

# Baydur® 641 IBS (35 pcf)

Polyurethane (MDI)

Covestro - PUR

## Message:

Baydur 641 IBS is a rigid polyurethane structural foam system used in the reaction injection molding (RIM) process. This system is supplied as two reactive liquid components and is typically used with a blowing paste purchased separately. Component A is a polymeric diphenylmethane diisocyanate (PMDI). Component B is a formulated polyol system containing no CFC- or HCFC-blowing additives. The blowing paste is Baydur PU-1731.

General Information			
Features	Good dimensional stability		
	Excellent appearance		
Uses	Structural Foam		
	Industrial application		
	Medical/nursing supplies		
Processing Method	Reaction Injection Molding (RIM)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.559	g/cm³	ASTM D792
Molding Shrinkage - Flow (12.7 mm)	0.30 - 0.50	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 12.7 mm)	64		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, 12.7 mm)	11.7	MPa	ASTM D638
Tensile Elongation (Break, 12.7 mm)	8.0	%	ASTM D638
Flexural Modulus (12.7 mm)	558	MPa	ASTM D790
Flexural Strength (12.7 mm)	23.4	MPa	ASTM D790
Compressive Strength (12.7 mm)	11.7	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength <sup>1</sup>	12	kJ/m²	Internal method
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, unannealed, 12.7mm)	75.0	°C	ASTM D648
Thermoset	Nominal Value		
Thermoset Components			
Component a	Mixing ratio by weight: 110		
Component B	Mixing ratio by weight: 100		
Additional Information			

#### Part A

Type: Isocyanate

Appearance: Dark brown liquid

Specific Gravity @ 25°C: 1.24

Viscosity @25°C: 200 cps

Flash Point PMCC: 199°C

NCO: 31.5 wt%

#### Part B

Type: Polyol

Appearance: Pale yellow liquid

Specific Gravity @ 25°C: 1.02

Viscosity @25°C: 2000 cps

Flash Point PMCC: 187°C

Water: 0.45 wt%

Hydroxyl Number: 367 KOH/g

Material Temperatures: 27 to 35°C Mold Temperature: 60 to 70°C Hand Mix Reactivity at 25°C

Cream Time: 8 to 13 sec

Gel Time: 15 to 25 sec

Tack Free Time: 23 to 28 sec

Free-Rise Density: 7.5 to 10 lb/ft<sup>3</sup>

Polyol Nucleation Specific Gravity: 0.85 to 0.90 Typical cure Time, 0.500 in Thickness: 4 sec

#### NOTE

1. 0.5 in

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