



## Advanced Materials

# RenPatch<sup>®</sup> 5169 A/B

## Polyurethane Patch Paste

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### DESCRIPTION:

RenPatch<sup>®</sup> 5169 A/B patch paste is an integral component of the RenShape<sup>®</sup> 5169 board system. The system is comprised of three specially formulated products; boards, adhesive and patch paste.

RenPatch<sup>®</sup> 5169 A/B patch paste is formulated to compliment RenShape<sup>®</sup> 5169 board. The patch paste is polyurethane based with similar performance characteristics to the RenShape<sup>®</sup> 5169 polyurethane board.

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

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

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### APPLICATIONS:

RenPatch<sup>®</sup> 5169 A/B patch paste is useful for patching RenShape<sup>®</sup> 5169 tools. The patch paste is applied through a convenient, economical dual-barrel cartridge system which thoroughly mixes and proportions air-free RenPatch<sup>®</sup> 5169 A/B 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<sup>®</sup> 5169 A/B patch paste cures very rapidly at room temperature and does not require a post-cure. RenPatch<sup>®</sup> 5169 A/B patch paste can normally be worked, tooled or sanded 15 minutes after application.

RenPatch<sup>®</sup> 5169 A/B patch paste bonds strongly to RenShape<sup>®</sup> 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<sup>®</sup> 5169 A/B 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 and the loose piece pressed quickly into place. Finishing the repair can begin in about 15 minutes.

RenPatch<sup>®</sup> 5169 A/B 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 89 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 SHCHEDULE:**

<b>Temperature</b> 77°F (25°C)	<b>Red Strength Time</b> 15 minutes	<b>Full Cure Time</b> 24 hours
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**TYPICAL CURED PROPERTIES:**

Tested @ 77°F (25°C) unless otherwise noted.

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

<sup>1</sup> Butt-joint construction

**NOTE :** Typical Properties – These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed establishing product specifications, please consult with our Quality Control Department.

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**DUAL BARREL CARTRIDGE USE:**

- For best result 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 A/B 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 50ml 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.

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**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 A/B 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 A/B 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 A/B. The material dispensed will flow easily with quick trigger pulls. RenPatch® 5169 A/B 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.

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**MACHINING:**

**Finishing Speed**  
10,000 RPM

**Finishing Feed**  
100 IPM

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

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**PACKAGING:**

<u>Unit</u>	<u>Size</u>	<u>Quantity</u>
Case	50 ml Dual Syringe	12 per case

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

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**HANDLING:****RenPatch® 5169 A/B**

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 A/B 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.

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**STORAGE :**

RenPatch® 5169 A/B 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 1 year. The product should not be exposed to direct sunlight.

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.

These products are moisture sensitive and are packaged under a blanket of dry nitrogen. Maintain factory seal. After opening a container, re-blanket with dry nitrogen and then tightly reseal.

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**PRECAUTIONARY STATEMENT :**

Huntsman Advanced Materials Americas LLC maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

**First Aid!**

Refer to MSDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN  
FOR PROFESSIONAL**

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