



PIPFOAM 270

TECHNICAL DATA SHEET

PIP Foam 270 is a rigid two component urethane foam system, specially formulated for continuous pour-in-place construction panel applications. PIP Foam 270 uses a zero ozone-depleting blowing agent technology with a zero ODS (ozone depletion substances) and low-GWP (low-Global Warming Potential).

Applications:

- Continuous construction panels and insulation panel production
- Continuous pour-in-place applications.

| PHYSICAL PROPERTIES | | | |
|--|------------------------------------|----------------------------|-------------|
| Thermal Resistance R (2 in. thick panel, 2 days @ 73°F (23°C)) | 7.1 ft ² •h•°F/Btu•in | 1.25 m ² •°C/W | ASTM C 518 |
| Thermal Conductivity K (2 in. thick panel, 2 days @ 73°F (23°C)) | 0.141 Btu•in/ft ² •h•°F | 0.799 W/m ² •°C | ASTM C 518 |
| In-Place Density | 2.50 lb/ft ³ | 40 kg/m ³ | ASTM D 1621 |
| Compressive Strength | 28.8 +/- 10% psi | 199 +/- 10% kPa | ASTM D 1621 |
| Water Adsorption (%Volume) | < 3.0 | | ASTM D 2842 |
| Dimensional Stability (% volume change @ 28 days) | | | ASTM D 2126 |
| 176°F (80°C), Ambient Relative Humidity | 0.67 % | | |
| 158°F (70°C), 90% relative humidity | 0.65 % | | |
| -22°F (-30°C), Ambient Relative Humidity | -0.53% | | |

| LIQUID COMPONENT PROPERTIES* | | |
|---|---------------------|---------------------|
| PROPERTY | A-PMDI ISOCYANATE | PIP Foam 270 RESIN |
| Color | Brown | Blue/Green |
| Viscosity @ 77°F (25°C) | 150 -350 cps | 650 - 950 cps |
| Specific Gravity | 1.24 | 1.11 - 1.15 |
| Shelf Life of unopened drum properly stored | 12 months | 6 months |
| Storage Temperature | 50 - 85°F (10-30°C) | 50 - 85°F (10-30°C) |
| Mixing Ratio (weight) | 100 | 100 |

*See SDS for more information

| REACTIVITY PROFILE | | | | |
|--------------------|-----------------|-----------------|-----------------|------------------------------|
| | Cream Time | Gel Time | Tack Free Time | Free Rise Density |
| Hand Mix* | 13 - 17 seconds | 46 - 65 seconds | 70 - 85 seconds | 2.2 - 2.4 lb/ft ³ |
| Machine Mix* | 5 - 8 seconds | 25 - 35 seconds | 50 - 65 seconds | 2.1 - 2.4 lb/ft ³ |

*Hand mixed using a 2" mixer @ 2500 RPM for 10 seconds, liquid components at 68°F (20°C).

**High pressure machine (2500 psi), liquid components at 73°F (23°C).

| RECOMMENDED PROCESSING PARAMETERS* | | |
|------------------------------------|----------------------------------|----------------------|
| Type of Machine | High or low pressure PIP machine | |
| Isocyanate Temperature | 68 -73°F | 20 - 23°C |
| Resin Temperature | 68 -73°F | 20 - 23°C |
| Hose Temperature | - | - |
| Mold or Panel Temperature | 110 -130°F | 43 - 54°C |
| Minimum In-place Density | 2.5 lb/ft ³ | 40 kg/m ³ |

*Foam application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment and other factors. While processing, the applicator must continuously observe the characteristics of the foam and adjust processing temperatures and pressures to maintain proper cell structure, adhesion, cohesion and general foam quality. It is the sole responsibility of the applicator to process and apply PIP Foam 270 within specification.

General Requirements: It is important to monitor the in-place density of the foam as stated in the Processing Recommendations section above. A lower density will result in poor physical properties. Furthermore, proper temperature of the mold (110 – 130°F (43 – 54°C) is critical in order to obtain a good adhesion of the foam to the substrate. It is the user's responsibility to test the product to ensure it performs to their expectations. This product should not be used when the continuous service temperature of the substrate is outside the range of -49°F (-45°C) to 200°F (93°C).

Disclaimer: The information herein is to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The foam product is combustible and must be protected in accordance with applicable codes. Protect from direct flame and spark contact, around hot work for example. The exclusive remedy for all proven claims is replacement of our materials.

