

InnoClear™ VA-273

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

VA-273 is a high heat polyurethane formulated for hand-batch or vacuum assisted casting methods. Excellent physical properties can be obtained without the utilization of mercury, MOCA, or TDI. The unique chemistry of VA-273 imparts excellent optical clarity as well as U.V. stability. With a short post cure, exceptional heat resistance may be achieved.

General Information			
Features	Good UV Resistance		
	High Clarity		
	High Heat Resistance		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
Processing Method	Vacuum Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.08	g/cm ³	
Cured	1.14	g/cm ³	
Base Resin	1.16	g/cm ³	
Molding Shrinkage - Flow	0.10 to 0.50	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	2410	MPa	ASTM D790
Flexural Strength	110	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	37	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	65.0	°C	
1.8 MPa, Unannealed	58.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 40		
Hardener	Mix Ratio by Weight: 37		

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	0.90	Pa·s	
25°C ²	1.0	Pa·s	
25°C ³	2.1	Pa·s	
Curing Time (25°C)	1.7E+2	hr	
Gel Time	10 to 14	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	80 to 90		ASTM D2240
Tensile Strength	62.1	MPa	ASTM D638
Tensile Elongation at Break	4.0	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		

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