

Bayflex® 956

Polyurethane (MDI)

Covestro - PUR

Message:

Bayflex 956 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 956 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 956 system a prime soling material for fashion and casual shoes. As with any product, use of the Bayflex 956 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			
Features	Workability, good		
	Good flexibility		
Uses	Footwear		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.481 - 0.545	g/cm ³	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	51 - 58		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	30.0 - 70.0	mg	ASTM D3489
Ross Flex ¹			ASTM D1052
-29°C, 6.35 mm	> 5.0E+4	Cycles	ASTM D1052
-18°C, 6.35 mm	> 1.0E+5	Cycles	ASTM D1052
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break)	3.45 - 4.14	MPa	ASTM D412
Tensile Elongation (Break)	350 - 450	%	ASTM D412
Tear Strength			
-- ²	3.33 - 4.38	kN/m	Internal method
-- ³	15.8 - 19.3	kN/m	ASTM D624
Thermoset	Nominal Value		
Thermoset Components ⁴			
Component a	Mixing ratio by weight: 78		
Component B	Mixing ratio by weight: 100		
Additional Information			

Part A

Type: Isocyanate

Specific Gravity @ 25°C: 1.20

Viscosity @25°C: 1100 mPa*s

Flash Point PMCC: 207°C

NCO: 18.7 - 19.1 wt%

Part B

Type: Polyol

Specific Gravity @ 25°C: 1.06

Viscosity @25°C: 1000 to 1500 mPa*s

Flash Point PMCC: 126°C

Water: 0.38 to 0.44 wt%

Hydroxyl Number: 170 to 180 mg KOH/g

Material Temperature: 28 to 32°C Mold Temperature: 43 to 51°C Demold Time: 3.5 min Linear Shrinkage @.5 g/cm³: <1.0% Hand Mix Reactivity @ 28°C

Cream Time: 9 to 13 sec

Tack Free: 10 to 25 sec

Pull Time: 25 to 35 sec

Free-Rise Density: 15 to 18 lb/ft³

NOTE

1.	0% Cut Growth
2.	Split
3.	C mould
4.	98 Index

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