

RenGel™ 1124/Ren[®] 1124

Epoxy General Purpose Surface Coat, Color Change Bondable, White

DESCRIPTION: RenGel 1124(Resin)/Ren 1124(Hardener) cures to a white epoxy surface coat for room temperature applications. Several new features 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 Adhesion – 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.

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

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.

MIXING INSTRUCTIONS:

Reaction Ratio

100R to 18H by weight

100R to 27H by volume

Mixing: Stir each component thoroughly before use. Weigh 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.

TYPICAL MIXED PROPERTIES:

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

⁽¹⁾Tested @ 77°F (25°C)

TYPICAL CURED PROPERTIES:

Property	ASTM Test Method	Test Values ⁽¹⁾
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
Izod 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	2.86×10^{-5}
Shrinkage (in/in) cast Mold #0	D-2566	0.002

⁽¹⁾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.

CURING INSTRUCTIONS: Although room temperature epoxies will normally set up to a rigid, demoldable state within 24 hours at room temperature (75°F \pm 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.

STORAGE/HANDLING INFORMATION:

RenGel 1124 and Ren 1124

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

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.

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

6-quart resin with preweighed hardener, and
pail resin with appropriate hardener

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

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

RenGel 1124

WARNING! Causes eye and skin irritation. May cause allergic skin reaction. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

Ren 1124

DANGER! CORROSIVE – causes skin and eye burns. Harmful if absorbed through skin. May cause allergic skin and respiratory reactions.

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.

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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