

Advanced Materials**RenCast® 6442 / Ren® 6442**

POLYUREA ELASTOMER
A LOW MOISTURE SENSITIVE SHORE 85 – 5A ELASTOMER

DESCRIPTION :

RenCast® 6442 (Resin) / Ren® 6442 (Hardener) is an amber, two-component casting elastomer designed for tooling applications. RenCast® 6442 cures fully at room temperature. The low viscosity, excellent working life and convenient one-to-one mixing ratio makes RenCast® 6442 easy to handle.

APPLICATIONS :

- Vibration damping
- Production and prototype parts
- Pads and strippers

MIXING INSTRUCTIONS :

Reaction Ratio 100R to 100H (by wt.)
 100R to 94H (by vol.)

Mixing : Stir each component thoroughly before use. Weigh each component accurately (\pm 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 (4 fl. oz.)		<u>Time (min)</u>	<u>Viscosity (cP)</u>
		5	1,610
		15	2,350
		25	4,350
		28	20,000
Color	Resin	Visual	Light Yellow
	Hardener		Light Amber
Viscosity	Resin	D-2393	8,000 – 12,000 cP
	Hardener		80 – 130 cP
Demold time (for most applications)			Without 24 hours

⁽¹⁾ Tested 7 days @ 77 °F (25 °C)

TYPICAL CURED PROPERTIES :

Property	ASTM Test Method	Test Values⁽¹⁾
Density (g/cc)	D-792	1.09
Hardness (durometer) (Shore A)	D-2240	85 ± 5
Tensile Strength (psi)	D-638 @ 20"/min.	2,100 psi (14,500 kPa)
Ultimate Elongation (%)	D-638 @ 20"/min.	525
Tear Strength (ppi)	D-624 @ 20"/min.	<u>290 ppi</u>
Taber Wear Index	DIE C D-4060 Wheel H-18	50;8 KN/m 2.1 mg/100 cycles
Compression set* (%)	D-395 B	52
Linear shrinkage Mold#1 (in/in)	D-2566	< 0.001

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

*** Compression set ASTM D-395 Method B**

The percent of permanent deformation resulting from constant deflection/pressure required to compress samples 25 %.

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 polyurethanes 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[®] 6442 and Ren[®] 6442**

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.

STORAGE :

RenCast® 6442 (Resin) / Ren® 6442 (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 is 2 years from manufacturing date. 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**

IMPORTANT LEGAL NOTICE

Huntsman Advanced Materials warrants only that its products meet the specifications agreed with the user. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications.

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