RapidVac[™] VA-274

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

VA-274 is a water clear, rigid polyurethane formulated for room temperature hand-batch or vacuum assisted casting methods. Excellent physical properties can be obtained without the utilization of mercury, MOCA, or TDI. VA-274 is low viscosity to be used in applications with thin wall sections for excellent flow rates.

General Information				
Features	High Flow			
	High Rigidity			
	Low Viscosity			
RoHS Compliance	RoHS Compliant			
Appearance	Clear/Transparent			
Processing Method	Vacuum Casting			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity				
Hardener	1.05	g/cm³		
Cured	1.08	g/cm³		
Base Resin	1.16	g/cm³		
Molding Shrinkage - Flow	0.50 to 1.0	%	ASTM D2566	
Mechanical	Nominal Value	Unit	Test Method	
Flexural Modulus	2520	MPa	ASTM D790	
Flexural Strength	115	MPa	ASTM D790	
Impact	Nominal Value	Unit	Test Method	
Notched Izod Impact	53	J/m	ASTM D256	
Thermal	Nominal Value	Unit	Test Method	
Deflection Temperature Under Load			ASTM D648	
0.45 MPa, Unannealed	74.0	°C		
1.8 MPa, Unannealed	70.0	°C		
Thermoset	Nominal Value	Unit	Test Method	
Thermoset Components				

Mix Ratio by Volume: 55

Hardener

Mix Ratio by Weight: 50

Resin	Mix Ratio by Volume: 100		
Demold Time	240 to 480	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
1	0.73	Pa·s	
2	0.75	Pa·s	
3	0.90	Pa·s	
Curing Time ⁴	40	hr	
Gel Time	15 to 21	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	80 to 86		ASTM D2240
Tensile Strength	67.6	MPa	ASTM D638
Tensile Elongation at Break	7.0	%	ASTM D638
NOTE			
1.	Hardener		
2.	Mixed		
3.	Resin		
4.	24 hours at 77°F + 16 hours at 180°F		

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