Bayflex® 952

Polyurethane (MDI)

Covestro - PUR

Message:

Bayflex 952 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 952 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 952 system a prime soling material for single-density soles for fashion and casual shoes. As with any product, use of the Bayflex 952 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	0.500	g/cm³	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	55		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	70.0	mg	ASTM D4060
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	МРа	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: 1.05 Viscosity @25°C: 1100 mPa-s Flash Point, PMCC: 138°C Bulk Density at 25°C: 8.70 lb/gal

Water: 0.38 wt% max Hydroxyl Number: 157

Material Temperature: 28°CMold Temperature: 49°CDemold Time: 3.5 minLinear Shrinkage at 0.50 g/cm³: <1.0%Hand Mix Reactivity at 25°C

Cream Time: 10 to 18 sec Tack-Free Time: 30 to 45 sec Pull Time: 40 to 55 sec

Free-Rise Density: 15 to 18 lb/ft³

NOTE		
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