

RP 6454 R/H

RAPID SET / RAPID DEMOLD

HIGH FLEXURAL MODULUS PROTOTYPE SYSTEM FOR MACHINE DISPENSING

Ren® RP 6454 resin and hardener is an extremely fast-setting, machine-dispensable polyurethane casting system for production of prototype parts from low-cost tooling. The cured castings exhibit ABS thermoplastic-like properties including good thermal resistance, and dimensional stability. RP 6454 R/H offers rapid part production with extremely fast demold time, up to 6 parts per hour depending upon part configuration. When this fast-setting polyurethane system is combined with meter-mix dispensing equipment, parts can be efficiently cycled in 15 to 30 minutes.

MIX RATIO

Resin to Hardener	By Weight: 80 to 100	By Volume: 67 to 100
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TYPICAL HANDLING PROPERTIES*

	<u>ASTM Method</u>	<u>Resin</u>	<u>Hardener</u>	<u>Mixed</u>
Color	Visual	Amber	Cream	Caramel
Specific Gravity	D-1963	1.20	1.08	
Viscosity, cP	D-2393	75	1,700	
Gel Time, 150g, seconds	D-2471			45-65

NOTE: These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed in establishing product specifications, please consult with our Product Management Department.

RECOMMENDED CURE SCHEDULES

1. 77°F (25°C) at 7 days
2. 77°F (25°C) at 24 hours, plus 176°F (80°C) at 14 hours

TYPICAL CURED PROPERTIES*

	<u>ASTM Method</u>	<u>Cure 1 Value</u>	<u>Cure 2 Value</u>
Density, lb./ft ³ (g/cm ³)	D-792	75 (1.20)	75 (1.20)
Cubic Inch per Pound		23.1	23.1
Hardness, Shore D	D-2240	85	85
Flexural Strength, 5% strain, psi	D-790	11,700	11,800
Flexural Modulus, psi	D-790	313,000	300,000
Ultimate Tensile Strength, psi	D-638	7,500	4,600
Tensile Modulus, psi	D-638	322,000	264,000
% Elongation	D-638	12	2
Tg by DMA, E", °F(°C)	D-4065	228 (109)	225 (107)
Deflection Temperature, °F(°C) 66 psi	D-648	186 (86)	157 (70)
264 psi		162 (72)	180 (82)
Ultimate Compressive Strength, psi	D-695	27,100	25,700
Compressive Modulus, psi	D-695	296,000	297,000
Izod Impact, notched, ft-lb./in	D-256	0.7	0.6
Coefficient of Thermal Expansion	D-3386		
-22 to 86°F, in/in/°F		48 x 10 ⁻⁶	56 x 10 ⁻⁶
-30 to 30°C, in/in/°C		86 x 10 ⁻⁶	101 x 10 ⁻⁶

* Tested @ 77°F (25°C) unless otherwise noted.

SAFETY: Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

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