Product Data

RenShape® solutions

Ren®
Professional Tooling Line

RenLam™8100
Ren® 8100 Medium
Ren® 8100 Fast

ROOM-TEMPERATURE PERFORMANCE UNFILLED LAMINATING RESIN

DESCRIPTION: RenLam 8100(Resin) with either Ren 8100 Medium(Hardener) or Ren 8100 Fast (Hardener) laminating system offers two hardener choices to suit both large and small laminating jobs. Both combinations offer high wet-out, low viscosity, and excellent cure strength to aid in the construction of high-quality, stable laminated tools.

RenLam 8100 R/H laminating system is a new generation of laminating material that offers significantly improved temperature performance after only a room temperature cure when used with the medium speed hardener.

MIX RATIO:

	By Weight:	By Volume:
Resin to Medium Hardener	100 to 15	100 to 19
Resin to Fast Hardener	100 to 25	100 to 29

TYPICAL HANDLING PROPERTIES*:	**ASTM Method**	**Mixed, Medium**	**Mixed, Fast**
Color	Visual	Clear	Clear
Viscosity, cP	D-2393	1,350	2,500
Gel Time, 150g, minutes	D-2471	90	35
Demold Time, hours		24	16–24

NOTE: 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 Product Management Department.

TYPICAL CURED PROPERTIES*:	**ASTM Method**	**Medium System**	**Fast System**
Hardness, Shore D	D-2240	92	92
Ultimate Flexural Strength, psi	D-790	49,102	42,180
Flexural Modulus, psi	D-790	2,100,000	1,910,000
Ultimate Tensile Strength, psi	D-638	34,831	32,224
Tensile Modulus, psi	D-638	1,800,000	2,180,000
% Elongation	D-638	2.8	2.2
Tg by DMA, E", ºF(ºC)	D-4065	212 (100)	167 (74.4)
Ultimate Compressive Strength, psi	D-695	31,113	23,450
Compressive Modulus, psi	D-695	2,880,000	2,240,000
Coefficient of Thermal Expansion	D-3386		
-22 to 86ºF, in/in/ºF		11×10^{-6}	12×10^{-6}
-30 to 30ºC, in/in/ºC		20×10^{-6}	22×10^{-6}

* Layup: Contact, 8 layer Volan A 7500 glass cloth, 90° Rotation.
Tested @ 77ºF (25ºC) unless otherwise noted.

RECOMMENDED CURE SCHEDULE:

1. 77ºF (25ºC) at 7 days

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

RenLam 8100

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.

Ren 8100 Medium

DANGER! COMBUSTIBLE. CORROSIVE. Causes skin and eye burns. May cause allergic skin reaction. Keep away from heat and flame. 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.

Ren 8100 Fast

DANGER! CORROSIVE. Causes eye burns and skin irritation. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapor and mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Nuisance dust may be generated when sanding or sawing cured material.

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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