

# Safety Data Sheet

Product : **Cyclopentane**  
MSDS Nr : 531-00-2001BOC(A) Version : 1.01

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Date : 24/12/2004

## 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name Cyclopentane  
Chemical formula C<sub>5</sub>H<sub>10</sub>  
Company identification see heading and/or footer  
Emergency phone numbers see heading and/or footer

## 2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation Substance.  
Components/Impurities Contains no other components or impurities which will influence the classification of the product.  
CAS Nr 287-92-3  
EC Nr (from EINECS) 206-016-6

## 3 HAZARDS IDENTIFICATION

Hazards identification Highly flammable  
Liquid.

## 4 FIRST AID MEASURES

Inhalation In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.  
In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.  
Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

Skin/eye contact For liquid spillage - flush with water for at least 15 minutes  
Remove contaminated clothing  
Immediately flush eyes thoroughly with water for at least 15 minutes.  
Obtain medical assistance

Ingestion Rinse mouth with water, do not induce vomiting, call a doctor.

## 5 FIRE FIGHTING MEASURES

Specific hazards Exposure to fire may cause containers to rupture/explode.  
Hazardous combustion products Incomplete combustion may form carbon monoxide.  
Suitable extinguishing media All known extinguishants can be used.  
Specific methods If possible, stop flow of product.  
Move away from the container and cool with water from a protected position.  
Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.

Special protective equipment for fire fighters In confined space use self-contained breathing apparatus.

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## 6 ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Eliminate ignition sources.
Environmental precautions	Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Clean up methods	Ventilate area. Absorb excess liquid spillage on inorganic absorbant material such as fine sand, brick dust etc. Place spent absorbant in sealed packages and contact specialist waste disposal contractor.

## 7 HANDLING AND STORAGE

Handling and storage	Ensure equipment is adequately earthed. Suck back of water into the container must be prevented. Purge air from system before introducing liquid. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.
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## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection	Ensure adequate ventilation. Do not smoke while handling product. Protect eyes, face and skin from liquid splashes.
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## 9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight	70.14
Melting point	-94 °C
Boiling point	49 °C
Relative density, gas	2.4 (air=1)
Relative density, liquid	0.7 (water=1)
Vapour Pressure 20°C	0.35 bar(a).
Solubility mg/l water	156 mg/l at 25°C
Appearance/Colour	Colourless liquid

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Odour Sweetish  
Poor warning properties at low concentrations.  
Flammability range 1.1-8.7 vol% in air.  
Flash point -39°C.  
Autoignition temperature 361 °C

## 10 STABILITY AND REACTIVITY

Stability and reactivity Can form explosive mixture with air.  
May react violently with oxidants.

## 11 TOXICOLOGICAL INFORMATION

General In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.  
Irritation to eyes, skin and respiratory tract.

## 12 ECOLOGICAL INFORMATION

General Toxic to water organisms.

## 13 DISPOSAL CONSIDERATIONS

General Avoid discharge to the environment.  
Do not discharge into areas where there is a risk of forming an explosive mixture with air.  
Waste gas should be flared through a suitable burner with flash back arrestor.  
Do not discharge into any place where its accumulation could be dangerous.  
Contact supplier if guidance is required.

## 14 TRANSPORT INFORMATION

Proper shipping name Cyclopentane  
UN Nr 1146  
Class 3  
ADR/RID Classification code F1  
ADR/RID Hazard Nr 33  
Packing group II  
Labelling ADR Label 3: Danger of fire (flammable liquid).  
IMDG EmS codes F-E, S-D  
IMDG Marine pollutant No  
IATA passenger packing instruction 305/Y305  
IATA passenger max. quantity/pack 5L/1L  
IATA cargo packing instruction 307  
IATA cargo max. quantity/pack 60L  
Other transport information Avoid transport on vehicles where the load space is not separated from the driver's compartment.

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Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- there is adequate ventilation.
- compliance with applicable regulations.

## 15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548	601-030-00-2.
EC Classification	F;R11 R52/53
-Symbols	F: Highly flammable
Labelling of cylinders	
-Symbols	Label 3: flammable liquid
-Risk phrases	R11 Highly flammable R52/53 Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.
-Safety phrases	S9 Keep container in well ventilated place. S16 Keep away from ignition sources - No smoking. S29 Do not empty into drains. S33 Take precautionary measures against static discharges. S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

## 16 OTHER INFORMATION

Ensure all national/local regulations are observed.

Ensure operators understand the flammability hazard.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

Users of breathing apparatus must be trained.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

**End of document.**

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