

Parts-In-Minutes®

RP 6455 R/H

2-MINUTE RAPID SET

HIGH FLEXURAL MODULUS PROTOTYPE SYSTEM FOR MACHINE DISPENSING

Ren® RP 6455 resin and hardener is a machine-dispensable polyurethane casting system for the rapid production of prototype parts from low-cost tooling. The cured castings exhibit thermoplastic-like properties including high impact and thermal resistance with good dimensional stability. RP 6455 R/H offers additional working time to fill large molds. When this rapid polyurethane system is combined with meter-mix dispensing equipment, parts can be efficiently cycled in 45 to 90 minutes.

MIX RATIO

Resin to Hardener	By Weight:	By Volume:
	80 to 100	67 to 100

TYPICAL HANDLING PROPERTIES*

	<u>ASTM Method</u>	<u>Resin</u>	<u>Hardener</u>	<u>Mixed</u>
Color	Visual	Dark brown	Cream	Caramel
Specific Gravity	D-1963	1.10	1.07	
Viscosity, cP	D-2393	170	1,800	
Gel Time, 150g, seconds	D-2471			100–130

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	83	85
Flexural Strength, 5% strain, psi	D-790	10,000	10,000
Flexural Modulus, psi	D-790	262,000	259,000
Ultimate Tensile Strength, psi	D-638	6,400	6,800
Tensile Modulus, psi	D-638	239,000	248,000
% Elongation	D-638	15	12.4
Tg by DMA, E", °F(°C)	D-4065	237 (114)	211 (99)
Deflection Temperature, °F(°C)	D-648	66 psi	173 (79)
		264 psi	208 (98)
Ultimate Compressive Strength, psi	D-695	32,400	28,000
Compressive Modulus, psi	D-695	246,000	245,000
Izod Impact, notched, ft-lb./in	D-256	0.8	0.7
Coefficient of Thermal Expansion	D-3386	-22 to 86°F, in/in/°F	64 x 10 ⁻⁶
		-30 to 30°C, in/in/°C	115 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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