

# Innothane® IE-3081

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

IE-3081 is a rigid polyurethane formulated for room temperature hand-batch or vacuum assisted casting methods. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA or TDI. IE-3081 has a very low mixed viscosity. It is ideal for color-matching due to its neutral semi-transparent appearance.

General Information			
Features	High Rigidity		
	Low Viscosity		
RoHS Compliance	RoHS Compliant		
Appearance	Translucent		
Processing Method	Vacuum Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.03	g/cm <sup>3</sup>	
Cured	1.08	g/cm <sup>3</sup>	
Base Resin	1.10	g/cm <sup>3</sup>	
Molding Shrinkage - Flow	0.50 to 1.0	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	1380	MPa	ASTM D790
Flexural Strength	53.8	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	60.0	°C	
1.8 MPa, Unannealed	55.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 100		
Hardener	Mix Ratio by Weight: 94		
	Mix Ratio by Weight: 100		
Resin	Mix Ratio by Volume: 100		

Demold Time	120 to 240	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
25°C <sup>1</sup>	0.040	Pa·s	
25°C <sup>2</sup>	0.10	Pa·s	
25°C <sup>3</sup>	0.25	Pa·s	
Curing Time (25°C)	1.7E+2	hr	
Gel Time	20 to 30	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	65 to 75		ASTM D2240
Tensile Strength	31.0	MPa	ASTM D638
Tensile Elongation at Break	11	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		

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