

TECHNICAL DATA SHEET  
**POLARFOAM PF-6352-0**  
**(POUR-IN-PLACE SYSTEM)**

**Polarfoam PF-6352-0** is a rigid two component urethane foam system, specially formulated for pour-in-place applications. This system has good flow characteristics and mixes well using a high or low-pressure machine. This friendly environmental foam product is manufactured with recycled plastic material, soya oil material and with zero ODS (ozone depletion substances) blowing agents. This product meets all the requirements of the Montreal protocol to protect the ozone layer..

**Polarfoam PF-6352-0** meets the requirements of the US Coast Specification “Code of US Regulation”: Navigation and Navigable Waters Article #183-114. Polarfoam PF-6352-0 also meets several requirements of Military Test Standard MIL-P-21919C “Military specification for plastic material, cellular polyurethane foam-in-place, rigid” as described in the physical property table of this Technical Data Sheet. All of these tests were performed at an independent laboratory.

Polarfoam PF-6352-0 meets the criteria to qualify for a UL 94 HBF, UL 94 HF-1 and UL 94 HF-2 classification.

**Applications:**

- Flotation
- Insulating panels
- Wall cavities

**Important:**

It is important to monitor the in-place density of the foam as stated in the processing recommendations (see reverse page). A lower density will result in poor physical properties. Furthermore, proper temperature (110-130°F) of the substrates 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. The shelf life of the resin PF-6352-0 is 12 months from the date of manufacture if stored in closed original containers at room temperature.

This product should not be used when the continuous service temperature of the substrate is outside the range of -60°C to 80°

**POLARFOAM PF-6352-0 Pg. 2**

**LIQUID COMPONENT PROPERTIES**

<b>Properties</b>	<b>Isocyanate</b>	<b>Resin</b>
Colour	Brown	Yellowish
Viscosity @ 25° C (cps)	150-350	400-700
Specific gravity	1.20-1.24	1.11-1.15

Mixing ratio (weight)	110	100
Mixing ratio (volume)	100	100

### PROCESSING RECOMMENDATIONS

Type of machine	A high or a low pressure machine	
Isocyanate temperature	20-23°C	68-73°F
Resin temperature	20-23°C	68-73°F
Mold or panel temperature	43-54°C	110-130°F
Minimum in-place density recommended	40 kg/m <sup>3</sup>	2.5 lb/ft <sup>3</sup>

### REACTIVITY PROFILE

	Handmix*	Machine**
Cream time (sec.)	20-25	10-14
Gel time (sec.)	150-165	75-90
Tack free time (sec.)	300-400	190-260
Free rise density (lb/ft <sup>3</sup> )	2.00-2.15	1.90-2.05

\*Mixer 2 inches @ 2500 RPM for 10 seconds, liquid components at 20°C

\*\*High pressure machine (2500 psi), liquid components at 27°C

### PHYSICAL PROPERTIES

Description	Results	ASTM
Density (in-place)	40 kg/m <sup>3</sup> 2.50 lb/ft <sup>3</sup>	D 1622
Thermal resistance R (2 in. thick panel, 2 days @ 23°C)	1.23 m <sup>2</sup> .°C/W 7.0 ft <sup>2</sup> .h.°F/btu.in	C 518
Thermal conductivity K (2 in. thick panel, 2 days @ 23°C)	0.811 W/m <sup>2</sup> .°C 0.143 Btu.in/ft <sup>2</sup> .h.°F	C 518
Thermal resistance R (2 in. thick panel, 90 days @ 23°C)	1.15 m <sup>2</sup> .°C/W 6.5 ft <sup>2</sup> .h.°F/btu.in	C 518
Thermal conductivity K (2 in. thick panel, 90 days @ 23°C)	0.873 W/m <sup>2</sup> .°C 0.154 Btu.in/ft <sup>2</sup> .h.°F	C 518
Dimensional stability (% vol. Change @ 28 days) 80°C, ambient relative humidity 70°C, 90% relative humidity -30°C, ambient relative humidity	0.19 2.71 -0.59	D 2126

<b>US COAST GUARD CODE ARTICLE 183.114</b> Flotation test (Water absorption % after soaking process aging)		D2842-97
Type B Gas (30 Days)	0.25	
Oil #2 (30 days)	-0.31	
Phosphate tri-sodium (30 days)	0.30	
Type B Gas Vapour (30 days)	0.84	
None (water only)	1.66	
<b>MIL-P-21919C</b>		
Density (lb/ft <sup>3</sup> )	2.50	D1622
Compressive Strength (10% deformation)	23.5 psi	D1621
Volume change after heat aging (% of original)	0.02	D2126
Volume Change after humidity aging (% of original)	-0.04	D2126
Distortion or other visible change after aging	No change	
Compression Set (%)	3.5	
Water absorption (lb/ft <sup>2</sup> )	0.08	D2842
Unicellularity (%)	14.78	D6226
Oil Resistance	No change	D471
<b>UL 94 HBF, UL 94 HF-1, UL 94 HF-2</b>	<b>PASS</b>	

These physical properties were obtained with the processing recommendations listed above.

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, express or implied, including any warranty or merchantability or fitness, nor is protection from any law patent inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials. Polyurethane foam is combustible. It is recommended that the user read the material safety data sheets on the liquid chemicals before using the products. Sept. 22, 2008