



Rapid Cast™

Product Name

RC-400 Polyurethane



Description

RC-400 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. RC-400 is formulated using only raw materials listed under FDA specification CFR 21.177.1680 for dry food contact.

Physical Properties

Mix Ratio	Resin:Hardener (parts by weight)		100:88
Mix Ratio	Resin:Hardener (parts by volume)		100:100
Viscosity (cps@77°F)	Resin	600	Gel Time
	Hardener	2000	Demold Time*
	Mixed	1200	Color
			White
Specific Gravity (g/cc)	Resin	1.21	* Demold time is always mass dependant
	Hardener	1.07	

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	80 ± 5	80 ± 5
Tensile Strength (psi)	ASTM D-638	6,200	7,000
Elongation at Break	ASTM D-638	10%	5%
Compression Strength (psi)	ASTM D-695	N/A	N/A
Compression Modulus (psi)	ASTM D-695	N/A	N/A
Ultimate Flex Strength (psi)	ASTM D-790	9,800	12,100
Flexural Modulus (psi)	ASTM D-790	230,000	275,000
Notched Izod (ft.lbs./in.)	ASTM D-256	0.8	1.1
Linear Shrink (in./in.)	ASTM D-2566	0.002-0.005	0.002-0.005
Heat Deflection Temp. (66psi)	ASTM D-648	85°C / 185°F	85°C / 185°F
Heat Deflection Temp. (264psi)	ASTM D-648	80°C / 176°F	80°C / 176°F
Specific Gravity (g/cc)		1.12	1.12

Processing Notes

RC-400 can be used at room temperature. Meter-mix equipment is recommended due to the short working-life of the formulation. RC-400 uses only raw materials specified under FDA CFR 21.177.1680 for dry food contact.

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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