Bayflex® MP-5000

Polyurethane (Polyether, MDI)

Covestro - PUR

Message:

Bayflex MP-5,000 is a solid elastomer which has a flexural modulus of 5,000 psi (35 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. As with any product, use of the Bayflex MP-5,000 system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.
Bayflex MP-5,000 is a formulated RIM system supplied as two liquid components. Component A is a diphenylmethane diisocyanate (MDI) prepolymer, and Component B is a polyether polyol. Note: Component B should be agitated thoroughly prior to transfer of contents from the drum to the day tank.

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)	1.3	%	Internal method
Water Absorption (24 hr, 3.00 mm)	3.3	%	Internal method
Water absorption rate-240 hr (3.00 mm)	5.0	%	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			ASTM D2240
Shaw A, 3.00mm	82		ASTM D2240
Shaw D, 3.00mm	30		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break, 3.00 mm)	13.1	MPa	ASTM D638
Flexural Modulus			ASTM D790
-30°C, 3.00 mm	100	MPa	ASTM D790
23°C, 3.00 mm	34.5	MPa	ASTM D790
65°C, 3.00 mm	27.6	MPa	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412

20% strain [1]	2.76	MPa	ASTM D412
50% strain, 3.00mm [2]	3.62	MPa	ASTM D412
100% strain, 3.00mm [3]	4.65	MPa	ASTM D412
Tensile Strength (Break, 3.00 mm)	13.1	MPa	ASTM D412
Tensile Elongation (Break, 3.00 mm)	360	%	ASTM D412
Tear Strength [4] (3.00 mm)	40.3	kN/m	ASTM D624
Thermal	**Nominal Value**	**Unit**	**Test Method**
CLTE - Flow (3.00 mm)	1.7E-4	cm/cm/°C	ASTM D696
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components [5]			
Component a	Mixing ratio by weight: 35		
Component B	Mixing ratio by weight: 100		
Shelf Life (30°C)	26	wk	
Demold Time	0.50	min	

Additional Information
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: 1.03 Viscosity @25°C: 1350 mPa-s Flash Point PMCC: 160 °C Molding Parameters Material Temperature: 32 to 42 °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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