

# Innothane® IE-3050

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

IE-3050 is a rigid polyurethane formulated for hand-batch processing 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		
	High Rigidity		
RoHS Compliance	RoHS Compliant		
Appearance	White		
Processing Method	Vacuum Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Cured	1.05	g/cm <sup>3</sup>	
Hardener	1.06	g/cm <sup>3</sup>	
Base Resin	1.16	g/cm <sup>3</sup>	
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	1210	MPa	ASTM D790
Flexural Strength	49.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	72.0	°C	
1.8 MPa, Unannealed	65.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 100		
Hardener	Mix Ratio by Weight: 92		
	Mix Ratio by Weight: 100		
Resin	Mix Ratio by Volume: 100		

Demold Time	25 to 35	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
25°C <sup>1</sup>	0.075	Pa·s	
25°C <sup>2</sup>	0.15	Pa·s	
25°C <sup>3</sup>	0.45	Pa·s	
Curing Time (25°C)	1.7E+2	hr	
Gel Time	4.0 to 7.0	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	65 to 75		ASTM D2240
Tensile Modulus	1140	MPa	ASTM D638
Tensile Strength	34.1	MPa	ASTM D638
Tensile Elongation at Break	24	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		

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