

**Advanced Materials****RenGel® 1124 / Ren® 1124**

EPOXY GENERAL PURPOSE SURFACE COAT, COLOR CHANGE BONDABLE, WHITE

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**DESCRIPTION :**

RenGel® 1124(Resin) / Ren® 1124(Hardener) cures to a white epoxy surface coat for room temperature applications. Several new feature incorporated into this universal surface coat help the user construct high quality tooling.

- Mix Indicator – the surface coat resin is coded with a special indicator which turns from green to white when the hardener is uniformly blended in.
- Intercoat Adhesive – special resins are employed which provide outstanding adhesion between surface coat layers and the laminate. Excellent adhesion is obtainable for 24 hours after the tack-free stage is reached. Start a job today and finish tomorrow or do extremely large tools with confidence.
- Workability – rheology of the mixed surface coat offers smooth brushability allowing the application of void-free surfaces.

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**APPLICATIONS :**

- Router overlays and forms
- Drill fixtures
- Master gauges
- Accessory tools
- Chemical milling templates
- Inspection fixtures
- Duplicate master forms
- Spotting racks
- Prototype panels
- Plaster break-away molds
- Keller models

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**HOW TO USE :**

You will notice several characteristics of this surface coat system which are different from other Ren® materials. The mint green color of the resin component will disappear as you blend in the proper amount of hardener. The blended color of the surface coat system is a uniform white.

After application of the compound to your properly released model, you are not required to wait to the tack stage before you apply the second layer of surface coat. A significant viscosity buildup occurs at 45 to 60 minutes at 75°F which permits you to brush on a second layer of surface coat. Importantly, you may leave the first layer for up to 24 hours before the second layer is applied and still achieve an excellent interlayer bond. If course, you should protect the first layer from excessive heat, humidity and shop dirt and debris.

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**MIXING INSTRUCTIONS :**

Reaction Ratio        100R to 18H by weight  
                             100R to 27H by volume

**Mixing :** Stir each component thoroughly before use. Weight 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.

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**TYPICAL MIXED PROPERTIES :**

Property		ASTM Test Method	Test Values <sup>(1)</sup>
Gel time		D-2471	25 mins.
Color	Resin	Visual	Mint green
	Hardener		Amber
	Mixed		White
Mixed sag		D-2730	Pass 1/8" Fail 1/4 1/4"
Specific gravity	Resin	--	1.50
	Hardener		0.99

<sup>(1)</sup> Tested @ 77 °F (25 °C)

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**TYPICAL CURED PROPERTIES :**

Property	ASTM Test Method	Test Values <sup>(1)</sup>
Specific Gravity	D-792	1.43
Cubic inch per pound	D-792	19
Hardness (Shore D)	D-2240	90
Ultimate Compressive Strength (psi)	D-695	14,500
Ultimate Flexural Strength (psi)	D-790	10,000
Ultimate Tensile Strength (psi)	D-638	6,200
Izd Impact (ft-lb/in)	D-256	0.25
Tg per DMA (°F)	D-4065	149
Deflection Temperature (264 psi) (°F)	D-648	127
Coefficient of Thermal Expansion (in/in/°F)	D-3386	$2.89 \times 10^{-5}$
Shrinkage (in/in) cast Mold #0	D-2566	0.002

<sup>(1)</sup> Cure Schedule – 7 days @ 77 °F (25 °C), tested @ 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.

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**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 postcure; 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.

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**HANDLING :*****RenGel<sup>®</sup> 1124 and Ren<sup>®</sup> 1124***

Stir well before use. This material will separate. 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.

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**PACKAGING :**

This product is available in the following package sizes: 6-quart resin with preweighed hardener, and pail resin with appropriate hardener. Please call Customer Service (800) 367-8793 for price and availability

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**STORAGE :**

RenGel<sup>®</sup> 1124(Resin) / Ren<sup>®</sup> 1124(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. The product should not be exposed to direct sunlight.

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**First Aid!**

Refer to MSDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN****FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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