### ETHANE

**CAS No:** 74-84-0  
**RTECS No:** KH9800000  
**UN No:** 1035  
**EC No:** 601-002-00-X  
(cylinder)  
(cylinder)  
\( \text{C}_2\text{H}_6 \)/ \( \text{CH}_3\text{CH}_3 \)  
Molecular mass: 30.1

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<table>
<thead>
<tr>
<th>TYPES OF HAZARD/EXPOSURE</th>
<th>ACUTE HAZARDS/SYMPTOMS</th>
<th>PREVENTION</th>
<th>FIRST AID/FIRE FIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRE</strong></td>
<td>Extremely flammable.</td>
<td>NO open flames, NO sparks, and NO smoking.</td>
<td>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</td>
</tr>
<tr>
<td><strong>EXPLOSION</strong></td>
<td>Gas/air mixtures are explosive.</td>
<td>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.</td>
<td>In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.</td>
</tr>
</tbody>
</table>

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**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**

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**SPILLAGE DISPOSAL**


**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

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**EMERGENCY RESPONSE**

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

**SAFE STORAGE**

Fireproof. Cool. Separated from strong oxidants and halogens.

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Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission © IPCS 2006

SEE IMPORTANT INFORMATION ON THE BACK.
**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**

<table>
<thead>
<tr>
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<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point</td>
<td>-89°C</td>
</tr>
<tr>
<td>Melting point</td>
<td>-183°C</td>
</tr>
<tr>
<td>Solubility in water, ml/100 ml at 20°C: (very poor)</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure, kPa at 20°C</td>
<td>3850</td>
</tr>
<tr>
<td>Relative vapour density (air = 1):</td>
<td>1.05</td>
</tr>
<tr>
<td>Flash point: flammable gas</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>472°C</td>
</tr>
<tr>
<td>Explosive limits, vol% in air:</td>
<td>3.0-12.5</td>
</tr>
<tr>
<td>Octanol/water partition coefficient as log Pow:</td>
<td>1.81</td>
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**ENVIRONMENTAL DATA**

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**

**NOTES**

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