

Bayfill® 382 (53.2:100)

Polyurethane (MDI)

Covestro - PUR

Message:

Bayfill 382 is a semi-rigid polyurethane foam system designed for automotive interior applications. The Bayfill 382 system is an excellent choice for the production of soft-touch panels, such as instrument panels, door trim, and center consoles. The foam is typically molded in a back-filling process between a soft, exterior skin and a rigid, thermoplastic substrate.

The Bayfill 382 system is supplied as two components. Component A is a polymeric diphenylmethane diisocyanate (PMDI). Component B is a polyol mixture. As with any product, use of the Bayfill 382 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	Foam		
	Application in Automobile Field		
	Car interior parts		
	Car interior equipment		
	Car dashboard		
Physical	Nominal Value	Unit	Test Method
Molded Density	141	kg/m³	ASTM D3574A
Compression Force Deflection			ASTM D3574C
-- ¹	0.228	MPa	ASTM D3574C
-- ²	0.172	MPa	ASTM D3574C
Compression Set			ASTM D3574D
Cd ³	59	%	ASTM D3574D
Cd ⁴	51	%	ASTM D3574D
Ct ⁵	26	%	ASTM D3574D
Ct ⁶	30	%	ASTM D3574D
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
-- ⁷	0.331	MPa	ASTM D3574K
--	0.352	MPa	ASTM D3574E
Tensile Elongation			
Fracture ⁸	23	%	ASTM D3574K
Fracture	27	%	ASTM D3574E
Elastomers	Nominal Value	Unit	Test Method
Tear Strength	0.350	kN/m	ASTM D3574F
Thermoset	Nominal Value		
Thermoset Components			
Component a	Mixing ratio by weight: 53		
Component B	Mixing ratio by weight: 100		
Additional Information			

Part A

Type: Isocyanate

Appearance: Dark brown to black liquid

Specific Gravity @ 25°C: 1.24

Viscosity @25°C: 200 cps

Flash Point PMCC: 199°C

NCO: 31 wt%

Part B

Type: Polyol

Appearance: Black liquid

Specific Gravity @ 25°C: 1.01

Viscosity @25°C: 1400 cps

Flash Point PMCC: 131°C

Water: 2.8 wt%

Hydroxyl Number: 70 KOH/g

Material Temperatures: 27 to 32°C Mold Temperature: 38 to 43°C Demold Time: >90 sec Hand Mix Reactivity at 25°C

Cream Time: 14 to 22 sec

Top of Cup Time: 50 to 64 sec

Gel Time: 60 to 76 sec

Rise Time: 87 to 107 sec

Free-Rise Density: 2.9 to 4.5 lb/ft³

Machine Reactivity at 29°C

Cream Time: 8 to 12 sec

Top of Cup Time: 24 to 30 sec

Gel Time: 40 to 45 sec

Rise Time: 60 to 65 sec

Free-Rise Density: 3.10 to 4.10 lb/ft³

Molded Density: 8.0 to 11.0 lb/ft³

NOTE

1.	0.5
2.	After J2 Autoclave
3.	After J2 Autoclave, Cd=compression set as a percentage of the original deflection
4.	50, Cd=compression set as a percentage of the original deflection
5.	50%, Ct=compression set as a percentage of the original thickness
6.	After J2 Autoclave, Ct=compression set as a percentage of the original thickness
7.	Dry Heat Aged at 140°C
8.	Dry Heat Aged at 140°C

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