Bayflex® 957

Polyurethane (MDI)

Covestro - PUR

Message:

Bayflex 957 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 957 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 957 system a prime soling material for fashion and casual shoes. As with any product, use of the Bayflex 957 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 957 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	0.497	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 [1]			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		%	ASTM D5694
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break)	3.10	MPa	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412
Tear Strength			
-- [2]	4.38	kN/m	Internal method
-- [3]	14.0	kN/m	ASTM D624
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components			
Component a	Mixing ratio by weight: 77		
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*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: 1.07
Viscosity @25°C: 1100 mPa*s
Flash Point PMCC: 132°C
Bulk Density @ 25°C: 8.93 lb/gal
Water: 0.45 wt%
Hydroxyl Number: 170
Material Temperature: 28°CMold Temperature: 49°CDemold Time: 3.5 minLinear Shrinkage @ 0.50 g/cm^3: <1.0%Hand Mix Reactivity @ 25°C
Cream Time: 12 to 16 sec
Tack Free: 23 to 33 sec
Pull Time: 32 to 43 sec
Free-Rise Density: 12.5 to 15 lb/ft^3

NOTE	
1.	0% Cut Growth
2.	Block
3.	C mould

Recommended distributors for this material

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