

ISOBUTANE**0901**

November 1998

CAS No: 75-28-5
RTECS No: TZ4300000
UN No: 1969
EC No: 601-004-00-0

2-Methylpropane
1,1-Dimethylethane
Trimethylmethane
 C_4H_{10} / $(CH_3)_2CHCH_3$
Molecular mass: 58.1

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.
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.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE			
Inhalation	Shortness of breath. Suffocation.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. 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		Safety goggles, face shield.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work.	

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. NEVER direct water jet on liquid. (Extra personal protection: filter respirator for organic vapours of low boiling compounds).	F+ Symbol R: 12 S: (2-)9-16 Note: C UN Hazard Class: 2.1

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-501 NFPA Code: H1; F4; R0	Fireproof. Cool.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS COMPRESSED LIQUEFIED GAS, WITH CHARACTERISTIC ODOUR.

Physical dangers

The gas is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts with strong oxidants, acetylene, halogens and nitrogen oxides causing fire and explosion hazard.

Occupational exposure limits

TLV not established.

MAK: 1000 ppm; 2350 mg/m³; IV (1998)

Routes of exposure

The substance can be absorbed into the body by inhalation.

Inhalation risk

A harmful concentration of this gas in the air will be reached very quickly on loss of containment.

Effects of short-term exposure

Rapid evaporation of the liquid may cause frostbite. The substance may cause effects on the cardiovascular system, resulting in impaired functions and respiratory failure. Exposure at high level may result in death.

PHYSICAL PROPERTIES

Boiling point: -12°C

Melting point: -160°C

Relative density (water = 1): 0.6 (when liquid)

Solubility in water, g/100 ml at 20°C: none

Vapour pressure, kPa at 20°C: 304

Relative vapour density (air = 1): 2

Flash point: Flammable Gas

Auto-ignition temperature: 460°C

Explosive limits, vol% in air: 1.8-8.4

Octanol/water partition coefficient as log Pow: 2.8

ENVIRONMENTAL DATA

NOTES

Turn leaking cylinder with the leak up to prevent escape of gas in liquid state. The measures mentioned in section PREVENTION are applicable to production, filling of cylinders, and storage of the gas.

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