

Bayflex® XGT-80

Polyurethane (Polyether, MDI)

Covestro - PUR

Message:

Bayflex XGT-80 is an elastomeric polyurethane system used in the reaction injection molding (RIM) process. The system is supplied as two liquid components: Component A is a modified diphenylmethane diisocyanate (MDI), and Component B is a polyether polyol system. Note: The polyol component phase-separates upon standing and must be thoroughly mixed via mechanical means prior to use. The extended gel time of Bayflex XGT-80 gives equipment designers the flexibility to create large, complex parts that can be molded on existing injection machinery. The resin's excellent surface quality and high impact resistance make it a candidate for agricultural equipment, heavy-duty trucks, specialty transportation, and marine applications.

General Information			
Features	Impact resistance, high		
	Excellent appearance		
Uses	Ship application		
	Agricultural application		
Forms	Liquid		
Processing Method	Reaction Injection Molding (RIM)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792, ASTM D1622
Molding Shrinkage - Flow (3.18 mm)	0.80 - 0.90	%	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 3.18 mm)	65		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, 3.18 mm)	25.5	MPa	ASTM D638
Tensile Elongation (Break, 3.18 mm)	150	%	ASTM D638
Flexural Modulus			ASTM D790
-30°C, 3.18 mm	1240	MPa	ASTM D790
23°C, 3.18 mm	572	MPa	ASTM D790
70°C, 3.18 mm	228	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ¹ (3.18 mm)	110	kN/m	ASTM D624
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	640	J/m	ASTM D256
Instrumented Dart Impact ²			ASTM D3763
-30°C, 3.18 mm	5.42	J	ASTM D3763
23°C, 3.18 mm	33.9	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed, 3.18 mm)	53.0	°C	ASTM D648

CLTE - Flow (3.18 mm)	1.1E-4	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: 140, mixing ratio by capacity: 120		
Component B	Mixing ratio by weight: 100, mixing ratio by capacity: 100		
Shelf Life ⁴ (32°C)	26	wk	
Demold Time	1.5	min	
Additional Information	Nominal Value	Unit	Test Method
Heat Sag - 4 in Overhang ⁵ (121°C, 3.18 mm)	1.50	cm	ASTM D3769

Part A

Type: Isocyanate

Appearance: Colorless to straw yellow liquid

Specific Gravity @ 25°C: 1.21

Viscosity @25°C: 700 mPa-s

Flash Point PMCC: 213 °C

NCO: 22.6 - 23.1 %

Part B

Type: Polyol

Appearance: Pale green to amber liquid

Specific Gravity @ 25°C: 1.04

Viscosity @25°C: 550 mPa-s

Flash Point PMCC: 112 °C

Water: <0.09 wt%

Molding Parameters

Material Temperature - Component A: 32 to 38 °C

Material Temperature - Component B: 32 to 38 °C

Mold Temperature: 66 to 71 °C

Polyol Nucleation - Specific Gravity: 0.70 to 0.80 0

shot time: 10 sec

NOTE

1. C mould
2. 2.24 m/sec
3. 1.05 Index
4. 0.125 in
5. 1 hr

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