



Rapid Cast™

Product Name

RC-510 Polyurethane



Description

RC-510 is a tough, impact resistant elastomer 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.

Physical Properties

Mix Ratio	Resin:Hardener (parts by weight)		100:90	
Mix Ratio	Resin:Hardener (parts by volume)		100:100	
Viscosity (cps@77°F)	Resin	100	Gel Time	50 ± 10 Seconds
	Hardener	2000	Demold Time	25 ± 5 Minutes
	Mixed	700	Color	Black
Specific Gravity (g/cc)	Resin	1.20		
	Hardener	1.08		

Cure 1 ▶ 24 hours at 77°F
Cure 2 ▶ 7 days at 77°F

Cured Properties

	Method	Cure 1	Cure 2
Hardness (shore D)	ASTM D-2240	85 ± 5	85 ± 5
Tensile Strength (psi)	ASTM D-638	9,000	9,400
Elongation at Break	ASTM D-638	5%	5%
Compression Strength (psi)	ASTM D-695	9,200	9,600
Compression Modulus (psi)	ASTM D-695	580,000	600,000
Ultimate Flex Strength (psi)	ASTM D-790	12,700	12,700
Flexural Modulus (psi)	ASTM D-790	270,000	350,000
Notched Izod (ft.lbs./in.)	ASTM D-256	0.4	0.5
Linear Shrink (in./in.)	ASTM D-2566	N/A	N/A
Heat Deflection Temp. (66psi)	ASTM D-648	157°C / 315°F	160°C / 320°F
Heat Deflection Temp. (264psi)	ASTM D-648	135°C / 275°F	140°C / 284°F
Specific Gravity (g/cc)		1.12	1.12

Processing Notes

RC-510 can be used at room temperature. Meter-mix equipment is recommended due to the short working-life of the formulation. The HDT can be improved beyond the data listed above with more aggressive post-cures.

An HDT (@ 66psi) of 191°C / 376°F is reached with the following cure schedule... 16 hours at 200°F.

The hardener component will separate during shipping/storage.

Agitate the hardener and resin before use to ensure that the formula is homogeneous.

Safety and Handling

DO NOT USE UNTIL MSDS HAVE BEEN READ AND UNDERSTOOD. Store containers in a dry location. Partially used containers should be blanketed with dry nitrogen to prevent moisture contamination. Moisture will react with the resin component, creating carbon dioxide gas and a possible pressure increase in the container.

SPECIFICATION WRITERS: The above values are meant to represent typical properties only. Users are encouraged to qualify products in their own laboratories prior to specification publication.

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