

**Advanced Materials****RenCast<sup>®</sup> 6432-1 / Ren<sup>®</sup> 6432-1**

POLYURETHANE ELASTOMER  
GENERAL PURPOSE, HAND CASTABLE, QUICK DEMOLD POLYURETHANE

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**DESCRIPTION :**

RenCast<sup>®</sup> 6432-1 (Resin) / Ren<sup>®</sup> 6432-1 (Hardener) is a non-mercury, hard 72D polyurethane casting system. The low viscosity of RenCast<sup>®</sup> 6432-1 aids the production of finely detailed parts. The combination of rapid curing with a gel time of 5 to 6 minutes assists in rapid production of parts without the use of meter-mix equipment.

This product does not contain mercury.

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**APPLICATIONS :**

Prototype parts and short-run production parts.

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**MIX RATIO :**

By weight :                    100 to 50            Resin to Hardener  
By volume :                   100 to 50            Resin to Hardener

**Mixing Instructions :** Stir resin and hardener thoroughly before use. Weigh resin and hardener accurately ( $\pm$  5%) into clean containers. Thoroughly mix resin and hardener together (minimum 1 minutes) scraping container sidewalls, bottom and mixing stick several times to assure a uniform mix.

Whenever possible, de-air the mixture before casting to remove unwanted air bubbles using a suitable vacuum pump and chamber.

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**DEMOLD TIME :**

<b>Temperature</b>	<b>Time</b>	<b>Thickness</b>
77 °F (25 °C)	1 – 2 hours	1/8"

**RECOMMENDED FULL CURE SCHEDULE :**

<b>Temperature</b>	<b>Time</b>
77 °F (25 °C)	7 days

**TYPICAL HANDLING PROPERTIES :**

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

<b>Property</b>	<b>Criteria</b>	<b>ASTM Test Method</b>	<b>Test Value</b>
Color	Resin	Visual	Clear amber
	Hardener		Off White
	Cured		Off White
Specific Gravity	Resin	D-792	1.10
	Hardener		1.06
Viscosity, cP	Resin	D-2393	50
	Hardener		1,100
Gel Time, minutes	150 g	D-2471	5 - 6

**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 Quality Control Department.

**TYPICAL CURED PROPERTIES :**

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

<b>Property</b>	<b>ASTM Test Method</b>	<b>Test<sup>1</sup> Values</b>	<b>Test<sup>2</sup> Values</b>
Density, lb./ft <sup>3</sup> (g/cm <sup>3</sup> )	D-792	71 (1.13)	70 (1.12)
Cubic Inch per Pound		24.5	24.7
Hardness, Shore D	D-2240	72	75
Ultimate Flexural Strength, psi	D-790	8,600	9,700
Flexural Modulus, psi	D-790	234,000	237,000
Ultimate Tensile Strength, psi	D-638	5,900	5,700
% Elongation	D-638	27	25
Tg by DMA, °F (°C)	D-4065	153 (67)	192 (89)
Deflection Temperature °F (°C)	D-648	66 psi	198 (92)
		264 psi	178 (81)
Ultimate Compressive Strength, psi	D-695	7,200	9,800
Compressive Modulus, psi	D-695	240,000	275,000
Izod Impact, notched, ft-lb./in	D-256	0.6	0.7
Coefficient of Thermal Expansion	D-3386		
		-22 ° to 86 °F, in/in/°F	60 x 10 <sup>-6</sup>
		-30 ° to 30 °C, in/in/°C	108 x 10 <sup>-6</sup>
Linear Shrinkage, in/in	D-2256	0.005	--

<sup>1</sup> Cured 7 days at 77 °C (25 °C)

<sup>2</sup> Cured 24 hours at 77 °F (25 °C) plus 16 hours at 176 °F (80 °C)

\* Radius Depth 0.875 Length 10"

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**PACKAGING :**

<u>Unit</u>		<u>Weight</u>
A package	System	13.8 lb.
Pail	Resin (2 required)	37.5 lb.
Pail	Hardener	37.5 lb.

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

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**HANDLING :****RenCast® 6432-1**

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.

**Ren® 6432-1**

Stir well before use. This material will separate.

**RenCast® 6432-1 System**

If heating of products in plastic packaging is necessary, heat in a ventilated oven to 145 °F maximum. Before heating loosen the container lid slightly to relieve any pressure buildup and place container to be heated into a metal bucket of sufficient volume to contain the product should the container tip over or leak.

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**STORAGE :**

RenCast® 6432-1 / Ren® 6432-1 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 AND INDUSTRIAL USE ONLY**

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