

Bayflex® XGT-140

Polyurethane (Polyether, MDI)

Covestro - PUR

Message:

Bayflex XGT-140 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.

The extended gel time of Bayflex XGT-140 system 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. As with any product, use of the Bayflex XGT-140 system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

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)	0.85	%	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 3.18 mm)	71		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, 3.18 mm)	29.0	MPa	ASTM D638
Tensile Elongation (Break, 3.18 mm)	80	%	ASTM D638
Flexural Modulus			ASTM D790
-30°C, 3.18 mm	1790	MPa	ASTM D790
23°C, 3.18 mm	965	MPa	ASTM D790
65°C, 3.18 mm	345	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break, 3.18 mm)	29.0	MPa	ASTM D412
Tensile Elongation (Break, 3.18 mm)	80	%	ASTM D412
Tear Strength ¹ (3.18 mm)	123	kN/m	ASTM D624
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	240	J/m	ASTM D256
Instrumented Dart Impact ²			ASTM D3763
-30°C, 3.18 mm	3.39	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)	55.0	°C	ASTM D648
CLTE - Flow (3.18 mm)	1.1E-4	cm/cm/°C	ASTM D696
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components ³			
Component a	Mixing ratio by weight: 160, mixing ratio by capacity: 140		
Component B	Mixing ratio by weight: 100, mixing ratio by capacity: 100		
Demold Time	2.0 - 3.0	min	
Additional Information	Nominal Value	Unit	Test Method
Heat Sag - 4 in Overhang ⁴ (121°C, 3.18 mm)	1.50	cm	ASTM D3769

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

NCO: 22.6 - 23.1 %

Part B

Type: Polyol

Appearance: Viscous liquid

Specific Gravity @ 25°C: 1.04

Viscosity @25°C: 550 mPa-s

Flash Point PMCC: 110 °C

Water: 0.08 wt%

Hydroxyl Number: 465 mg KOH/g

Molding Parameters

Material Temperature: 32 to 38 °C

Mold Temperature: 60 to 70 °C

Polyol Nucleation - Specific Gravity: 0.75 to 0.80 0

shot time: 11 to 12 sec

NOTE

- | | |
|----|------------|
| 1. | C mould |
| 2. | 2.24 m/sec |
| 3. | 1.05 Index |
| 4. | 1 hr |

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