BOC GASES

Safety Data Sheet

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name	Trimethylamine
Chemical formula	(CH3)3N
Company identification	see heading and/or footer
Emergency phone numbers	see heading and/or footer

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	00075-50-3
EC Nr (from EINECS)	200-875-0

3 HAZARDS IDENTIFICATION

Hazards identification	Extremely flammable
	Harmful by inhalation
	Risk of serious damage to eyes.
	Irritating to respiratory system and skin.
	Liquefied gas

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	May cause severe chemical burns to skin and cornea. Suitable first-aid treatment should be immediately available. Seek medical advice before using product.
	Immediately flush eyes thoroughly with water for at least 15 minutes.
	Remove contaminated clothing. Drench affected area with water for at least 15 minutes
	Obtain medical assistance
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:

	Nitric oxide/nitrogen dioxide
	Carbon monoxide
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.

6 ACCIDENTAL RELEASE MEASURES

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

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.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit value for country	Great Britain: LTEL: 10ppm, STEL: 15ppm (EH 40/97)
	France: VLE: 10ppm
Personal protection	Ensure adequate ventilation.
	Do not smoke while handling product.
	Protect eyes, face and skin from liquid splashes.
	Keep self contained breathing apparatus readily available for emergency use.
	Keep suitable chemically resistant protective clothing readily available for emergency use.

9 PHYSICAL AND CHEMICAL PROPERTIES

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

10 STABILITY AND REACTIVITY

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

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)	7000 ppm

12 ECOLOGICAL INFORMATION

General	May cause pH changes in aqueous ecological systems.

13 DISPOSAL CONSIDERATIONS

General	Avoid discharge to atmosphere. Do not discharge into any place where its accumulation could be dangerous. Gas may be scrubbed in sulphuric acid solution. 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. Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere. Contact supplier if guidance is required.

14 TRANSPORT INFORMATION

UN Nr	1083
Class	2.1
ADR/RID Classification code	2F
ADR/RID Hazard Nr	23
Labelling ADR	Label 2.1: 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
	Xi: Irritant
Labelling of cylinders	
-Symbols	Label 2.1: flammable gas
-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	S9 Keep container in well ventilated place.
	S16 Keep away from ignition sources - No smoking.
	S23 Do not breathe the gas.
	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S33 Take precautionary measures against static discharges.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.

Ensure operators understand the flammability hazard.

Ensure operators understand the toxicity 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.

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