

INTERNATIONAL\_GASES\_AND\_CHEMICALS\_LTD

MATERIAL SAFETY DATA SHEETS

DATE: 10/15/97

SUPPLIER ADDRESS: SPEEDWELL RD  
PARKHOUSE EAST  
NEWCASTLE-U-LYME

EMERGENCY PHONE: (178) 256-5556  
NUMBER

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\_1.\_CHEMICAL\_PRODUCT

PRODUCT NAME: METHYLAMINE

SYNONYMS: Monomethylamine, Aminomethane,  
Methanamine

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\_2.\_COMPOSITION,\_INFORMATION\_ON\_INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)			
				ACGIH TLV	OSHA PEL	MAC	Other STEL
METHYLAMINE	CH3NH2	74-89-5	99+%	10	10	10	NE

Note: NE = NONE ESTABLISHED

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\_3.\_HAZARD\_IDENTIFICATION

## \*\*\* EMERGENCY OVERVIEW \*\*\*

Flammable, corrosive liquid and gas under pressure.

Can cause eye, skin and respiratory tract burns.

May cause liver, kidney and heart damage.

Can form explosive mixtures with air.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation , Skin

ACUTE EFFECTS: Irritation to the eyes and mucous membranes, bronchitis, conjunctivitis and constriction of larynx. Vapors produce skin irritation, dermatitis, or burns. Inhalation may be fatal due to spasm, inflammation, edema, of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms include burning sensation, coughing, wheezing, shortness of breath, and headaches. Symptoms may include nausea, vomiting, and laryngitis. May damage liver and kidney.

CHRONIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: None

CARCINOGENICITY (US Only):

NTP - No

IARC MONOGRAPHS - No

OSHA REGULATED - No

Continued ...

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#### \_4.\_FIRST\_AID\_MEASURES

INHALATION: Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

EYE CONTACT: Immediately flush with copious amounts of water for at least 15 minutes.

SKIN CONTACT: Immediately flush with copious amounts of water for at least 15 minutes while removing contaminated clothing.

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

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#### \_5.\_FIRE\_FIGHTING\_MEASURES

FLASH POINT: 0 deg. C

AUTOIGNITION TEMPERATURE: 430 deg. C

FLAMMABLE LIMITS: Vol.%

LOWER: 4.9

UPPER: 20.7

EXTINGUISHING MEDIA: Do not extinguish burning gas if flow cannot be shut off immediately.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray. If possible, stop the product flow.

HAZARDOUS COMBUSTION PRODUCTS: Toxic carbon monoxide may be given off during combustion. Toxic fumes of nitrogen oxides.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Cylinder rupture may occur under fire conditions. Emits toxic fumes under fire conditions. Extremely flammable. Can react violently with oxidizing material. Do not expose to heat or flame.

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#### \_6.\_ACCIDENTAL\_RELEASE\_MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Shut off source if possible and remove source of heat.

SPECIALIZED EQUIPMENT: Leaks can be detected by passing an open bottle of HCl in the vicinity of the suspected leak. White fumes will form if a leak is present.

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#### \_7.\_HANDLING\_AND\_STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in well ventilated areas. Keep valve protection cap on cylinders when not in use.

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#### 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentrations below exposure and flammable limits.

##### PERSONAL PROTECTION

EYE/FACE PROTECTION: Safety glasses

SKIN PROTECTION: Impervious gloves, coveralls, boots, and/or other resistant protective clothing.

RESPIRATORY PROTECTION: In case of leakage, use self-contained breathing apparatus.

OTHER PROTECTIVE EQUIPMENT: Safety shoes when handling cylinders.

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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless

ODOR: Strong fishy, ammonia like odor.

PHYSICAL STATE: Gas

VAPOR PRESSURE: @20 deg.C: 2.96 atm

VAPOR DENSITY (AIR=1): 1.08

BOILING POINT (C): -6.3

SOLUBILITY IN WATER: Soluble

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SPECIFIC GRAVITY (H<sub>2</sub>O=1): @20 deg.C:  
0.66

EVAPORATION RATE: Gas

ODOR THRESHOLD: N/Av

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#### 10. STABILITY AND REACTIVITY

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STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: Storage in poorly ventilated areas. Storage near a heat source.

MATERIALS TO AVOID: Acid, acid chlorides, anhydrides, oxidizing agents, chloroformates, phosphorous halides, copper, zinc and tin.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: Toxic carbon monoxide and nitrogen oxides may be given off.

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#### 11. TOXICOLOGICAL INFORMATION

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LETHAL CONCENTRATION (LC<sub>50</sub>): 7010 ppm, Rat 1 hour.

LETHAL DOSE 50 (LD<sub>50</sub>): N/Av

TERATOGENICITY: N/Av

REPRODUCTIVE EFFECTS: N/Av

MUTAGENICITY: N/Av

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#### 12. ECOLOGICAL INFORMATION

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No adverse ecological effects are expected.

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#### 13. DISPOSAL CONSIDERATIONS

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WASTE DISPOSAL METHOD: Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Allow gas to vent slowly to atmosphere in an unconfined area or exhaust hood. If the cylinders are the refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place.

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#### 14. TRANSPORT INFORMATION

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CONCENTRATION: 99+%

DOT DESCRIPTION (US ONLY):

PROPER SHIPPING NAME: Methylamine, anhydrous

HAZARD CLASS: 2.1 (flammable)

IDENTIFICATION NUMBER: UN1061

REPORTABLE QUANTITIES: 100 lbs

LABELING: FLAMMABLE GAS

ADR/RID (EU Only): Class 2, 2F

SPECIAL PRECAUTIONS: Cylinders should be transported in a secure upright position in a well ventilated truck.

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#### 15. REGULATORY INFORMATION

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OSHA: Process Safety Management:

Material is not listed in appendix A of 29 CFR 1910.119 as highly hazardous chemical.

TSCA: Material is not listed in TSCA inventory. This material is provided for experimental or laboratory use only.

SARA: The threshold planning quantity for material is 10,000 lbs.

EU NUMBER: 200-820-0

NUMBER IN ANNEX 1 OF DIR 67/548: Not listed in annex 1.

EU CLASSIFICATION: N/Av

R: 13, 36/37

S: 16, 26, 29

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#### 16. OTHER INFORMATION

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OTHER PRECAUTIONS: Protect containers from physical damage. Do not deface cylinders or labels. Cylinders should be refilled by qualified producers of compressed gas. Shipment of a compressed gas cylinder which has not been filled by the owner or with his written consent is a violation of federal law (49 CFR).

ABBREVIATIONS:

N/Av - Not Applicable

N/Av - Not Available

SA - Simple Asphyxiant

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NE - None Established

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