

Advanced Materials**RenCast® 6403-1 / Ren® 6403-2**

POLYURETHANE ELASTOMER
A FAST CURING GOOD LOAD RECOVERY SHORE 92 ± 7A ELASTOMER

DESCRIPTION :

RenCast® 6403-1 (Resin) / Ren® 6403-2 (Hardener) is a low viscosity, milky-white, two-component polyurethane casting elastomer. RenCast® 6403-1/ Ren® 6403-2 develops high tensile and tear strengths without a heat post-cure. It can be further strengthened with mild heat post cure, if desired. The low viscosity permits excellent reproduction of detail and good air release.

APPLICATIONS :

High resiliency makes RenCast® 6403-1/ Ren® 6403-2 ideal for durable parts such as impellers and rollers.

MIXING INTRUSCTIONS :

Reaction Ratio 50R to 100H (by wt.)

Mixing: Stir each component thoroughly before use. Weigh each component accurately (± 5%) into clean containers. Thoroughly mix resin and hardener together (minimum 3 minutes) scraping container sidewalls, bottom and mixing stick several times to assure a uniform mix.

TYPICAL MIXED PROPERTIES :

Property		ASTM Test Method	Test Values⁽¹⁾
Gel Time and Viscosity Profile (150g)		<u>Time (min.)</u>	<u>Viscosity (cP)</u>
		5	800
		10	1,000
		14	20,000
		15	gelled
Color	Resin	Visual	Amber
	Hardener		Milky-white
Viscosity	Resin	D-2393	35 – 50 cP
	Hardener		1,100 – 1,500 cP
Demold time (for most applications)			24 hours
Cure time (for ultimate properties)			7 days

⁽¹⁾ Tested @ 77 °F (25 °C)

TYPICAL CURED PROPERTIES :

Property	ASTM Test Method	Test Values⁽¹⁾
Density (g/cc)	D-792	1.10
Hardness (Shore A)	D-2240	85 – 90
Ultimate Tensile Strength (psi)	D-638 @ 20"/min.	2,500 (17,200 kPa)
Ultimate Elongation (%)	D-638 @ 20"/min.	240
Tear Strength (ppi)	D-624 @ 20"/min.	470
	DIE C	(82.3 kN/m)
Linear shrinkage (in/in)	D-2566 Mold #1	0.001

⁽¹⁾ Cure Schedule – 7 days @ 77°F (25 °C), tested @ 77°F

NOTE : Typical Properties – These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed establishing product specifications, please consult with our Quality Control Department.

CURING INSTRUCTIONS :

Although room temperature polyurethane will normally set up to a rigid, demoldable state within 24 hours at room temperature (75 °F ± 5 °F), these systems reach their full cure after seven days at room temperature. A full cure can be accelerated by applying heat after the part has set rigid. We recommend a post cure of 176 °F for a minimum of 16 hours. (Add to this adequate time to bring the part to the post cure temperature.) After cure, the part should be cooled at a slow rate so as not to shock the part thermally.

Uniform heat distribution is also required during post cure ; concentrated heat, such as that directed from a lamp, can cause warp. An elevated temperature cure will slightly increase the shrinkage compared to a room temperature cure.

HANDLING :**RenCast[®] 6403-1 / Ren[®] 6403-2**

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 two component system, combine the resin and hardener according to mix ration. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65 °F (18 °C) when mixing.

RenCast[®] 6403-1

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[®] 6403-2

This product upon storage will form a hard precipitate on the bottom of the container. Do not attempt to mix back in as this is normal and does not affect the quality of the product. However do stir the liquid portion well before use.

STORAGE :

RenCast® 6403-1 (Resin) / Ren® 6403-2 (Hardener) 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 of the RenCast® 6403-1 is 1 year, the Ren® 6403-2 is 2 years, and the RenCast® 6403-1 / Ren® 6403-2 system as a unit kit is 1 year from date of manufacture. The product should not be exposed to direct sunlight.

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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