

METHANE

0291

February 2000

CAS No: 74-82-8
RTECS No: PA1490000
UN No: 1971
EC No: 601-001-00-4

Methyl hydride
(cylinder)
CH₄
Molecular mass: 16.0

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Extremely flammable.	NO open flames, NO sparks, and NO smoking.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases extinguish with water spray, powder, carbon dioxide.
EXPLOSION	Gas/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Use non-sparking handtools.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE			
Inhalation	Suffocation. See Notes.	Ventilation. Breathing protection if high concentration.	Fresh air, rest. Artificial respiration if indicated. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE.	Cold-insulating gloves.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention.
Eyes	ON CONTACT WITH LIQUID: FROSTBITE.	Safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion			

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: self-contained breathing apparatus. Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. NEVER direct water jet on liquid.	EU classification F+ Symbol R: 12 S: (2-)9-16-33 UN classification UN Hazard Class: 2.1

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-20G1F NFPA Code: H 1; F 4; R 0	Fireproof. Cool. Ventilation along the floor and ceiling.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS, COMPRESSED OR LIQUEFIED GAS, WITH NO ODOUR.

Physical dangers

The gas is lighter than air.

Occupational exposure limits

TLV: (aliphatic hydrocarbons gases, Alkane C1-C4) 1000 ppm (as TWA) (ACGIH 2005).
MAK not established.

Routes of exposure

The substance can be absorbed into the body by inhalation.

Inhalation risk

On loss of containment this gas can cause suffocation by lowering the oxygen content of the air in confined areas.

Effects of short-term exposure

Rapid evaporation of the liquid may cause frostbite.

PHYSICAL PROPERTIES

Boiling point: -161/C
Melting point: -183/C
Solubility in water, ml/100 ml at 20/C: 3.3
Relative vapour density (air = 1): 0.6

Flash point: Flammable Gas
Auto-ignition temperature: 537/C
Explosive limits, vol% in air: 5-15
Octanol/water partition coefficient as log Pow: 1.09

ENVIRONMENTAL DATA

NOTES

Density of the liquid at boiling point: 0.42 kg/l.
High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death.
Check oxygen content before entering area.
Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.
After use for welding, turn valve off; regularly check tubing, etc., and test for leaks with soap and water.
The measures mentioned in section PREVENTION are applicable to production, filling of cylinders, and storage of the gas.
Other UN number: 1972 (refridgerated liquid), Hazard class: 2.1.
Card has been partly updated in October 2005. See section Emergency Response.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information