

**Advanced Materials****RenPim® 6460 Resin / Hardener\* System**

RAPID SET/RAPID DEMOLD, VERY HIGH HEAT DISTORTION TEMPERATURE, POLYURETHANE PROTOTYPE SYSTEM FOR MACHINE DISPENSING

**DESCRIPTION :**

RenPim® 6460 Resin/Hardener System is an extremely fast setting, machine dispensable, polyurethane casting system for production of production of prototype parts. The cured castings exhibit thermoplastic-like properties including very high impact resistance, thermal resistance, and dimensional stability. RP 6460 Resin-Hardener System offers rapid part production with extremely fast demold time (up t 6 parts per hour depending upon part configuration). When this fast setting polyurethane system is combined with meter/mix dispensing equipment, parts up to 10 pounds can be efficiently cycled in 15-30 minutes.

**APPLICATIONS :**

For fast production of complex prototype parts and other limited production parts series requiring a high degree of temperature resistance.

**MIX INSTRUCTIONS :**

Reaction Ratio                           80R to 100H by weight  
   67R to 100H by volume

This highly reactive system is best suited for use employing a meter mix dispensing system or suitable cartridge/static mixer system. Your technical sales representative is available to discuss the requirements for dispensing this material.

Simple silicone, polyurethane or epoxy molds can be used for molding the RP 6460 system. Mold design and construction should allow pressure-free casting.

**TYPICAL MIXED PROPERTIES :**

<b>Property</b>	<b>ASTM Test Method</b>	<b>Test Value<sup>(1)</sup></b>
Gel Time (4 fl. oz.) (GT-4 Tecam Gelation Timer)	D-2471	50 seconds
Color	Visual	Dark Brown Cream Buff
Viscosity, cP	D-2393	170 cP 1500 cP
Demold Time		10 to 15 minutes

<sup>(1)</sup> Tested @ 77 °F (25 °C)

\* Patent applied for

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**TYPICAL CURED PROPERTIES :**

<b>Property</b>	<b>ASTM Test Method</b>	<b>Test Values <sup>(1)</sup></b>	<b>Test Values <sup>(2)</sup></b>
Density (g/cc)	D-792	1.18	1.17
Izod Impact (ft-lb/in)	D-256	1.0	1.1
Hardness (Shore D)	D-2240	80	80
Ultimate Compressive Strength (psi)	D-695	24,500	26,400
Compressive Modulus (psi)	D-695	175,400	172,000
Ultimate Flexural Strength (psi)	D-790	7900*	7700*
Flexural Strength @ 5 % strain (psi)	D-790	7,100**	7,000**
Flexural Modulus (psi)	D-790	174,000	181,000
Ultimate Tensile Strength (psi)	D-638	5,300	5,400
Tensile Modulus (psi)	D-638	176,000	176,000
Elongation (%)	D-638	8.0	7.9
Tg per DMA, °F (°C)	D-4065	320 (160)	332 (167)
Coefficient of Thermal Expansion (in/in/°F) -30 °C to +30 °C	D-3386	69 x 10 <sup>-6</sup>	70 x 10 <sup>-6</sup>

<sup>(1)</sup> Test Values – 7 days at room temperature

<sup>(2)</sup> Test Values – 4 hours @ 80 °C, plus 2 hours @ 120 °C

(\*) Samples did not break, Strength @ Peak

(\*\*) Samples did not break

**Note :** Typical Properties - 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 Quality Control Department.

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**CURING INSTRUCTIONS :**

Parts can be cured unsupported at room temperature. This system requires a post-cure for development of maximum physical properties. After demolding at room temperature, the parts should be post-cured and supported for 4 hours at 176 °F. (80 °C) plus 2 hours at 248 °F (120 °C).

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**HANDLING :****RP 6460 Resin and Hardener**

This product is moisture-sensitive and packaged under a blanket of dry nitrogen. Maintain factory seal, after use re-blanket with dry nitrogen and tightly reseal.

Work in a well-ventilated area and use clean, dry tools for mixing and applying. For a two-component system, combine the resin and hardener according to mix ratio. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65 °F (18 °C) when mixing.

**RP 6460 Resin**

This product may crystallize upon storage. If crystallized, vent container and heat to 125-145 °F until crystals dissolve. Stir well after product has liquefied.

**RP 6460 Hardener**

Stir well before use. This material will separate.

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**PACKAGING :**

This product is a commercial product. It is available in "A" packages containing appropriate amounts of resin and hardener (total weight 14.4#), as well as pail resin and hardener units. Resin pail 32#, Hardener pail 40#.

Please call Customer Service (800-367-8793) for price and availability.

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**STORAGE :**

RenPim<sup>®</sup> 6460 Resin/Hardener System should be stored in a dry place, in the sealed original container, at temperatures between +2°C and +40°C (+35.6°F and 104°F). Under these storage conditions, the shelf life is 1 year. The product should not be exposed to direct sunlight.

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**PRECAUTIONARY STATEMENT :**

Huntsman Advanced Materials Americas LLC maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

**First Aid!**

Refer to MSDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN  
FOR PROFESSIONAL**

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