



Technical Data Sheet

SIPOLYNATE® R125OCFE

Description

SIPOLYNATE® R125OCFE is a pre-blended CFC free polyurethane polyol for (2K) two-component injection moisture cure rigid foams. The foam has a good compaction with excellent shock absorption properties. The system gives out a foam with a fine rigid cell structure and good inter-laminar adhesion with relatively low densities. The system uses SIPANE™ as our in-house developed eco-friendly blowing agent. It is ideally processed through high-pressure impingement mixing at room temperature. The polyol and isocyanate mix remains in a gel form unless and until there is any direct moisture or water exposure.

Typical Component Properties

S No.	Characteristics	Unit	Polyol Specifications	Isocyanate Specifications
1.	Physical State	None	Liquid	Liquid
2.	Colour	None	Milky White	Dark Brownish
3.	Specific Gravity	None	1.02-1.05 (25°C)	1.23-1.25 (25°C)
4.	Viscosity	cps	250-450 (25°C)	200-250 (25°C)
5.	Hydroxyl Value	mgKOH/g	120-130	-
6.	NCO Content	%	-	30.5-32.5

Typical Reaction Characteristics

S No.	Characteristics	Unit	Specifications
1.	Ideal Operated Temperature	Celsius	25°C
2.	Mixing Ratio (Polyol:Isocyanate)	PBW	100:125
3.	Cream Time	seconds	5-10
4.	Gel Time	seconds	40-50
5.	End of Rise Time	seconds	110-130
6.	Tack Free Time	minutes	<5
7.	Water Level Threshold	pphp	6-7

The above reaction characteristics are achieved in the laboratory tests at 21°C via hand mixing with a mechanical stirrer at 3000 rpm. The overall applied density may also vary depending upon processing conditions, including ambient and substrate temperatures, mixing speed and time, water exposure levels, etc.

Typical Foam Properties

Serial No.	Characteristics	Unit	Specifications
1.	Free Rise Density @ 2.5% water level	kg/m ³	20 ± 2
2.	Overall Density @ 2.5% water level	kg/m ³	28 ± 2
3.	Expansion Ratio @ 2.5% water level	times	50-55
4.	Curing Time	minutes	15 max
5.	Dimensional Stability	%	1 max
6.	Fire Retardancy (PIR)	Class	B3 (DIN 4102)

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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