

Technical Data Sheet

SIPOLYNATE® R100HDO

Description

SIPOLYNATE® R100HDO is a pre-blended open cell rigid polyurethane polyol for high density applications, such as offshore pipe joints, block sections, pour in place or structural foams. The foam has a good surface finish with excellent cell structure and good inter-laminar adhesion. The system uses our in-house CFC free SIPANE™ as the blowing agent. It is ideally processed through high-pressure impingement mixing. The system requires continuous agitation or blending before each use.

Typical Component Properties

Serial No.	Characteristics	Unit	Specifications
1.	Physical State	None	Liquid
2.	Colour	None	Yellowish
3.	Specific Gravity	None	1.05-1.10 (25°C)
4.	Viscosity	cps	750±500 (25°C)

Typical Reaction Characteristics

Serial No.	Characteristics	Unit	Specifications
1.	Ideal Operated Temperature	Celsius	25°C
2.	Mixing Ratio (Polyol:MDI*)	PBW	100:120
3.	Cream Time	seconds	20-30
4.	Gel Time	seconds	80-100
5.	End of Rise Time	seconds	120-150
6.	Hardening Time	minutes	2-3

* Bayer Desmodur 44v22L, BASF Lupranat M20S or Equivalent MDI (Isocyanate)

The above reaction characteristics are achieved in the laboratory tests at 25°C via hand mixing with a mechanical stirrer at 3000 rpm. Using a high-pressure dispensing machine with primary and secondary heating line would speed up the system. The overall applied density may also vary depending upon processing conditions, including ambient and substrate temperatures, mixing speed and time, etc.

Typical Foam Properties

Serial No.	Characteristics	Unit	Specifications
1.	Free Rise Density	kg/m ³	100 ± 2
2.	Moulded Density	kg/m ³	160 ± 5
3.	Open Cell Content	%	>85
4.	Compressive Strength	MPa	>2.8
5.	Dimensional Stability	%	1 max
6.	Fire Retardancy (PIR)	Class	B3 (DIN 4102)

*The above free rise density and moulded density can be altered according to the user's expectations and requirements.

Process Recommendation

The product temperature must be adjusted for desired chemical reactivity and viscosities. The material should be mixed well before use for at least 5-15 minutes. For best results, use the material under continuous agitation.

Handling and Storage

The product must be stored out of direct sunlight, weather, and direct external fire sources. The containers must always be kept sealed against moisture. Ideal storage temperature is approximately 25°C or less. Under these conditions, the product will remain stable for 6 months.

Safety Precautions

SIPOLYNATE® is a blend of polyether polyols and other components, which include a small percentage of tertiary aliphatic amines.

- Because of its alkaline character, SIPOLYNATE® may cause slight to moderate irritation when it is exposed to the skin, the eyes, and the mucous membranes.
- Safety goggles and impermeable protective gloves should always be worn if there is a risk of direct exposure when handling SIPOLYNATE®.
- Splashes that are exposed to skin must be wiped off immediately and the contaminated areas must be thoroughly washed with soap and water.
- Affected areas should be treated with a good barrier cream.
- To prevent further contact with the skin, contaminated clothing should be changed immediately and thoroughly cleaned before reuse.
- The product must be kept away from food items.
- Anyone involved in the application of the system must familiarize themselves with the safety precautions required of rigid polyurethane foam.

Disclaimer

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