

Advanced Materials**RenLam[®] 569 / Ren[®] 569-1 (FAST) System**
RenLam[®] 569 / Ren[®] 569-2 (SLOW) System**LAMINATING SYSTEM****DESCRIPTION:**

RenLam[®] 569(Resin) / Ren[®] 569-1 or Ren[®] 569-2(Hardener) are glass fiber reinforced laminating paste systems that greatly simplify the construction of tools or tooling aids. With these systems a tool can be produced in one operation instead of building up individual layers of glass cloth.

Note: RenLam[®] 569 resin has been formulated to improve mixability and working characteristics which will help reduce the labor needed to construct the tool.

APPLICATIONS:

RenLam[®] 569 resin / Ren[®] 569-1 hardener is used for the construction of small tools or construction of tools where the desired thickness is less than ½ inch.

RenLam[®] 569 resin / Ren[®] 569-2 hardener is used on larger tools or construction of tools where the desired thickness is up to 1 inch.

Tools required to withstand high mechanical stresses must be constructed by the hand lay-up method.

MIXING INSTRUCTIONS:

Reaction Ratio **RenLam[®] 569 resin / Ren[®] 569-1 hardener**
100R to 11H by wt.

RenLam[®] 569 resin / Ren[®] 569-2 hardener
100R to 14H by wt.

Mixing: Stir each component thoroughly before use. Weigh each component accurately (± 5%) into clean containers. They must be mixed together using a mechanical mixer (such as a Hobart or Kol mixer). Thoroughly mix resin and hardener together (minimum 3 minutes) scraping container sidewalls, bottom and mixing stick several times to assure a uniform mix. The blue pigmented hardener enables simple visual assessment of the homogeneity of the mix. Prolonged mixing may raise the temperature of the laminating paste and as a result shorten pot life.

TYPICAL MIXED PROPERTIES:

Property	ASTM Test Method	Test Value (1) RenLam [®] 569 resin / Ren [®] 569-1 hardener	RenLam [®] 569 resin / Ren [®] 569-2 hardener
Gel time (6.5 lbs.)	D-2471	35 mins.	50 mins.
Color Resin Hardener Mixed	Visual	White Blue Light blue	White Blue Light blue
Viscosity, mixed	D-2393	Dough-like consistency	Dough-like consistency
Demold time		16 hours	24 hours

⁽¹⁾ Tested @ 77°F (25°C)**TYPICAL CURED PROPERTIES:**

Property	ASTM Test Method	Test Value (1) RenLam [®] 569 resin / Ren [®] 569-1 hardener	RenLam [®] 569 resin / Ren [®] 569-2 hardener
Specific Gravity	D-792	1.20	1.14
Cubic inch per pound	D-792	23	23
Hardness (Shore D)	D-2240	80	80
Ultimate Compressive Strength (psi)	D-695	8,000	5,000
Ultimate Flexural Strength (psi)	D-790	4,600	4,000
Flexural Modulus (psi)	D-790	0.38 x 10 ⁶	0.25 x 10 ⁶
Ultimate Tensile Strength (psi)	D-638	2,800	1,800
Deflection temperature (°F) @ 264 psi	D-648	150	138
Coefficient of Thermal expansion (in/in/°F)	D-3386	3.80 x 10 ⁻⁵	4.80 x 10 ⁻⁵

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

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.

APPLYING:

Approximately 1.5 pounds of RenLam[®] 569 resin laminating paste will cover one square foot, ¼” thick. RenLam[®] 569 laminating paste is normally applied over a general purpose epoxy surface coat such as RenLam[®] 1126 product. Two surface coats are recommended to eliminate print-through of the laminating paste onto the surface of the tool. In addition to the surface coat, a coupling coat should be brushed onto the surface coat to enhance adhesion and prevent the entrapment of air voids. The laminating paste should be applied immediately onto the coupling coat. The surface coat used can be used as coupling coat or you can thicken a general purpose epoxy laminating system such as RenLam[®] 1700-1 product with chopped glass fibers.

Apply laminating paste as evenly as possible by hand, then smooth and compress with a roller. Always wear gloves to protect hands and eye protection to guard against splashes.

CURING INSTRUCTIONS:

Although room temperature epoxies 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 postcure of 150°F for a minimum of six hours. (Add to this adequate time to bring the part to the postcure 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 :**RenLam[®] 569 resin / Ren[®] 569-1 and Ren[®] 569-2 hardeners**

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 ratio. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65°F (18°C) when mixing.

PACKAGING:

This product is available in the following package size(s):

Pails of RenLam[®] 569 resin at 23# each
Ren[®] 569-1 hardener – small pails at 2.5# each
Ren[®] 569-2 hardener– small pails at 3.2# each

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

STORAGE :

RenLam[®] 569(Resin) / Ren[®] 569-1 or Ren[®] 569-2(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 is 3 years. 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.

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