

InnoClear™ OC-7086

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

OC-7086 is a water-clear, 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. The unique chemistry allows for excellent optical clarity as well as U.V. protection. Mixed material can be cast into either tin or platinum silicone molds.

General Information			
Features	Good UV Resistance		
	High Clarity		
	High Rigidity		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
Processing Method	Vacuum Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Cured	1.10	g/cm ³	
Hardener	1.10	g/cm ³	
Base Resin	1.13	g/cm ³	
Molding Shrinkage - Flow	0.10 to 0.50	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	2380	MPa	ASTM D790
Flexural Strength	110	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	59	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	95.0	°C	
1.8 MPa, Unannealed	91.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 59		
Hardener	Mix Ratio by Weight: 57		

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 ¹	0.45	Pa·s	
25°C ²	0.65	Pa·s	
25°C ³	1.3	Pa·s	
Curing Time ⁴	28	hr	
Gel Time	15 to 20	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	75 to 85		ASTM D2240
Tensile Modulus	1830	MPa	ASTM D638
Tensile Strength	72.4	MPa	ASTM D638
Tensile Elongation at Break	8.0	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		
4.	24 hours at 77°F + 4 hours at 150°F		

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