PROPANE

0319
November 2003

CAS No: 74-98-6
RTECS No: TX2275000
UN No: 1978
EC No: 601-003-00-5

n-Propane
(cylinder)
C_3H_8 / $CH_3CH_2CH_3$
Molecular mass: 44.1

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 powder, carbon dioxide.
EXPLOSION	Gas/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding) if in liquid state. Use non-sparking handtools.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.
EXPOSURE			
Inhalation	Drowsiness. Unconsciousness.	Closed system and ventilation.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE.	Cold-insulating gloves. Protective clothing.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention.
Eyes	ON CONTACT WITH LIQUID: FROSTBITE.	Face shield.	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! Remove all ignition sources. Ventilation. NEVER direct water jet on liquid.	**EU classification** F+ Symbol R: 12 S: (2-)9-16 **UN classification** UN Hazard Class: 2.1

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-20S1978 NFPA Code: H1; F4; R0	Fireproof. Cool.

IPCS
International Programme on Chemical Safety

Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission

IMPORTANT DATA

Physical State; Appearance
ODOURLESS, COLOURLESS COMPRESSED LIQUEFIED GAS.

Physical dangers
The gas is heavier than air and may travel along the ground; distant ignition possible, and may accumulate in low ceiling spaces causing deficiency of oxygen. As a result of flow, agitation, etc., electrostatic charges can be generated.

Occupational exposure limits
TLV: (Aliphatic hydrocarbon gases) 1000 ppm as TWA; (ACGIH 2005).
MAK: 1000 ppm, 1800 mg/m^3; Peak limitation category: II(4); Pregnancy risk group: D; (DFG 2006).

Routes of exposure
The substance can be absorbed into the body by inhalation.

Inhalation risk
On loss of containment this liquid evaporates very quickly displacing the air and causing a serious risk of suffocation when in confined areas.

Effects of short-term exposure
Rapid evaporation of the liquid may cause frostbite. The substance may cause effects on the central nervous system.

PHYSICAL PROPERTIES

Boiling point: -42/C
Melting point: -189.7/C
Relative density (water = 1): 0.5
Solubility in water, g/100 ml at 20/C: 0.007
Vapour pressure, kPa at 20/C: 840
Relative vapour density (air = 1): 1.6
Flash point: -104/C
Auto-ignition temperature: 450/C
Explosive limits, vol% in air: 2.1-9.5
Octanol/water partition coefficient as log Pow: 2.36

ENVIRONMENTAL DATA

NOTES

Check oxygen content before entering area.
Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.
High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death.
Card has been partially updated in July 2007: see Occupational Exposure Limits.

ADDITIONAL INFORMATION