Toxicology and Industrial Hygiene Department
Ethyl Corporation

FOR ADDITIONAL NONEMERGENCY MSDS INFORMATION, CONTACT:
TOXICOLOGY AND INDUSTRIAL HYGIENE DEPARTMENT
ETHYL CORPORATION
451 FLORIDA ST.
BATON ROUGE, LA 70801
(504) 388-7717

EXPLANATION OF MATERIAL SAFETY DATA SHEET TERMINOLOGY

PRODUCT IDENTIFICATION
TRADE NAME AND SYNONYMS
The name under which the product is sold and common synonyms.

CHEMICAL NAME and FORMULA
Chemical descriptive name and the chemical formula.

CAS NO.
Chemical Abstract Service registry number which identifies the product.

SUMMARY OF HAZARDS
Emphasizes major hazard(s) associated with the chemical. Further details are provided in subsequent sections.

COMPONENTS

COMPONENT NAME
Chemical, generic, or proprietary name that identifies the product or components of a mixture. Inclusion of a component is not necessarily based on hazard criteria.

% (PERCENT)
Percentage by weight or volume of the component in the total product.

EXPOSURE LIMIT
The airborne concentration at which most workers can be exposed without any expected adverse effects. Source may be Ethyl guideline, ACGIH TLV, or OSHA PEL.

CHEMICAL AND PHYSICAL PROPERTIES

APPEARANCE/ODOR
Description of material at normal temperature and pressure that may be useful in identifying the presence of the product.

BOILING POINT
Temperature at which a liquid changes to a vapor at 760 mm Hg or some specified pressure.

MELTING POINT
Temperature at which a solid changes to a liquid at 760 mm Hg or some specified pressure.

VAPOR PRESSURE
Pressure exerted by a saturated vapor above its liquid.

SOLUBILITY IN WATER
Solubility of the product, by weight, in water at ambient or specified temperature.

SPECIFIC GRAVITY
Ratio of the weight of a volume of the product to the weight of an equal volume of water (liquids/solids) or air (gases).

EVAPORATION RATE
Ratio of the rate of vaporization of the product to the rate of a known material.

PERCENT VOLATILES
The percentage of the product (liquid or solid) that will evaporate at ambient temperature.

FIRE AND EXPLOSION HAZARDS

FLASH POINT (CLOSED CUP METHOD)
Lowest temperature at which the chemical will give off enough vapor to ignite.

FLAMMABLE LIMITS
Range of vapor concentration (percent by volume in air) which will burn or explode in the presence of spark or flame. LEL is the lower explosive limit and UEL is the upper explosive limit.

EXTINGUISHING MEDIA
The fire fighting agents which should be used.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS
Known hazardous products resulting from heating or burning the compound.

SPECIAL FIREFIGHTING PROCEDURES
General firefighting procedures of chemical fires are not described, but special procedures are given.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Hazards not covered by other sections of the MSDS pertaining to chemical reactions in the presence of heat and/or fire.

REACTIVITY DATA

STABILITY
Indicates the susceptibility of dangerous decomposition by the chemical.

CONDITIONS AND MATERIALS TO AVOID
Gives the conditions and materials that may cause unstable situations.

HAZARDOUS DECOMPOSITION PRODUCTS
Describes the hazardous materials produced from a chemical reaction.

HAZARDOUS POLYMERIZATION
Indicates the tendency of the chemical's molecules to combine in a violent reaction.
HEALTH HAZARDS

Gives the effects of over-exposure to the chemical by skin or eye contact, breathing vapors or dust, and ingestion. Common symptoms which may occur from exposure to the chemical are given.

CHRONIC EFFECTS
Refers to the effects most likely to occur after repeated or prolonged overexposure to the chemical.

OTHER HEALTH EFFECTS
May include medical conditions which have been known to be aggravated by exposure to the chemical.

TOXICITY
Gives numerical results from animal tests on the compound. LD$_{50}$ or LC$_{50}$ is the dose level that kills half of the animals tested.

EMERGENCY FIRST AID

Gives emergency and first aid instructions for treating overexposure by inhalation, ingestion, and skin and eye contact.

NOTE TO PHYSICIAN
May give any contraindicated treatment or recommended treatment for a licensed health care professional to conduct.

EXPOSURE CONTROL INFORMATION

EYE PROTECTION
Specification of eyes or face protection beyond normal use of safety glasses.

PROTECTIVE GLOVES
Specification of gloves required, based on type and degree of hazard from skin contact.

RESPIRATORY PROTECTION
Specification of the type of respirator recommended for use during routine or emergency situations.

VENTILATION
Specification of the type (local/general) of ventilation recommended to capture contaminants or prevent the build-up of hazardous atmospheres.

OTHER
Specification of other recommended personal protective equipment based on type and degree of hazard.

ENVIRONMENTAL PROTECTION

SPILLS AND LEAKS
Indicates special precautions for clean-up of spills and leaks and preparation of chemical for disposal.

DISPOSAL METHOD
 Tells the EPA classification of the chemical as well as the proper disposal procedure.

STORAGE REQUIREMENTS
Any unusual requirements are given as well as precautions for storage.

ADDITIONAL PRECAUTIONS OR COMMENTS
States or re-emphasizes any special precautions or handling requirements.