

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: **DIETHYLAMINE**
Supplier: **LABSCAN LIMITED,
T24-26 STILLORGAN INDUSTRIAL PARK, STILLORGAN,
CO. DUBLIN, IRELAND.**
Emergency telephone number: **+353 1 295 2684** Fax No: **+353 1 295 2685**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation

Chemical Name	CAS-No	EEC-No	Class	Weight %
DIETHYLAMINE	109-89-7	612-003-00-X	F R11; Xn R20/21/22; C R35	100

3. HAZARDS IDENTIFICATION

Most important hazards: Highly flammable.
Harmful by inhalation, in contact with skin and if swallowed.
Causes burns.

Specific hazards Irritating to eyes, respiratory system and skin.
Thermal decomposition can lead to release of irritating
gases and vapours.

4. FIRST AID MEASURES

General advice: Show this safety data sheet to the doctor in attendance.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus. Consult a physician after significant exposure.

Skin contact: Remove contaminated clothing immediately and wash affected skin with soap and water. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Eye contact: If substance has got into the eyes, immediately wash out with plenty of water until medical assistance is provided. Keep eye wide open while rinsing. Consult a physician for severe cases.

Ingestion: Rinse mouth. Do not induce vomiting without medical advice, drink water as a precaution. Obtain medical attention.
Never give anything by mouth to an unconscious person.

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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Extinguish preferably with dry chemical powder, Carbon dioxide blanket, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons:

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards:

Vapours may form explosive mixtures with air.

Decomposes in a fire giving off toxic fumes: carbon monoxide, nitrogen oxides (NO_x), nitriles, cyanides.

Special protective equipment for firefighters:

Wear a positive-pressure supplied-air respirator / full protective flameproof clothing.

Specific methods:

Standard procedure for chemical fires.

Water mist may be used to cool closed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Remove all sources of ignition. Wear a positive-pressure supplied-air respirator. Shut off leaks if without risk. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges.

Environmental precautions:

Do not flush into surface water or sanitary sewer system. Contain leaking liquid with sand or earth; consult an expert. Prevent liquid entering sewers, basements and workpits; vapour may create explosive and toxic atmosphere. If substance has entered a water course or sewer or contaminated soil or vegetation, advise police.

Methods for cleaning up:

Absorb in earth or sand or other suitable material. Transfer to covered steel drums. Contact waste disposal services. Dispose of as special waste in compliance with local and national regulations.

7. HANDLING AND STORAGE

Handling:

Use only in area provided with appropriate exhaust ventilation. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

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Storage: Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Protect from light. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Electrical equipment should be protected to the appropriate standard. Store in original container. Store in cool place (+15-+25C).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name:

DIETHYLAMINE

National occupational exposure limits:IRL OEL: 10ppm (30mg/m³) 8 h TLVIRL OEL: 25ppm (25mg/m³) 15 mins TLV

Engineering measures to reduce exposure

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Personal protection equipment:

- **Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment.
- **Hand protection:** Viton gloves. 89/686/EEC and EN374.
- **Eye protection:** Goggles giving complete protection to eyes.
- **Skin and body protection:** Chemical-proof suit / flame retardant antistatic protective clothing, heavy duty work shoes.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

Keep away from food, drink and animal feeding stuffs.

Wash hands and face before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Formula:	(C₂H₅)₂NH		
Form:	liquid		
Colour:	colourless		
Odour:	strong fish / ammoniacal		
pH:	(20 °C)	12	(100 g/l H₂O)
Boiling point/range:	53-57		°C
Melting point/range:	-50		°C
Decomposition temperature:			°C
Flash point:	-22		°C
Autoignition temperature:	312		°C
Flammability (solid, gas):	Classification "Highly flammable "		
Explosive properties:			
Explosion limits:	- lower	2.3	vol. %

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	- upper	14	vol. %
Oxidizing properties:		no data available	
Vapour pressure:	(20 °C)	260	hPa
Relative density:	(°C) >=		
	<=		
Bulk density:		705	kg/m ³
Solubility:			
Water solubility	(°C)	completely miscible	g/l)
Solubility in other solvents		Ethanol solutions (Exothermic reaction)	
Partition coefficient (n-octanol/water)		log P _{ow} = 0.58	
Viscosity:	(20 °C)	1	mPa.s

