

# RapidVac™ VA-255

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

VA-255 is a rigid polyurethane formulated for hand-batch and vacuum cast methods. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA, or TDI. VA-255 has excellent green strength for good demold characteristics.

General Information			
Features	Durable		
	Good Green Strength		
	Good Mold Release		
	High Rigidity		
RoHS Compliance	RoHS Compliant		
Appearance	Off-White		
	White		
Processing Method	Vacuum Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.11	g/cm <sup>3</sup>	
Cured	1.14	g/cm <sup>3</sup>	
Base Resin	1.25	g/cm <sup>3</sup>	
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	2760	MPa	ASTM D790
Flexural Strength	114	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	90.0	°C	
1.8 MPa, Unannealed	82.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 62		
Hardener	Mix Ratio by Weight: 55		

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>	0.20	Pa·s	
25°C <sup>2</sup>	0.35	Pa·s	
25°C <sup>3</sup>	1.0	Pa·s	
Curing Time <sup>4</sup>	28	hr	
Gel Time	8.0 to 12	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	75 to 85		ASTM D2240
Tensile Modulus	1930	MPa	ASTM D638
Tensile Strength	68.9	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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