

# Safety Data Sheet

**Product :**

**Dimethylamine**

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MSDS Nr : 047\_AL

Version : 1.01

Date : 31/07/2002

## 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

MSDS Nr	047_AL
Product name	Dimethylamine
Chemical formula	C <sub>2</sub> H <sub>7</sub> N
Company identification	see heading and/or footer see paragraph 16 "OTHER INFORMATION"
Emergency phone numbers	see heading and/or footer see paragraph 16 "OTHER INFORMATION"

## 2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation	Substance.
Components/Impurities	Contains no other components or impurities which will influence the classification of the product.
CAS Nr	00124-40-3
EEC Nr (from EINECS)	204-697-4

## 3 HAZARDS IDENTIFICATION

Hazards identification	Liquefied gas Extremely flammable Harmful by inhalation Irritating to eyes, respiratory system and skin.
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## 4 FIRST AID MEASURES

Inhalation	Harmful by inhalation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
Skin/eye contact	Remove contaminated clothing Obtain medical assistance Immediately flush eyes thoroughly with water for at least 15 minutes.
Ingestion	Ingestion is not considered a potential route of exposure.

## 5 FIRE FIGHTING MEASURES

Specific hazards	Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products	If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition:

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	Carbon monoxide
	Nitric oxide/nitrogen dioxide
Suitable extinguishing media	All known extinguishants can be used.
Specific methods	If possible, stop flow of product. Move away from the container and cool with water from a protected position. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.
Special protective equipment for fire fighters	Use self-contained breathing apparatus and chemically protective clothing.

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## 6 ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources. Use self-contained breathing apparatus and chemically protective clothing.
Environmental precautions	Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Reduce vapour with fog or fine water spray.
Clean up methods	Ventilate area. Hose down area with water. Wash contaminated equipment or sites of leaks with copious quantities of water.

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## 7 HANDLING AND STORAGE

Handling and storage	Ensure equipment is adequately earthed. Suck back of water into the container must be prevented. Purge air from system before introducing gas. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.
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## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit value -TLV(ACGIH)	5 ppm (2000 edition)
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Exposure limit value for country	Great Britain: STEL: 6ppm LTEL: 2 ppm (EH 40/97) Germany: MAK= 2 ppm France: VLE: 10 ppm
Personal protection	Ensure adequate ventilation. Protect eyes, face and skin from liquid splashes. Do not smoke while handling product. Keep self contained breathing apparatus readily available for emergency use. Keep suitable chemically resistant protective clothing readily available for emergency use.

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## 9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight	45
Melting point	-92.2 °C
Boiling point	7 °C
Critical temperature	164 °C
Relative density, gas	1.5 (air=1)
Relative density, liquid	0.67 (water=1)
Vapour Pressure 20°C	1.7 bar
Solubility mg/l water	Hydrolyses.
Appearance/Colour	Colourless gas
Odour	Rotten fish Odour can persist.
Autoignition temperature	400 °C
Flammability range	2,8-14,4 vol% in air.
Other data	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

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## 10 STABILITY AND REACTIVITY

Stability and reactivity	May react violently with oxidants. May react violently with acids. Reacts with water to form corrosive alkalis. Can form explosive mixture with air.
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## 11 TOXICOLOGICAL INFORMATION

General	Irritation to lungs and upper respiratory tract shown as rhinitis, pharyngites and pneumonia. May cause dermatitis, eye irritation, corneal oedema and chemical burns.
LC50/1h (ppm)	11000 ppm

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## 12 ECOLOGICAL INFORMATION

General

May cause pH changes in aqueous ecological systems.

## 13 DISPOSAL CONSIDERATIONS

General

Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere.

Avoid discharge to atmosphere.

Do not discharge into any place where its accumulation could be dangerous.

Do not discharge into areas where there is a risk of forming an explosive mixture with air.

Waste gas should be flared through a suitable burner with flash back arrestor.

Contact supplier if guidance is required.

## 14 TRANSPORT INFORMATION

Proper shipping name

Dimethylamine, anhydrous

UN Nr

1032

Class/Div

2.1

ADR/RID Classification code

2, 2°F

ADR/RID Hazard Nr

23

Labelling ADR

Label 3: flammable gas

Other transport information

Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- there is adequate ventilation.
- compliance with applicable regulations.

## 15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548

612-001-00-9.

EC Classification

F+;R12|Xn;R20|Xi;R37/38-41

-Symbols

F+: Extremely flammable

Xn: Harmful

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-Risk phrases

R12 Extremely flammable.  
R20 Harmful by inhalation.  
R37/38 Irritating to respiratory system and skin.  
R41 Risk of serious damage to eyes.

-Safety phrases

S3 Keep in a cool place.  
S16 Keep away from ignition sources - 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).

## 16 OTHER INFORMATION

Ensure all national/local regulations are observed.

Ensure operators understand the flammability hazard.

Users of breathing apparatus must be trained.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

This MSDS is for information purposes only and is subject to change without notice. [Prior to purchase of products, please contact your local Air Liquide office for a complete MSDS (with Manufacturer's name and emergency phone number).]

**End of document.**

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