Bayflex® 180 RRIM (20% Mineral)

Polyurethane (Polyether, MDI)

Covestro - PUR

Message:

Bayflex 180 is a high-performance polymer system with excellent heat stability, low moisture absorption, low thermal expansion characteristics and excellent impact resistance. Parts made from this material have excellent surface and paint adhesion qualities and have a DOI (Distinction of Image) comparable to painted steel parts. A wide range of parts can be molded with the Bayflex 180 system, from thin wallstock rocker panels and trim to large, durable body panels and engine enclosures for specialty equipment. As with any product, use of the Bayflex 180 system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.
The Bayflex 180 system is supplied as two reactive liquid components. Component A is a diphenylmethane diisocyanate (MDI) prepolymer and Component B is a polyether polyol.

General Information	
Filler / Reinforcement	Mineral filler, 20% filler by weight
Features	Low hygroscopicity Impact resistance, good Sprayable Thermal stability, good Excellent appearance
Uses	Parts under the hood of a car Application in Automobile Field Automotive exterior parts Car exterior decoration
Forms	Liquid
Processing Method	Reaction Injection Molding (RIM)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.25	g/cm³	ASTM D792, ASTM D1622
Molding Shrinkage - Flow	0.42	%	Internal method
Water absorption-240 hr(3.81 mm)	0.20	%	Internal method
Heat Sag - 6 in Overhang [1]			ASTM D3769
121°C, 3.81 mm	1.02	mm	ASTM D3769
191°C, 3.81 mm	10.2	mm	ASTM D3769

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, 3.81 mm)	32.4	MPa	ASTM D638
Tensile Elongation (Break, 3.81 mm)	70	%	ASTM D638
Flexural Modulus (23°C, 3.81 mm)	1720	MPa	ASTM D790

Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break, 3.81 mm)	32.4	MPa	ASTM D412
Tensile Elongation (Break, 3.81 mm)	70	%	ASTM D412
Tear Strength [2] (3.81 mm)	105	kN/m	ASTM D624

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.81 mm)	160	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
CLTE - Flow (3.81 mm)	7.6E-5	cm/cm/°C	ASTM D696
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components [3]			
Component a	Mixing ratio by weight: 150		
Component B	Mixing ratio by weight: 100		
Shelf Life (32°C)	26	wk	

Additional Information	Nominal Value	Unit	Test Method

Part A
Type: Isocyanate
Appearance: Colorless to light yellow liquid
Specific Gravity @ 25°C: 1.1
Viscosity @25°C: 735 mPa-s
Flash Point PMCC: >93 °C
Part B
Type: Polyol
Appearance: Yellow to amber liquid
Specific Gravity @ 25°C: 1.01
Viscosity @25°C: 960 mPa-s
Flash Point PMCC: 164 °C
Molding Parameters
Material Temperature: 32 to 43 °C
Mold Temperature: 71 to 74 °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

Recommended distributors for this material

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