Bayflex® 110-50

Polyurethane (Polyether, MDI)

Covestro - PUR

Message:

The Bayflex 110-50 system produces a solid urethane elastomer which has a flexural modulus of approximately 50,000 psi* at room temperature. This system can be used with or without milled glass fiber or mineral reinforcements. The Bayflex 110-50 system is used in applications requiring excellent impact properties such as automotive fascias, agricultural and construction equipment, specialty vehicles and recreational equipment.
The Bayflex 110-50 system is a formulated elastomeric reaction injection molding (RIM) system supplied as two liquid components. Component A is a diphenylmethane diisocyanate (MDI) prepolymer, and Component B is a polyether polyol system. As with any product, use of the Bayflex 110-50 system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

General Information			
UL YellowCard	E61384-247031		
Features	Impact resistance, good		
Uses	Architectural application field Agricultural application Application in Automobile Field Strap		
Forms	Liquid		
Processing Method	Reaction Injection Molding (RIM)		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.04	g/cm³	ASTM D792, ASTM D1622
Molding Shrinkage - Flow (3.18 mm)	1.3	%	Internal method
Water absorption rate-240 hr(3.18 mm)	2.8	%	Internal method
Heat Sag [1]			ASTM D3769
4 in Overhang : 121°C, 3.18 mm	1.52	cm	ASTM D3769
6 in Overhang : 121°C, 3.18 mm	0.91	cm	ASTM D3769
Water Immersion, Length Increase (3.18 mm)	0.60	%	Internal method
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D, 3.18 mm)	58		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus			ASTM D790
-30°C, 3.18 mm	793	MPa	ASTM D790
23°C, 3.18 mm	359	MPa	ASTM D790
65°C, 3.18 mm	262	MPa	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break, 3.18 mm)	24.1	MPa	ASTM D412
Tensile Elongation (Break, 3.18 mm)	250	%	ASTM D412
Tear Strength [2] (3.18 mm)	78.8	kN/m	ASTM D624
Impact	**Nominal Value**	**Unit**	**Test Method**

Notched Izod Impact (3.18 mm)	590	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
CLTE - Flow (3.18 mm)	< 7.6E-5	cm/cm/°C	ASTM D696
Flammability	**Nominal Value**		**Test Method**
Flame Rating (3.18 mm)	HB		UL 94
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components [3]			
Component a	Mixing ratio by weight: 58		
Component B	Mixing ratio by weight: 100		
Additional Information	**Nominal Value**	**Unit**	**Test Method**

Part A
Type: Isocyanate
Appearance: Light yellow to yellow liquid
Specific Gravity @ 25°C: 1.21
Viscosity @25°C: 700 mPa-s
Flash Point PMCC: 213 °C
Part B
Type: Polyol
Appearance: Dark amber viscous liquid
Specific Gravity @ 25°C: 1.03
Viscosity @25°C: 1300 mPa-s
Flash Point PMCC: 174 °C
Molding Parameters
Material Temperature: 32 to 38 °C
Mold Temperature: 60 to 70 °C
Typical Cure Time, 0.125 in: 30 sec
Polyol Nucleation - Specific Gravity: 0.70 to 0.75 0

NOTE	
1.	1 hr
2.	C mould
3.	105 Index

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