


<b>ISOPENTANE</b> Ethyl dimethyl methane 2-Methylbutane Isoamyl hydride	www.junyuanpetroleumgroup.com info@junyuanpetroleumgroup.com
<b>CAS #: 78-78-4</b> <b>UN #: 1265</b> <b>EC Number: 201-142-8</b>	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
<b>FIRE &amp; EXPLOSION</b>	Extremely flammable. Heating will cause rise in pressure with risk of bursting. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Do NOT use compressed air for filling, discharging, or handling. Use non-sparking handtools.	Use powder, carbon dioxide, alcohol-resistant foam, water spray. In case of fire: keep drums, etc., cool by spraying with water.

	SYMPTOMS	PREVENTION	FIRST AID
<b>Inhalation</b>	Dizziness. Drowsiness. Headache. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
<b>Skin</b>	Dry skin.	Protective gloves.	First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again.
<b>Eyes</b>	No acute symptoms expected.	Wear safety spectacles or eye protection in combination with breathing protection.	Rinse with plenty of water (remove contact lenses if easily possible).
<b>Ingestion</b>	Nausea. Vomiting. Aspiration hazard!	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer immediately for medical attention.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Personal protection: filter respirator for organic gases and vapours of low boiling point adapted to the airborne concentration of the substance. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Do NOT wash away into sewer.	<p><b>According to UN GHS Criteria</b></p> <div style="text-align: center;">  </div> <p><b>DANGER</b></p> <p>Extremely flammable liquid and vapour            May cause drowsiness or dizziness            May be fatal if swallowed and enters airways            Toxic to aquatic life</p> <p><b>Transportation</b>  <b>UN Classification</b>            UN Hazard Class: 3; UN Pack Group: I</p>
<b>STORAGE</b>	
Fireproof. Well closed. Separated from strong oxidants. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing.	
<b>PACKAGING</b>	

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**ISOPENTANE**
**PHYSICAL & CHEMICAL INFORMATION**
**Physical State; Appearance**

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

**Physical dangers**

The vapour is heavier than air and may travel along the ground; distant ignition possible. The vapour is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen.

**Chemical dangers**

May explode on heating. Reacts with strong oxidants. This generates fire or explosion hazard.

 Formula: C<sub>5</sub>H<sub>12</sub> / (CH<sub>3</sub>)<sub>2</sub>-CH-CH<sub>2</sub>-CH<sub>3</sub>

Molecular mass: 72.2

Boiling point: 28°C

Melting point: -160°C

Relative density (water = 1): 0.6

Solubility in water: none

Vapour pressure, kPa at 20°C: 79

Relative vapour density (air = 1): 2.5

Relative density of the vapour/air-mixture at 20°C (air = 1): 2.2

Flash point: &lt;-51°C c.c.

Auto-ignition temperature: 420°C

Explosive limits, vol% in air: 1.4-7.6

Octanol/water partition coefficient as log Pow: 2.3

 Viscosity: 0.3 mm<sup>2</sup>/s at 20°C

**EXPOSURE & HEALTH EFFECTS**
**Routes of exposure**
**Effects of short-term exposure**

If swallowed the substance easily enters the airways and could result in aspiration pneumonitis. Inhalation of high concentrations of the vapour may cause depression of the central nervous system.

**Inhalation risk**

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

**Effects of long-term or repeated exposure**

The substance defats the skin, which may cause dryness or cracking.

**OCCUPATIONAL EXPOSURE LIMITS**

TLV: 1000 ppm as TWA.

 MAK: 3000 mg/m<sup>3</sup>, 1000 ppm; peak limitation category: II(2); pregnancy risk group: C.

 EU-OEL: 3000 mg/m<sup>3</sup>, 1000 ppm as TWA

**ENVIRONMENT**

The substance is toxic to aquatic organisms. It is strongly advised not to let the chemical enter into the environment.

**NOTES**

High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death.

Check oxygen content before entering area.

**ADDITIONAL INFORMATION**
**EC Classification**

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# Isopentane

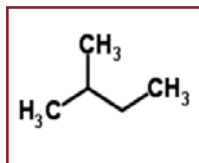
Isopentane, also called methylbutane or 2-methylbutane, is a branched-chain saturated hydrocarbon with five carbon atoms, with formula  $C_5H_{12}$  or  $CH(CH_3)$ . Isopentane is an extremely volatile and extremely flammable liquid at room temperature and pressure. It is also the least dense liquid at standard conditions.



**Junyuan Petroleum Group is your premier choice for all your specialty solvent needs. We offer a broad line of solvent types and grades.**

Molecular formula:  $C_5H_{12}$   
Molar mass: 72.149  
CAS Registry Number: 78-78-4  
Appearance: colourless liquid with a characteristic smell  
Melting point:  $-160\text{ }^{\circ}\text{C}$   
Boiling point:  $28\text{ }^{\circ}\text{C}$   
Solubility: Water, 48 mg/L (25 deg C)

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Our team of scientists has experience in all areas of research including Life Science, Material Science, Chemical Synthesis, Analytical and many others.



Isopentanes are some of the primary blowing agents used in the production of polystyrene foam and other foams.



Usually, a mixture of n-, i-, is used for this purpose.