Bayflex® MP-10000 IMR

Polyurethane (Polyether, MDI)

Covestro - PUR

Message:

Bayflex MP-10,000 IMR is a solid elastomer which has a flexural modulus of approximately 10,000 psi (69 MPa) at room temperature. It is processed on reaction injection molding (RIM) equipment and is used for rollers, gaskets, and encapsulated windows. This system combines rapid demold times, excellent integrity at demold, improved release characteristics, and outstanding physical properties.
This system also offers the advantage of an internal mold release (IMR). It is formulated to provide excellent releasability during production of RIM encapsulated windows while still maintaining strong adhesion to primed glass. Compatibility between MP-10,000 IMR and current industrial in-mold coatings is equivalent to standard Bayflex MP systems. The incorporation of internal mold release technology into RIM modular window production reduces the frequency of external mold release application. This can increase productivity by decreasing cycle time and reducing the frequency of mold cleaning. As with any product, use of the Bayflex MP-10,000 IMR system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

General Information			
Features	Good demoulding performance		
Uses	Washer Roller Doors and Windows		
Forms	Liquid		
Processing Method	Reaction Injection Molding (RIM)		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	0.998	g/cm³	ASTM D792
--	1.00	g/cm³	ASTM D1622
Molding Shrinkage - Flow (3.00 mm)	1.5	%	Internal method
Water Absorption (24 hr, 3.00 mm)	2.9	%	Internal method
Water absorption rate-240 hr (3.00 mm)	5.3	%	Internal method
Low Temperature Brittleness (-50°C, 3.00 mm)	No Cracking		ASTM D746
Water Immersion, Length Increase (3.00 mm)	1.5	%	Internal method
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (shaw d, 3.00mm)	40		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break, 3.00 mm)	15.2	MPa	ASTM D638
Flexural Modulus			ASTM D790
-30°C, 3.00 mm	183	MPa	ASTM D790
23°C, 3.00 mm	68.9	MPa	ASTM D790
65°C, 3.00 mm	53.1	MPa	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412

20% strain [1]	4.14	MPa	ASTM D412
50% strain, 3.00mm [2]	5.17	MPa	ASTM D412
100% strain, 3.00mm [3]	6.89	MPa	ASTM D412
Tensile Strength (Break, 3.00 mm)	15.2	MPa	ASTM D412
Tensile Elongation (Break, 3.00 mm)	300	%	ASTM D412
Tear Strength [4] (3.00 mm)	42.0	kN/m	ASTM D624
Thermal	**Nominal Value**	**Unit**	**Test Method**
CLTE - Flow (3.00 mm)	1.7E-4	cm/cm/°C	ASTM D696
Flammability	**Nominal Value**	**Unit**	**Test Method**
Burning Rate	15	mm/min	FMVSS 302
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components [5]			
Component a	Mixing ratio by weight: 39		
Component B	Mixing ratio by weight: 100		
Demold Time	0.50	min	

Additional Information	Nominal Value	Unit	Test Method

Part A
Type: Isocyanate
Specific Gravity @ 25°C: 1.21
Viscosity @25°C: 700 mPa-s
Flash Point PMCC: 213 °C
Part B
Type: Polyol
Specific Gravity @ 25°C: 1.02
Viscosity @25°C: 1230 mPa-s
Flash Point PMCC: 185 °C
Molding Parameters
Material Temperature: 35 to 45 °C
Mold Temperature: 65 to 70 °C

NOTE	
1.	Die C, 510 mm/min
2.	C mold, 510mm/min
3.	Mouth die C, 510mm/min
4.	C mould
5.	105 Index

Recommended distributors for this material

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