Bayflex® 953

Polyurethane (MDI)

Covestro - PUR

Message:

Bayflex 953 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 953 system is used in the manufacture of microcellular polyurethane shoe soles. Soles prepared from these components combine light weight, comfort, and durability. Processibility and dynamic flexural properties are excellent over a wide range of densities. The combination of excellent physical properties and ease of processing has made the Bayflex 953 system a prime material for single-density soles for fashion and casual shoes. As with any product, use of the Bayflex 953 system in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.

General Information			
Uses	Footwear		
Forms	Liquid		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.520	g/cm³	Internal method
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	50		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	70.0	mg	ASTM D3489
Ross Flex - 0% Cut Growth			ASTM D1052
-29°C, 6.35 mm	> 5.0E+4	Cycles	ASTM D1052
23°C, 6.35 mm	> 1.0E+5	Cycles	ASTM D1052
Oil Resistance - Volume Swell		%	ASTM D5694
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break)	3.10	MPa	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412
Tear Strength			
-- [1]	4.38	kN/m	Internal method
-- [2]	14.0	kN/m	ASTM D1004
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components [3]			
Component a	Mixing ratio by weight: 70		
Component B	Mixing ratio by weight: 100		
Additional Information	**Nominal Value**	**Unit**	**Test Method**

Part A
Type: Isocyanate
Appearance: Light yellow viscous liquid
Specific Gravity @ 25°C: 1.20
Viscosity @25°C: 1100 mPa
Flash Point, PMCC: 207°C
NCO: 18.7 to 19.1 wt%
Bulk Density at 25°C: 10.01 lb/gal
Part B
Type: Polyol
Appearance: White liquid
Specific Gravity @ 25°C: 1.06
Viscosity @25°C: 1100 mPa-s
Flash Point, PMCC: 132°C
Bulk Density at 25°C: 8.80 lb/gal
Water: 0.46 wt% max
Hydroxyl Number: 160
Material Temperature: 28°CMold Temperature: 49°CDemold Time: 3.5 minLinear Shrinkage at 0.50 g/cm^3: <1.0%Hand Mix Reactivity at 25°C
Cream Time: 9 to 13sec
Tack-Free Time: 10 to 25 sec
Pull Time: 30 to 40 sec
Free-Rise Density: 15 to 18 lb/ft^3

NOTE	
1.	Block
2.	C mould
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Recommended distributors for this material

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