



# RenInfusion™ 8612

## EPOXY RESIN SYSTEM

**DESCRIPTION:** RenInfusion 8612(Resin) is a one-component, low-viscosity epoxy system developed for use in the production of advanced composites using vacuum-assisted resin transfer molding (VARTM), resin transfer molding (RTM), Seemans Composite Resin Injection Molding Process (SCRIMP<sup>SM</sup>), or other infusion processes. The low viscosity and wet-out potential of RenInfusion 8612 enhance processability parameters.

RenInfusion 8612 is designed for use in fabricating composites requiring excellent toughness. Composites produced with this product can achieve a glass transition of 200°F (93°C) following a postcure.

The RenInfusion 8612 system is very latent (non-reactive) at up to 150°F (66°C). This offers long working time and mass infusion potential at very low viscosity. RenInfusion 8612 is room temperature stable (70 to 110°F) for a minimum of 6 months and requires no refrigerator storage.

**TYPICAL HANDLING PROPERTIES:** Tested @ 77°F(25°C) unless otherwise noted.

Property	Criteria	ASTM Test Method	Test Value
Color		Visual	Transparent
Specific Gravity		D-792	1.2
Viscosity, cP	@ 77°F (25°C) @ 125°F (52°C)	D-2393	5,000 400

**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.

**RECOMMENDED  
CURE SCHEDULE:**

	Time	Temperature
<b>Self Supporting at Post Curing</b>	10-16 hours	200°F (93°C) <b>Plus</b>
	2 hours	300°F (149°C)

## NEAT SYSTEM

**TYPICAL CURED PROPERTIES:** Cured 16 hours @ 200°F (93°C) plus 4 hours at 250°F (121°C). Tested @ 77°F(25°C) unless otherwise noted.

Property	ASTM Test Method	Test Value
Ultimate Flexural Strength, psi	D-790	14,100
Flexural Modulus, psi	D-790	421,200
Ultimate Tensile Strength, psi	D-638	9,600
Tensile Modulus, psi		408,400
% Elongation		5.0
Tg by TMA, °F (°C)	D-3386	200 (95)

## GLASS LAMINATE

**TYPICAL CURED PROPERTIES:** Cured 16 hours @ 200°F (93°C) plus 2 hours at 300°F (149°C) Tested @ 77°F(25°C) unless otherwise noted.

Property	ASTM Test Method	Test Value
Ultimate Flexural Strength, psi	D-790	61,000
Flexural Modulus, psi	D-790	2.8 x 10 <sup>6</sup>
Ultimate Tensile Strength, psi	D-638	47,000
Tensile Modulus, psi		3.4 X 10 <sup>6</sup>
% Elongation		1.0
Tg by TMA, °F (°C)	D-3386	200 (95)
Ultimate Compressive Strength, psi	D-695	46,500
Compressive Modulus, psi		3.8 x 10 <sup>6</sup>

### LAY-UP PROCESS:

Panel Type: Approximately 2 ft. x 2 ft. flat panel  
Cloth Type: 8 layer, Volan A 7500, 10 oz.  
Cloth Rotation: 0 degrees  
Procedure: Infusion Process

### PACKAGING:

<u>Unit</u>	<u>Weight</u>
5 gallon	45 lb.
Drum	495 lb.

### STORAGE/HANDLING INFORMATION:

Store at 60-100°F in a dry place. After use 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 ratio. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65°F (18°C) when mixing.

**SHELF LIFE:** Provided materials are stored under the recommended storage conditions in their original containers, they will remain in useable condition for six months from date of shipping.

**SAFETY/HANDLING PRECAUTIONS:** Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

**RenInfusion 8612**

**DANGER!** Causes severe skin irritation. Causes eye and respiratory irritations. May cause skin burns and allergic skin reaction.

Avoid contact with eyes, skin, or clothing.  
Avoid breathing vapor or mist.  
Avoid prolonged or repeated contact with skin.  
Use with adequate ventilation. Keep container closed.  
Wash thoroughly after handling.

**FIRST AID:** In case of contact with:

**Skin:** Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

**Eyes:** Immediately flush with water for at least 15 minutes. Call a physician.

**Ingestion:** If conscious, give plenty of water to drink. Do not induce vomiting. Call a physician.

**Inhalation:** Remove to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

**Other:** Referral to physician is recommended if there is any question about the seriousness of any injury.

**PRECAUTIONARY NOTE:** Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released vary significantly between systems. Additionally, ambient or compound temperature, amount of material mixed, and construction and shape of the mold or container can also be factors in the temperature profile of a mixed system. In some cases, the thermosetting reaction can be vigorous, generating heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke.

A good rule of thumb is never mix more material than can be applied during the stated pot life or gel time. Also take care when using materials in applications other than stated on the Product Data Sheet, i.e., a laminating resin for casting.

Please feel welcome to call our Product Information Department or your local Ren representative for instructions before you start your job.

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