

Bayflex® 963

Polyurethane (MDI)

Covestro - PUR

Message:

Bayflex 963 is a fully compounded polyether-based polyurethane system consisting of two liquid components which can be water-blown. Component A is a modified diphenylmethane diisocyanate (MDI) prepolymer, and Component B is a polyether polyol system.

The Bayflex 963 system is used in the manufacture of microcellular polyurethane innersoles. The innersoles prepared from these compounds combine light weight, comfort, and durability.

Processibility and dynamic flexural properties are excellent and have made the Bayflex 963 system a prime innersole material. As with any product, use of the Bayflex 963 system in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.

The properties of the Bayflex 963 system, listed below, are representative of typical performance characteristics of molded panels. Actual results may vary, depending on part design and processing conditions.

General Information			
Features	Workability, good		
	Good flexibility		
Uses	Footwear		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.304	g/cm ³	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness	60		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break)	2.07	MPa	ASTM D412
Tensile Elongation (Break)	500	%	ASTM D412
Tear Strength ¹	1.40	kN/m	Internal method
Compression Load Deflection at 25%	0.0517	MPa	ASTM D575
Compression Load Deflection at 50%	0.138	MPa	ASTM D575
Compression Set (25°C, 22 hr)	4.0	%	ASTM D395
Thermoset	Nominal Value		
Thermoset Components			
Component a	Mixing ratio by weight: 69		
Component B	Mixing ratio by weight: 100		
Additional Information			

Part A

Type: Isocyanate

Appearance: Light yellow viscous liquid

Specific Gravity @ 25°C: 1.20

Viscosity @25°C: 1100 mPa*s

Flash Point PMCC: 207°C

Bulk Density @ 20°C:10.01 lb/gal

NCO: 18.7 - 19.1 wt%

Part B

Type: Polyol

Appearance: Milky white liquid

Specific Gravity @ 25°C: 1.06

Viscosity @25°C: 1100 mPa*s

Flash Point PMCC: 126°C

Bulk Density @ 25°C: 8.85 lb/gal

Water: 0.83 wt%

Hydroxyl Number: 125

Material Temperature: 25 to 30°C Mold Temperature: 43 to 49°C Demold Time: 3.5 min Linear Shrinkage@ 0.5 g/cm: <1.0% Hand Mix Reactivity @ 25°C

Cream Time: 10 to 15 sec

Tack Free: 45 to 55 sec

Pull Time: 55 to 65 sec

Free-Rise Density: 8 to 11 lb/ft³

NOTE

1. Block

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