

# Innothane® IE-3040

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

IE-3040 is a polyethylene-like polyurethane formulated for hand-batch processing, roto-casting or vacuum cast methods. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA, or TDI. It has excellent green strength yielding enhanced demold characteristics.

General Information			
Features	Good Green Strength		
	Good Mold Release		
RoHS Compliance	RoHS Compliant		
Appearance	White		
Processing Method	Vacuum Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.05	g/cm <sup>3</sup>	
Cured	1.08	g/cm <sup>3</sup>	
Base Resin	1.21	g/cm <sup>3</sup>	
Molding Shrinkage - Flow	0.10 to 0.50	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	469	MPa	ASTM D790
Flexural Strength	21.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	150	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	85.0	°C	
1.8 MPa, Unannealed	61.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 100		
Hardener	Mix Ratio by Weight: 100		
	Mix Ratio by Weight: 70		
Resin	Mix Ratio by Volume: 61		

Demold Time	60 to 120	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
25°C <sup>1</sup>	0.075	Pa·s	
25°C <sup>2</sup>	0.30	Pa·s	
25°C <sup>3</sup>	0.90	Pa·s	
Curing Time <sup>4</sup>	25	hr	
Gel Time	4.0 to 6.0	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	55 to 65		ASTM D2240
Tensile Strength	23.4	MPa	ASTM D638
Tensile Elongation at Break	55	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		
4.	24 hour at 77°F + 1 hour at 150°F		

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