

ETHANE

0266
April 2006

CAS No: 74-84-0 (cylinder)
 RTECS No: KH3800000 (cylinder)
 UN No: 1035 C₂H₆ / CH₃CH₃
 EC No: 601-002-00-X Molecular mass: 30.1

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 water spray, powder
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	Suffocation. See Notes.	Ventilation, local exhaust, or breathing protection.	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

Personal protection: self-contained breathing apparatus. Evacuate danger area! Consult an expert! Remove all ignition sources. Ventilation. NEVER direct water jet on liquid.

PACKAGING & LABELLING

EU classification
 F+ Symbol
 R: 12
 S: (2-)9-16-33
UN classification
 UN Hazard Class: 2.1
GHS classification
 Signal: Danger
 Flame-Cylinder
 Extremely flammable gas
 Contains gas under pressure; may explode if heated

EMERGENCY RESPONSE

Transport Emergency Card: TEC (R)-20S1035
 NFPA Code: H1; F4; R0

SAFE STORAGE

Fireproof. Cool. Separated from strong oxidants and halogens.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS COMPRESSED LIQUEFIED GAS, ODOURLESS WHEN PURE.

Physical dangers

The gas mixes well with air, explosive mixtures are easily formed. As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts violently with halogens, strong oxidants causing fire and explosion hazard.

Occupational exposure limits

TLV (as Aliphatic Hydrocarbon Gases : Alkanes (C1-C4)) : 1000 ppm;
mg/m³ (ACGIH 2006).
MAK not established.

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.

PHYSICAL PROPERTIES

Boiling point: -89/C
Melting point: -183/C
Solubility in water, ml/100 ml at 20/C: (very poor)
Vapour pressure, kPa at 20/C: 3850
Relative vapour density (air = 1): 1.05

Flash point: flammable gas
Auto-ignition temperature: 472/C
Explosive limits, vol% in air: 3.0-12.5
Octanol/water partition coefficient as log Pow: 1.81

ENVIRONMENTAL DATA

NOTES

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.
Other UN number : 1961 (refrigerated liquid), Hazard class : 2.1.
Card has been partially updated in July 2007: see Occupational Exposure Limits, GHS classification.

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