HUNTSMAN
BUILDING SOLUTIONS

PIPFOAM 250A
TECHNICAL DATA SHEET

Huntsman Building Solutions' **PIP Foam 250A** is a two component, closed-cell, rigid polyurethane foam system specially formulated for pour-in-place applications. This system is formulated with recycled plastic material and renewable soya oil. This family of product uses the Honeywell Solstice® liquid HFO blowing agent technology, an ultra-low Global Warming Potential and zero ozone depleting agent. Huntsman Building Solutions' PIP Foam 250A comes in three different reactivity profiles, specially adapted for different processing specifications:

- PIP Foam 250A-CO is designed for continuous application and panel insulation in a continuous lamination process.
- PIP Foam 250A-DC is designed for discontinuous applications like single shot panel filling, closed cavity insulation, etc.
- PIP Foam 250A-FROTH is a quasi-froth foam system that exhibits the true-froth characteristics that some insulation processes require.

PHYSICAL PROPERTIES			
Thermal Resistance R (2 in. thick panel, 2 days @ 73°F (23°C))	6.6 – 7.1 ft²•h•°F/Btu•in	1.16 – 1.25 m²•°C/W	ASTM C 518
Thermal Conductivity K (2 in. thick panel, 2 days @ 73°F (23°C))	0.141 – 0.152 Btu•in/ft²•h•°F	0.800 – 0.860 W/m²•°C	ASTM C 518
Desnity in-place	2.5-2.6lbs/ft³	40-42 kg/m³	ASTM D 1621
Compressive Strength	25 - 32 psi	172 - 220 kPa	ASTM D 1621
Tensile Strength	25 - 28 psi	172 - 193 kPa	ASTM D 1623
Dimensional Stability (% volume change @ 28 days)			ASTM D 2126
158°F (70°C), Ambient Relative Humidity	0.04 %		
-22°F (-30°C), Ambient Relative Humidity	0.38 %		

FIRE TEST RESULTS		
Flame Spread Index @ 4"	20 (ClassA)	ASTM E 84
Smoke Development Index @ 4"	350 (Class A)	ASTM E 84
Flame Spread Rating @ 4''	20	CAN/ULC S102
Smoke Developed @ 4''	130	CAN/ULC S102
Flame Spread Value @ 4'' Canadian National Building Code Declared Value (<500)	310	CAN/ULC S127 (corner wall test)

*To meet the Canadian National Building Code specification an insulation material highest value from the CAN/ULC S102 and CAN/ULC S127 test procedures has to be below 500 (<500).

LIQUID COMPONENT PROPERTIES*		
PROPERTY	**A-PMDI ISOCYANATE**	**PIP Foam 250A (HFO) RESIN**
Color	Brown	Greenish
Viscosity @ 77°F (25°C)	180 -220 cps	150 - 350 cps
Specific Gravity	1.20 - 1.24	1.12 - 1.18
Shelf Life of unopened drum properly stored	12 months	6 months
Storage Temperature	50 - 100°F (10-38°C)	50 - 85°F (10 - 29°C)
Mixing Ratio (weight)	130	100

*See SDS for more information

RECOMMENDED PROCESSION 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
Mold or Panel Temperature	113 – 131°F	45 – 55°C
Minimum In-place Density	2.5 lb/ft³	40 kg/m³

REACTIVITY PROFILE						
Series	**PIP Foam 250A-CO**		**PIP Foam 250A-DC**		**PIP Foam 250A-FR**	
Processing Method	Hand Mix*	Machine Mix**	Hand Mix*	Machine Mix**	Hand Mix*	Machine Mix**
Cream Time (Seconds)	13 – 17	5 – 8	50 – 55	28 – 32	21 – 25	11 – 15
Gel Time (Seconds)	46 – 53	25 – 35	180 – 200	105 – 125	110 – 130	55 – 75
Tack Free Time (Seconds)	75 – 85	50 – 65	190 – 220	110 – 130	150 – 190	85 – 115
Free Rise Density (lb/ft^3)	2.20 – 2.30	2.10 – 2.25	1.80 – 1.90	1.75 – 1.85	1.60 – 1.90	1.60 – 1.90

*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).

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 substrates (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 -76°F (-60°C) to 176°F (80°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.

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