

Trimethylamine

1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name :	Trimethylamine
SDS Nr :	SDS_122_CLP
Chemical description :	Trimethylamine CAS No :000075-50-3 EC No :200-875-0 Index No :612-001-00-9
Chemical formula :	C ₃ H ₉ N / (CH ₃) ₃ N
Registration-No. :	Registration deadline not expired.
Use :	Industrial and professional. Perform risk assessment prior to use.

Manufacturer / Distributor:**Ehsan International Gases**

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2 Hazards identification

Classification of the substance or mixture**Hazard Class and Category Code****Regulation EC 1272/2008 (CLP)**

- **Physical hazards** : Flammable gases - Category 1 - Danger (H220)
Gases under pressure - Liquefied gas - Warning (H280)
- **Health hazards** : Acute toxicity, Inhalation - Category 4 - Warning (H332)
Skin irritation - Category 2 - Warning (H315)
Serious eye damage - Category 1 - Danger (H318)
Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation
Category 3 - Warning (H335)

Classification EC 67/548 or EC 1999/ : F+; R12

45 Xn; R20

Xi; R37/38-41

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Label elements

Labelling Regulation EC 1272/2008 (CLP)

• Hazard pictograms

• Hazard pictograms code

: GHS02 - GHS05 - GHS04 - GHS07

• Signal word

: Danger

• Hazard statements

: H332 : Harmful if inhaled.
 H220 : Extremely flammable gas.
 H318 : Causes serious eye damage.
 H315 : Causes skin irritation.
 H280 : Contains gas under pressure; may explode if heated.
 H335 : May cause respiratory irritation.

• Precautionary statements

- Prevention

: P260 : Do not breathe gas, vapours.
 P280 : Wear protective gloves/protective clothing/eye protection/face protection.
 P210 : Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

- Response

: P304+P340+P315 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice / attention.
 P305+P351+P338+P315 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice / attention.
 P332+P313 : If skin irritation occurs: Get medical advice/attention.
 P377 : Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
 P381 : Eliminate all ignition sources if safe to do so.
 P302+P352 : IF ON SKIN: Wash with plenty of soap and water.

- Storage

: P403 : Store in a well-ventilated place.

Labelling EC 67/548 or EC 1999/45

Symbol(s)

: Xn : Harmful
 : F+ : Extremely flammable

R Phrase(s)

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

S Phrase(s)

: S3 : 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 when possible).

Other hazards

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Other hazards : None.

3 Composition/information on ingredient

Substance / Preparation		: Substance.				
Substance name	Contents	CAS No	EC No	Index No	Registration no	Classification
Trimethylamine	100 %	75-50-3	200-875-0	612-001-00-9	NOTE 2 F+; R12	Xn; R20 Xi; R37/38-41 ----- Flam. Gas 1 (H220) Flam. Gas 1 (H220) Eye Dam 1 (H318) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) STOT SE 3 (H335) Liq. Gas (H280)

Contains no other components or impurities which will influence the classification of the product. Note 1: Listed in Annex IV / V REACH, exempted from registration.
Note 2: Registration deadline not expired.
Full text of R-phrases see chapter 16

4 First aid measures

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 : Carbon monoxide. Nitric oxide/nitrogen dioxide.

Extinguishing media

- **Suitable extinguishing media**

: All known extinguishants can be used.

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- 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** : Use self-contained breathing apparatus and chemically protective clothing.

6 Accidental release measures

fighters

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

7 Handling and storage

- Handling** : Take precautionary measures against static discharge.
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).
Refer to supplier's container handling instructions.
- Storage** : Keep container below 50°C in a well ventilated place.
Segregate from oxidant gases and other oxidants in store.

8 Exposure controls/personal protection

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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.
Occupational Exposure Limits	: Trimethylamine : TLV [©] -TWA [ppm] : 5 Trimethylamine : TLV [©] -STEL [ppm] : 15

9 Physical and chemical properties

Physical state at 20 °C	: Gas.
Colour	: Colourless gas.
Odour	: Rotten fish. Ammoniacal. Odour can persist.
Molecular weight	: 59
Melting point [°C]	: -117
Boiling point [°C]	: 3
Critical temperature [°C]	: 160
Vapour pressure [20°C]	: 1.9 bar
Relative density, gas (air=1)	: 2
Relative density, liquid (water=1)	: 0.65
Solubility in water [mg/l]	: Completely soluble.
Flammability range [vol% in air]	: 2 to 11.6
Auto-ignition temperature [°C]	: 190
Other data	: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 Stability and reactivity

Hazardous decomposition products	: None.
Incompatible materials	: May react violently with oxidants. Air, Oxidiser. May react violently with acids. Reacts with water to form corrosive alkalis. Can form explosive mixture with air.

11 Toxicological information

Conditions to avoid : Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Toxicity information : Irritation to lungs and upper respiratory tract shown as rhinitis, pharyngitis and pneumonia. May cause dermatitis, eye irritation, corneal oedema and chemical burns.

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12 Ecological information

Rat inhalation LC50 [ppm/4h] : 3500

Ecological effects information: May cause pH changes in aqueous ecological systems.

13 Disposal considerations

General : Avoid discharge to atmosphere.

Toxic and corrosive gases formed during combustion should be scrubbed before 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

UN number : 1083

• Labelling ADR, IMDG, IATA

: 2.1 : flammable gas.

Land transport

ADR/RID

H.I. nr : 23

UN proper shipping name : TRIMETHYLAMINE, ANHYDROUS

Transport hazard class(es) : 2

- ADR/RID Classification code : 2 F

- Packing Instruction(s) - General : P200

- Tunnel Restriction : B/D Tank carriage: Passage forbidden through tunnels of category B, C, D and E;
Other carriage: Passage forbidden through tunnels of category D and E

Sea transport

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- IMO-IMDG code
- Proper shipping name : TRIMETHYLAMINE, ANHYDROUS
- Class : 2.1
- IMO Packing group : P200
- Emergency Schedule (EmS) - Fire : F-D
- Emergency Schedule (EmS) - Spillage : S-U
- Instructions - Packing : P200

Air transport

- ICAO/IATA
- Proper shipping name : TRIMETHYLAMINE, ANHYDROUS
- Class : 2.1
- Passenger and Cargo Aircraft :
- Cargo Aircraft only :
- Packing instruction : 200

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 containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.

15 Regulatory information

- Compliance with applicable regulations.

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.

16 Other information

Seveso regulation 96/82/EC : Listed

Ensure operators understand the flammability hazard.

Users of breathing apparatus must be trained.

List of full text of R-phrases in section 3. : R12 : Extremely flammable. **section**

R20 : Harmful by inhalation.

R37/38 : Irritating to respiratory system and skin.

R41 : Risk of serious damage to eyes.

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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.

DISCLAIMER OF LIABILITY

: 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.

Details given in this document are believed to be correct at the time of going to press. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.