

RapidCast™ RC-510

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

RC-510 is a rigid 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.

General Information			
Features	Fast Molding Cycle		
	High Heat Resistance		
	High Rigidity		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.08	g/cm ³	
Cured	1.12	g/cm ³	
Base Resin	1.20	g/cm ³	
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	1860	MPa	ASTM D790
Flexural Strength	87.6	MPa	ASTM D790
Compressive Modulus	4000	MPa	ASTM D695
Compressive Strength	63.4	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	21	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	157	°C	
1.8 MPa, Unannealed	135	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Mix Ratio by Volume: 100			
Hardener	Mix Ratio by Weight: 90		

Mix Ratio by Weight: 100

Resin	Mix Ratio by Volume: 100		
Demold Time	20 to 30	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
25°C ¹	0.10	Pa·s	
25°C ²	0.70	Pa·s	
25°C ³	2.0	Pa·s	
Curing Time (25°C)	24	hr	
Gel Time	0.67 to 1.0	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	5.0	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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