



Expansion agent

NOVEXPANS HFO 1336mzz-Z

PRESENTATION

NOVEXPANS™ HFO 1336mzz-Z is a hydrofluorobutene used as a **blowing agent** in polyurethane foam expansion.

Its application doesn't require particular investment regarding safety installation ATEX. NOVEXPANS™ HFO 1336mzz-Z was particularly developed to substitute the HFC 365mfc/HFC 227ea (93/7) and the HFC 245fa. In comparison with these products, it has environmental benefits on greenhouse effect.

NOVEXPANS™ HFO 1336mzz-Z is a 4th generation of fluorinated product. It is conformed with environmental regulations to the HFC substitution. It has no effect on ozone layer and its **impact on greenhouse effect is very negligible (GWP: 2.08, regulation No 2024/573)**.

SPECIFICATION

Standard characteristics	Limit values
Appearance	Clear
Purity	≥ 99.0 % weight
Water content	≤ 100 ppm weight
Acidity (HCl)	≤ 1 ppm weight
Non volatile residue	≤ 0.01 % volume

CHARACTERISTICS

		Units	Values
Chemical formula			CF ₃ CH=CHCF ₃
Molecular weight		g/mol	164
Boiling point	initial, below 1.013 bar	°C	33.4
Liquid density	at 20°C	kg/dm ³	1.38
	at 50°C	kg/dm ³	1.30
Absolute pressure	at 20°C	bar	0.6
	at 50°C	bar	1.8
Latent heat of vaporization	at boiling point	kJ/kg	165
Flash point	closed cup	°C	None
Lower flammability limit	in the air at 20°C	% in volume	None
Upper flammability limit	below 1.013 bar	% in volume	None
λ	in the air at 20°C	mW/m.K	10.4



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PACKAGING	Cylinder		Drum	Container
	27	88	217	930
Capacity (L)	27	88	217	930
Tare (kg)	13.5	37	22	460
Load (kg)	16	32	300	1300
Diameter (mm)	300	300	585	860
Height (mm)	630	1525	880	2330
Outflow external diameter (mm)	21.8	21.8	<i>specific</i>	26.1
Tap: right pitch (mm)	1.814	1.814	---	1.814
Test pressure (bar)	33	33	---	33
Pressurised with N ₂	<i>on request</i>	<i>on request</i>	---	<i>on request</i>

- 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.

Shelf life: unlimited (*if appropriate storage conditions*).

The information contained in this product sheet is the result of our studies and experience. It is provided in good faith, but should not, under any circumstance, be taken to constitute a guarantee on our part or an assumption of our responsibility. This is particularly the case when third party rights are at stake or in situations where a user of one of our products fails to observe applicable regulations.



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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
<p>Plastics:</p> <ul style="list-style-type: none"> ▪ Polyvinyl chloride (PVC) ▪ Polypropylene (PP) ▪ PVDF <p>Metals:</p> <ul style="list-style-type: none"> ▪ Stainless steel ▪ Aluminium ▪ Copper ▪ Brass 	<ul style="list-style-type: none"> ▪ Oxidizing agents ▪ Combustive agents ▪ Viton™

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 to determine the suitability of any compound in a peculiar application.

Measures while handling:

- Away from heat sources (flame or hot metallic surfaces)
- In cool and aired areas

HEALTH SAFETY AND ENVIRONMENT (HSE)

Consult the Material Safety Datasheet (MSDS) on the website: www.quickfds.com

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