



Product Data

RenPatch™ 5169

POLYURETHANE PATCH PASTE

DESCRIPTION: RenPatch 5169 patch paste is an integral component of the RenShape® 5169 board system. The system is comprised of three specially formulated products; boards, adhesive and patch paste.

RenPatch 5169 patch paste is formulated to compliment RenShape 5169 board. The patch paste is polyurethane based with similar performance characteristics to the RenShape 5169 polyurethane board.

RenPatch 5169 patch paste closely matches the characteristics of RenShape 5169 for color, hardness, machinability, and coefficient of thermal expansion. The resultant patched areas blend well with surrounding board. RenPatch 5169 bonds tenaciously to RenShape 5169 boards resulting in strong, durable repairs.

RenPatch 5169 employs special dual viscosity technology for repairs requiring hole filling or sag-resistant patching. RenPatch 5169 cures rapidly and can be finished in about 15-30 minutes.

APPLICATIONS: RenPatch 5169 patch paste is useful for patching RenShape 5169 tools. The patch paste is applied through a convenient, economical dual-barrel cartridge system which thoroughly mixes and proportions air-free RenPatch 5169 patch paste directly on to the repair area. If necessary, the patch paste is easy to spread but in addition will also resist sagging on vertical surfaces. RenPatch 5169 patch paste cures very rapidly at room temperature and does not require a post-cure. RenPatch 5169 patch paste can normally be worked, tooled or sanded 15 minutes after application.

RenPatch 5169 patch paste bonds strongly to RenShape 5169 boards. The patch paste makes an excellent choice as a fast adhesive for bonding areas no greater than about 50 square inches at a time. RenPatch 5169 patch paste can also be used to bond pieces of board to existing work for modifications or repairs. Large areas for repair should be routed out and fitted with a loose piece. The routed area is then filled with repair paste and the loose piece pressed quickly into place. Finishing the repair can begin in about 15 minutes.

RenPatch 5169 patch paste can also be used as a convenient fillet forming material when constructing patterns. The paste also offers a means to make fast repairs to patterns on the shop floor.

MIX RATIO:

By weight:	100 to 86	Resin to Hardener
By volume:	100 to 100	Resin to Hardener

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

Property	Criteria	ASTM Test Method	Test Value
Color	Resin Hardener Mixed	Visual	Translucent brown Red Red
Specific Gravity	Resin Hardener	D-792	1.20 1.04
Viscosity cP	Resin Hardener Mixed	D-2393	92.5 400-700 Paste
Gel Time, seconds	4 fl.oz.	D-2471	45-75

RECOMMENDED CURE SCHEDULE:

Temperature 77°F (25°C)	Red Strength Time 15 minutes	Full Cure Time 24 hours
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TYPICAL CURED PROPERTIES: Tested @ 77°F (25°C) unless otherwise noted.

Property	ASTM Test Method	Test Value
Hardness (Shore D)	D-2240	>85
Bond Strength, RenShape® 5169 board substrate	Vantico Method ¹	Substrate failure
Coefficient of Thermal Expansion In/in/°F (-22° to 86°) In/in/°C (-30° to +30°)	D-3386	42.6 x 10 ⁻⁶ 76.8 x 10 ⁻⁶

¹ Butt-joint construction

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.

DUAL BARREL CARTRIDGE USE:

- For best results and most economical use of the patch paste and nozzles, prepare all areas to be repaired first. Grind or abrade for a good bond. Contaminants should be removed, and the area free of moisture.
- The proper use of RenPatch 5169 patch paste requires the use of a mechanical gun designed for 50ml dual barrel cartridges.
- Set up the professional gun with the one to one drive. The economy model is already configured for one to one use.
- Install the Dual Barrel 50 ml cartridge into the dispensing gun.
- Point the tip of the cartridge up and remove the protective cap by twisting counterclockwise. Save the cap. Remove the remaining white foam plug and save it also.
- Install the nozzle by twisting firmly clockwise while the cartridge remains pointed up.
- Point the nozzle horizontally on to a scrap piece of paper and squeeze the gun trigger evenly until material begins to flow from the tip. Dispense and discard the first 4 inches of mixed material.

APPLICATION: Dispense material directly from the nozzle onto each repair area. Avoid working the dispensed material any more than necessary before setting. Try to spread material by placing in the proper area. Hand spreading will add air bubbles to the repair that will adversely affect wear resistance of the patch. Proceed quickly as the RenPatch 5169 patch paste sets very rapidly and will cure in the nozzle if either too long an interval between trigger squeezes or too slow squeezing does not purge material before the pot life is exceeded.

For vertical repair areas, gently dispense RenPatch 5169 patch paste on to the area. The material will appear to be at first a liquid but will stay in place if undisturbed.

For void filling, quick pulls on the dispensing gun trigger will utilize the dual-viscosity characteristics of RenPatch 5169. The material dispensed will flow easily with quick trigger pulls. RenPatch 5169 will be sag-resistant when slow, even trigger pulls are employed.

If a nozzle sets-up before the repair job is finished, install another, follow the purge procedure and finish.

Opened cartridges are susceptible to moisture contamination. When finished, remove the used nozzle and reinstall the protective seal and cap. Store in the original bag in a dry place. If the cartridge tip becomes clogged on storage, discard the cartridge properly if the tip cannot be completely cleaned with a small pick or if foaming is present in the amber component.

MACHINING:

Finishing Speed
10,000 RPM

Finishing Feed
100 IPM

Cutters: 5/8" Ball End Mill 2-Flute Carbide or High Speed Steel

PACKAGING:

Unit
Case

Size
50 ml Dual Syringe

Quantity
12 per case

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

STORAGE: Store at 70-90°F. This product is moisture-sensitive and packaged under a blanket of dry nitrogen. Maintain factory seal. After use, reblanket with dry nitrogen and tightly reseal.

CONDITIONING:

RenPatch 5169

This product may crystallize upon storage. If crystallized, vent container and heat to 125-145°F until crystals dissolve. Stir well after product has liquefied.

RenPatch 5169 System

If heating of product in plastic packaging is necessary, heat in a ventilated oven to 145°F maximum. Before heating, loosen the container lid slightly to relieve any pressure buildup and place container to be heated into a metal bucket of sufficient volume to contain the product, should the container tip over or leak.

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.

RenPatch 5169

WARNING! Harmful if inhaled. Causes skin and eye irritation. Causes allergic skin and respiratory reaction.

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

Ren5169

WARNING! Causes eye, skin, and respiratory irritation. May cause allergic skin reaction.

Avoid contact with eyes, skin, and clothing.

Avoid breathing vapor or mist.

Avoid prolonged or repeated contact with skin.

Keep container closed. Use with adequate ventilation.

Wash thoroughly after handling.

NOTICE! Overexposure may cause liver damage.

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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