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions. Stable under recommended storage conditions.
Conditions to avoid:	Keep away from heat and sources of ignition. Take precautionary measures against static discharges.
Materials to avoid:	Nitrous acid and other nitrosating agents, strong acids, peroxides, light metals, acid anhydrides, alcohols, aldehydes, ketones, esters, halogenated hydrocarbons, phenols, mercury, oxidizing agent.
Hazardous decomposition products:	carbon oxides, nitrogen oxides (NOx), nitriles, cyanides.

Product name: **DIETHYLAMINE****11. TOXICOLOGICAL INFORMATION****Acute toxicity:****Inhalation:**

LC50/inhalation/4h/rat = 12.1mg/kg

Harmful by inhalation. Irritating to respiratory system.

Concentration above the TLV may cause irritation of eyes and mucous membranes.

Skin contact:

LD50/dermal/rabbit = 582 mg/kg

Harmful in contact with skin. The substance can be readily absorbed through intact skin. May cause skin irritation and/or dermatitis.,

Eye contact:

Irritating to eyes. May cause irreversible eye damage i.e blurred vision.

Ingestion:

LD50/oral/rat = 540 mg/kg (20% aqueous solution)

Severe pain, nausea, vomiting, and diarrhoea occur. After a latency period of weeks pyloric stenosis can result. Lung damage in the form of pulmonary oedema and emphysema and liver damage. Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.

Sensitization:

Irritant effect on skin.

Long term toxicity:

Danger of serious damage to health by prolonged exposure to solvent.

Chronic toxicity:

risk of injury to Lungs / Stomach / Liver

12. ECOLOGICAL INFORMATION**Mobility:**

Readily soluble in water. Highly volatile liquid.

Persistence / degradability:

Biochemical oxygen demand (BOD) = (28DAY/COD) (OEC 301C) 76%

Readily biodegradable, according to appropriate OECD test.

Bioaccumulation:

Bioaccumulation not significant.

Ecotoxicity:

Ecological injuries are not known or expected under normal use.

LC50/96h/goldfish = 130-855 mg/l

EC50/48h/Daphnia = 56 mg/l

Bacterial Toxicity: 20mg/l/96h

Toxicity to bacteria: 35mg/l/17h

13. DISPOSAL CONSIDERATIONS**Waste from residues / unused products:**

If recycling is not practicable, dispose of in compliance with local regulations.

Can be incinerated, when in compliance with local regulations.

Product name: **DIETHYLAMINE****Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal.

Empty containers can be landfilled after cleaning, when in compliance with local regulations.

14. TRANSPORT INFORMATION**ADR/RID**

Proper shipping name:	DIETHYLAMINE		
Class:	3	Item:	22 (B)
Packaging group:	II	HI/UN No:	1154

IMO

Proper shipping name:	DIETHYLAMINE		
Class:	3.1	IMDG Page:	3116
EmS:	3.02	MFAG:	320
Packaging group:	II	UN-No:	1154
Marine pollutant:	Not applicable.		

ICAO

Proper shipping name:	DIETHYLAMINE		
Class:	3	UN/ID No:	1154
Packaging group:	II		

15. REGULATORY INFORMATION**Classification according to European directive on classification of hazardous preparations 2001/58/EC**

- **Contains:** Diethylamine
- **Symbol(s):**



F - Highly flammable	C - Corrosive
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- R -phrase(s):** R11 - Highly flammable.
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
R35 - Causes severe burns

- S -phrase(s):** S 3 - Keep in a cool place.
S16 - Keep away from sources of ignition - No smoking.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29 - Do not empty into drains.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

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16. OTHER INFORMATION

Recommended restrictions: Take notice of labels and material safety data sheets for the working chemicals.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors)

Recommended use: General purpose solvent

Further information: Contact Labscan Limited

REVISION DATE: 20/08/2002

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.