



Product Data

RenInfusion™ 8606/Ren® 8606 EPOXY RESIN SYSTEM

DESCRIPTION: RenInfusion 8606(Resin)/Ren 8606(Hardener) is a two-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 (SCRIMPSM), or other infusion processes. The low-mixed viscosity and wet-out potential of RenInfusion 8606/Ren 8606 enhance processability parameters.

RenInfusion 8606/Ren 8606 will cure to self-support after 24 to 48 hours at room temperature. Composites produced using this product can achieve a glass transition of 344°F (173°C) following a postcure.

MIX RATIO: By weight: 100 to 35 Resin to Hardener

Mixing Instructions: Measure each component accurately ($\pm 5\%$) into clean containers. Thoroughly mix resin and hardener together (minimum 2 minutes) scraping container sidewalls, bottom, and mixing stick several times to assure a uniform mix.

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

Property	Criteria	ASTM Test Method	Test Value
Color	Mixed		Transparent
Viscosity, cP	Resin	D-2393	3,900
	Hardener		40
@ 77°F (25°C)	Mixed		1,800
@ 125°F (51°C)	Mixed		< 300
Gel Time, minutes		D-2471	
@ 77°F (25°C)	150 grams		670
@ 125°F (51°C)	10 grams		130

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:

24 hours @ 77°F (25°C) plus 4 hours @ 250°F (121°C) plus 4 hours at 350°F (177°C), unless noted otherwise.

Please note that other cure schedules may be used to obtain comparable physical properties. Please contact RenShape Solutions' Technical Information Hotline (800) 759-7165 to discuss your application.

LAMINATE SYSTEM

TYPICAL CURED PROPERTIES: Tested @ 77°F(25°C) unless otherwise noted.
Cured 24 hours at 77°F (25°C) plus 4 hours at 250°F (121°C) plus 4 hours at 350°F (177°C).

Property	ASTM Test Method	Test Value
Hardness (Shore D)	D-2240	87
Ultimate Flexural Strength, psi	D-790	116,500
Flexural Modulus, psi	D-790	390,000
Ultimate Tensile Strength, psi	D-638	68,400
Tensile Modulus, psi		7.30 x 10 ⁶
% Elongation		1.0
Tg by DMA, E' onset, dry, °F (°C)	D-4065	344 (173)
Tg by DMA, E' onset, wet, °F (°C)	D-4065	302 (150)
Ultimate Compressive Strength, psi	D-695	45,500

LAY-UP PROCESS:

Panel Type:	Approximately 3 ft. x 2 ft. flat panel
Cloth Type:	8 layers 3K, 70P graphite cloth
Cloth Rotation:	0 degrees
Procedure:	VARTM infusion
Laminate Thickness:	0.074 ± 0.002 inches

PACKAGING:	Unit		Weight
	5 gallon	<i>Resin</i>	43 lb.
	5 gallon	<i>Hardener</i>	35 lb.
	Gallon	<i>Hardener</i>	7.1 lb.
	Drum	<i>Resin</i>	500 lb.
	Drum	<i>Hardener</i>	350 lb.

STORAGE: Store at 60-100°F in a dry place. After use tightly reseal.

CONDITIONING: Stir well before use. This material will separate.

HANDLING: 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 at least one year 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 8606

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

Avoid contact with eyes, skin, or clothing.
Avoid prolonged or repeated contact with skin.
Wash thoroughly after handling.

SAFETY/HANDLING PRECAUTIONS (continued)

Ren 8606

DANGER! CORROSIVE – Causes eye burns and skin burns. Harmful if inhaled, or if absorbed through skin.

Do not get in eyes, on skin, or on clothing.
Avoid breathing vapor or mist.
Keep container closed.
Use with adequate ventilation.
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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