

Technical Data Sheet

SIPOLYNATE® R100HDUltra

Description

SIPOLYNATE® R100HDUltra is a pre-blended rigid polyurethane polyol for high density applications, such as wood imitation, load bearing supports, and open mould pouring applications. The foam has a good surface finish with excellent cell structure and good inter-laminar adhesion. It is ideally processed through high-pressure impingement mixing.

Typical Component Properties

| Serial No. | Characteristics | Unit | Specifications |
|------------|------------------|------|------------------|
| 1. | Physical State | None | Liquid |
| 2. | Colour | None | Clear Yellow |
| 3. | Specific Gravity | None | 1.05-1.10 (25°C) |
| 4. | Viscosity | cps | 800±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 | 25-45 |
| 4. | Gel Time | seconds | 100-150 |
| 5. | End of Rise Time | seconds | 150-180 |
| 6. | Hardening Time | minutes | 5-7 |

* 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 | 300-950 |
| 2. | Moulded Density | kg/m ³ | 500-1000 |
| 3. | Closed Cell Content | % | >90 |
| 4. | Compressive Strength | MPa | >6.5 |
| 5. | Dimensional Stability | % | 1 max |
| 6. | Fire Retardancy (PIR) | None | No |

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

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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