

# Cyclopentane/Isopentane (50/50)

## BLOWING AGENTS

### ◎ POLYURETHANE:

#### Cyclopentane-Isopentane

#### Description

Mixture of Cyclopentane C<sub>5</sub>H<sub>10</sub> Isopentane C<sub>5</sub>H<sub>12</sub>.

#### Usage

Blowing agent.

#### Characteristics

Low boiling point liquid, colourless, non-toxic, flammable.

#### Conditions of use

- MSDS

#### Packaging

Cyclopentane-Isopentane Tank

## PERFORMANCES

The **cyclopentane/isopentane (50/50)** is a blend of Cyclopentane and Isopentane with guaranteed specifications used as an **expansion agent** in rigid **polyurethane foams expansion**. This blend is the **ideal compromise between the mechanical and heat resistances** of the resulting foam. Harmless to the ozone layer, it is especially fit as a substitute for the HCFC 141 b.

## SPECIFICATIONS

Standard characteristics	Limit values
Appearance	Clear
Composition :	
Cyclopentane	50 ± 3% weight
Isopentane	50 ± 3% weight
Benzene content	≤ 20 ppm weight

## CHARACTERISTICS

		Units	Values
Molecular weight		g/mol	71.1*
Boiling point	initial, below 1.013 bar	°C	27.8
Liquid density	at 20°C	kg/dm <sup>3</sup>	0.68*
	at 50°C	kg/dm <sup>3</sup>	0.64*
Absolute pressure	at 20°C	bar	0.6*
	at 20°C	bar	1.5*
Latent heat of vaporization	at boiling point	kJ/kg	366*
Flash point	closed cup	°C	-51
Lower flammability limit	In the air at 20°C	% in volume	1.1
Upper flammability limit	below 1.013 bar	% in volume	8.7
Auto-ignition temperature		°C	> 360
λ	at 25°C	mW/m.K	12.5*

\*calculated

## PACKAGING

### ✓ ISO Tank Container

- Packaging technical characteristics available upon request to the commercial department.
- Feasibility of filling packaging of the customers if they are in conformity with the legislation.
- Contact us for any other specific packaging.
- According to the density of pentane blends, the filling rate volume of the ISO tank container can not be less than 80%, and the maximum can not exceed 95%.

## STORAGE AND SHELF LIFE

### Precautions for handling and storage:

China plants are controlled by the regulation of listed Establishments and have to comply with it (*or with the local legislation*).

- All packaging will be stored in a dry, well-ventilated, easily accessible place, sheltered from sunlight and bad weather, away from any ignition source.
- It is recommended to store all packaging either in a specific place or isolated and sheltered by a fence.
- All packaging and piping will be grounded to discharge static electricity.
- Leak detectors, put at ground level, will be connected to an audible alarm, which will trigger in the event of leaks.
- The whole equipment will be tested with an appropriate leak detector before use.
- Material and electrical equipment in an explosive atmosphere will comply with the regulations (*grounding, equipotential bonding, ATEX material*).



## CONDITIONS OF USE

Please refer to the Material Safety Data Sheet (MSDS) before using the product.  
Workers handling the product should be trained about risks and preventive measures.

The product is compatible and not compatible with:

COMPATIBILITY	NON COMPATIBILITY
Plastics : <ul style="list-style-type: none"> <li>▪ Polyethylene</li> <li>▪ Polypropylene</li> <li>▪ Polyester</li> <li>▪ Teflon</li> </ul> Metals : <ul style="list-style-type: none"> <li>▪ Stainless steel</li> <li>▪ Carbon steel</li> </ul>	<ul style="list-style-type: none"> <li>▪ Natural or butyl rubbers</li> <li>▪ Polystyrene</li> <li>▪ Oxidizing agents</li> <li>▪ Combustive agents</li> </ul>

*The information above is intended as a guide only. We assume no liability for its accuracy on its use. The user should make its own tests under its conditions in order to determine the suitability of any compound in a peculiar application.*

### Measures while handling:

- Collect vapors at emission point,
- Use spark-free tools (*beryllium bronze*),
- Ground the equipment,
- Work in a well ventilated premises to avoid accumulating static discharges.

## HEALTH SAFETY AND ENVIRONMENT (HSE)

Consult the Material Safety Datasheet (MSDS) on the website: [www.junyuanpetroleumgroup.com](http://www.junyuanpetroleumgroup.com)

