Novexpans Cyclopentane

PERFORMANCES

The **NOVEXPANS™ cyclopentane** is a product with guaranteed specifications *(high cyclopentane content)* used as an **expansion agent** in rigid **polyurethane foams expansion**.

Because of **its low coefficient of thermal conductivity**, it is used for **insulation foams in the white line** *(household electrics)* and blocks manufacturing.

The H225 classification is an asset in complying with the legislation on flammable products storage.

Harmless to the ozone layer, it is **especially fit as a substitute for the HCFC 141 b.**

SPECIFICATIONS

Standard characteristics	Limit values
Appearance	**Clear**
Density at 15°C	**0.740 - 0.755 kg/dm^3**
Purity	**≥ 95 % weight**
Benzene content	**≤ 5 ppm weight**
n-Hexane content	**≤ 20 ppm weight**

CHARACTERISTICS

		Units	Values
Chemical Formula			**C_5H_{10}**
Molecular weight		g/mol	**70**
Boiling point	initial, at 1.013 bar	°C	**48**
Liquid density	at 20°C at 50°C	kg/dm^3 kg/dm^3	**0.74** **0.70**
Absolute pressure	at 20°C at 50°C	bar bar	**0.4** **1.1**
Latent heat of vaporization	at boiling point	kj/kg	**389**
Flash point	closed cup	°C	**-35**
Lower flammability limit Upper flammability limit	in the air at 20°C below 1.013 bar	% volume	**1.1** **8.7**
Auto-ignition temperature		°C	**> 360**
λ	at 25°C	mW/m.K	**11**

PACKAGING

	Drum	Container	Bulk
Capacity (liter)	217	930	5 to 20 t
Tare (kg)	22	460	
Load (kg)	120	600	
Diameter (mm)	585	860	
Height (mm)	880	2330	
Outflow external diameter (mm)	3/4" & 2"	26.1	
Tap: left pitch (mm)	---	1.814	
Test pressure (bar)	---	33	

- 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.

STORAGE AND SHELF LIFE

Precautions for handling and storage:

French 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).*

Climalife can study the set up and assembling of your storage tanks, piping, and pumps, according to the prevailing regulations.

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 : ▪ **PVDF** ▪ **Polyamide** ▪ **Teflon** Metals : ▪ **Stainless steel** ▪ **Carbon steel**	▪ **Natural or butyl rubbers** ▪ **Polystyrene** ▪ **Polycarbonate** ▪ **Polyvinyl chloride *(PVC)*** ▪ **Oxidizing agents** ▪ **Combustive agents**

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.quickfds.com

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