

# RapidCast™ RC-82D

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

## Message:

RC 82D is a translucent polyurethane formulated for room temperature meter-mix dispensing systems and short mold cycle times. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA or TDI RC-82D is particularly ideal for color-matching applications due to its neutral semi-transparent appearance

General Information			
Features	Fast Molding Cycle		
RoHS Compliance	RoHS Compliant		
Appearance	Translucent		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.05	g/cm <sup>3</sup>	
Cured	1.12	g/cm <sup>3</sup>	
Base Resin	1.22	g/cm <sup>3</sup>	
Molding Shrinkage - Flow	0.10 to 0.50	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	1720	MPa	ASTM D790
Flexural Strength	74.5	MPa	ASTM D790
Compressive Strength	64.8	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	37	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	75.0	°C	ASTM D648
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 100		
Hardener	Mix Ratio by Weight: 86		
	Mix Ratio by Weight: 100		
Resin	Mix Ratio by Volume: 100		
Demold Time	9.0 to 15	min	
Uncured Properties	Nominal Value	Unit	Test Method

Viscosity			
25°C <sup>1</sup>	0.10	Pa·s	
25°C <sup>2</sup>	0.38	Pa·s	
25°C <sup>3</sup>	0.65	Pa·s	
Curing Time <sup>4</sup>	40	hr	
Gel Time	0.67 to 1.0	min	
<b>Cured Properties</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Shore Hardness (Shore D)	75 to 85		ASTM D2240
Tensile Strength	58.6	MPa	ASTM D638
Tensile Elongation at Break	10	%	ASTM D638
<b>NOTE</b>			
1.	Resin		
2.	Mixed		
3.	Hardener		
4.	24 hours at 77°F + 16 hours at 200°F		

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