



## MATERIAL SAFETY DATA SHEET

DIETHYLAMINE REAGENT

### SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:  
DIETHYLAMINE REAGENT 11

Catalog Numbers: D/2100, D/2110

Synonyms:  
Un Listed

Company Information:  
LEONID CHEMICALS  
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb  
Ashokpuram School Road  
Bangalore-560 022, Karnataka, INDIA  
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

### SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	109-89-7
Chemical Name	:	DIETHYLAMINE
%	:	Un Listed
EINECS#	:	203-716-3
Hazard Symbols	:	XI F
Risk Phrases	:	11 36/37

### SECTION 3- HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Highly flammable. Irritating to eyes and respiratory system.

#### Potential Health Effects

The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

### SECTION 4- FIRST AID MEASURES

Eyes:

Not available.

Skin:

Not available.

Ingestion:

Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Not available.

Notes to Physician:  
Un Listed

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#### SECTION 5- FIRE FIGHTING MEASURES

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General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

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#### SECTION 6- ACCIDENTAL RELEASE MEASURES

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General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

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#### SECTION 7 - HANDLING and STORAGE

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Handling:

Not available.

Storage:

Not available.

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#### SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

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Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment :

Eyes:

Wear safety glasses and chemical goggles if splashing is possible.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Not available.

Respirators:

Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

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#### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Physical State	:	Liquid
Color	:	Colorless liquid.
Odor	:	Ammonia-like odor.
pH	:	Not available.
Vapor Pressure	:	195 mm Hg @20C
Viscosity	:	Not available.

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Boiling Point	:	134 deg F
Freezing/Melting Point	:	-58 deg F
Autoignition Temperature	:	312 deg C ( 593.60 deg F)
Flash Point	:	-23 deg C ( -9.40 deg F)
Explosion Limits, lower	:	1.8
Explosion Limits, upper	:	10.1
Decomposition Temperature	:	Not available.
Solubility in water	:	Miscible in water
Specific Gravity/Density	:	0.7
Molecular Formula	:	C4H11N
Molecular Weight	:	73.0837

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#### SECTION 10 - STABILITY AND REACTIVITY

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##### Chemical Stability:

Stable under normal temperatures and pressures.

##### Conditions to Avoid:

Not available.

##### Incompatibilities with Other Materials:

Acids - oxidizing agents.

##### Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.

##### Polymerization:

Has not been reported.

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#### SECTION 11 - TOXICOLOGICAL INFORMATION

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##### RTECS#:

CAS# 109-89-7: Hz8750000

##### LD50/LC50:

CAS# 109-89-7: Inhalation, rat: LC50 = 4000 ppm/4H; Oral, mouse:

Ld50 = 500 mg/kg; Oral, rat: LD50 = 540 mg/kg; Skin, rabbit: LD50 = 820 uL/kg.

##### Carcinogenicity:

DIETHYLAMINE -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

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#### SECTION 12 - ECOLOGICAL INFORMATION

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No information available.

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#### SECTION 13 - DISPOSAL CONSIDERATIONS

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Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

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#### SECTION 14 - TRANSPORT INFORMATION

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##### IATA

Shipping Name : DIETHYLAMINE

Hazard Class : 3

UN Number : 1154  
Packing Group : II

IMO  
Shipping Name : DIETHYLAMINE  
Hazard Class : 3  
UN Number : 1154  
Packing Group : II

RID/ADR  
Shipping Name : DIETHYLAMINE  
Hazard Class : 3  
UN Number : 1154  
Packing Group : II

USA RQ: CAS# 109-89-7: 100 lb final RQ; 45.4 kg final RQ

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## SECTION 15 - REGULATORY INFORMATION

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European/International Regulations  
European Labeling in Accordance with EC Directives

Hazard Symbols:  
XI F

Risk Phrases:  
R 11 Highly flammable.  
R 36/37 Irritating to eyes and respiratory system.

Safety Phrases:  
S 16 Keep away from sources of ignition No smoking.  
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S 29 Do not empty into drains.

WGK (Water Danger/Protection)  
CAS# 109-89-7: 1

United Kingdom Occupational Exposure Limits  
CAS# 109-89-7: OES-United Kingdom, TWA 10 ppm TWA; 30 mg/m<sup>3</sup> TWA  
CAS# 109-89-7: OES-United Kingdom, STEL 25 ppm STEL; 76 mg/m<sup>3</sup> STEL  
United Kingdom Maximum Exposure Limits

Canada  
CAS# 109-89-7 is listed on Canada's DSL List.  
CAS# 109-89-7 is listed on Canada's Ingredient Disclosure List.

Exposure Limits :  
CAS# 109-89-7: OEL-AUSTRALIA: TWA 10 ppm (30 mg/m<sup>3</sup>); STEL 25 ppm (75 mg/m<sup>3</sup>)  
OEL-AUSTRIA: TWA 10 ppm (30 mg/m<sup>3</sup>)  
OEL-BELGIUM: TWA 10 ppm (30 mg/m<sup>3</sup>); STEL 25 ppm (75 mg/m<sup>3</sup>)  
OEL-DENMARK: TWA 10 ppm (30 mg/m<sup>3</sup>)  
OEL-FINLAND: STEL 10 ppm (30 mg/m<sup>3</sup>); Skin  
OEL-FRANCE: STEL 10 ppm (30 mg/m<sup>3</sup>)  
OEL-GERMANY: TWA 10 ppm (30 mg/m<sup>3</sup>)

OEL-HUNGARY:TWA 30 mg/m<sup>3</sup>;STEL 60 mg/m<sup>3</sup>  
OEL-JAPAN:TWA 10 ppm (30 mg/m<sup>3</sup>)  
OEL-THE NETHERLANDS:TWA 10 ppm (30 mg/m<sup>3</sup>)  
OEL-THE PHILIPPINES:TWA 25 ppm (75 mg/m<sup>3</sup>)  
OEL-POLAND:TWA 30 mg/m<sup>3</sup>  
OEL-RUSSIA:TWA 10 ppm;STEL 30 mg/m<sup>3</sup>;Skin  
OEL-SWEDEN:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 15 ppm (45 mg/m<sup>3</sup>);Skin  
OEL-SWITZERLAND:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 20 ppm (60 mg/m<sup>3</sup>)  
OEL-TURKEY:TWA 25 ppm (75 mg/m<sup>3</sup>)  
OEL-UNITED KINGDOM:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 25 ppm (75 mg/m<sup>3</sup>)  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

#### US FEDERAL

TSCA:

CAS# 109-89-7 is listed on the TSCA inventory

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#### SECTION 16 - ADDITIONAL INFORMATION

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.