

3M™ Scotch-Weld™ Repair Paste RP-2220 B/A

Technical Data Sheet

Product Description

3M Scotch-Weld Repair Paste RP-2220 B/A is a clear two-part urethane that cures to an erosion resistant polyurethane elastomer. It is designed to repair polyurethane coatings or films commonly used for erosion protection on aircraft, including, boot products, leading edges, and other areas susceptible to erosion damage. It is supplied in 50 ml dual syringe plastic Duo-Pak cartridges with a 1:1 mix ratio as part of the 3M™ EPX™ Applicator System.

3M Scotch-Weld Repair Paste RP-2220 B/A:

- 1:1 mix ratio
- Cures to a transparent, erosion resistance polyurethane elastomer, 100% solids
- Designed to repair polyurethane films, tapes, boots, and coatings
- Has excellent sand and rain erosion resistance properties
- Convenient 50 ml Duo-Pak cartridges for easy application with minimal waste

Typical Physical Properties

Notes: 1) The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Metric values are listed in parenthesis. 2) ASTM = American Society for Testing and Materials.

Property	Test Method	Typical Value
Uncured		
Color Part A/B	Visual	Transparent
Density Part A Part B	ASTM D1875	A: 1.11 g/mL B: 1.08 g/mL
Viscosity Part A Part B	ASTM D2556	A: 20000-50000 cps B: 30000-45000 cps

Property	Test Method	Typical Value
Cured		
Color	Visual	Transparent
Density	ASTM D792	1.12 g/mL
Time to Full Cure @ 77°F (25°C)	ASTM D440	24 hours
Hardness Shore A	ASTM D2240	68
Taber	ASTM D4060	0.02 g
Work Life	3M Test Method, C-548	15 minutes
Tack Free Time	3M Test Method, C-3173	2 hours
Adhesion to Polyurethane	ASTM D3330, Method A	21 in/lb

Temperature (°C)	Gel Point (Min)	Time to full Cure (Min.)	Time to 95% Cure (Min.)
15	66	2147	1438
25	33	517	271
32	19	398	135
50	6	266	39
65	4	155	22
80	3	100	10

Note: RP-2220 should only be used to edge seal on primed or painted surfaces – do not use on bare metal.

Edge Seal Instructions

Tape Preparation

Ensure surface area to be sealed is clean and dry prior to application of RP-2220. Prepare the polyurethane protective tape part for edge sealing by applying a strip of 471 vinyl tape across the top of the polyurethane protective tape, 1/32" back from the edge. Apply a second strip of 471 vinyl tape on the aircraft surface, 1/8" from the edge of the polyurethane protective tape. This will provide a neat, defined area for the application of the urethane edge sealant. See *Figures 1 & 2*.



Figure 1: Apply masking tape to enable neat edge seal application

Apply Edge Seal

Finish by neatly applying 3M™ Scotch-Weld™ Repair Paste RP-2220 to seal the perimeter edges of the die cut or boot part applied to the navigational lens. Attach a RP-2220 cartridge to a 3M™ EPX™ Applicator. Attach a nozzle included in the RP-2220 product packaging to the cartridge. Dispense an approximately 1" diameter circle of mixed RP-2220 onto a scrap piece of metal, paper or other clean scrap material to ensure proper dispensing and mixing before starting application. Apply a bead of RP-2220 between the 471 vinyl tape strips that were applied in the steps above. See *Figure 2*.



Figure 2: Edge seal application

Smooth Edge Seal

With a clean, silicone-free and dust-free protective glove, use a finger to spread and smooth the sealant bead between the strips of 471 vinyl tape. Remove vinyl tape immediately after RP-2220 application is complete. See *Figure 3*.



Figure 3: Edge seal should be smoothed after application

Allow Edge Seal to Cure

Allow the RP-2220 to cure a minimum of 8 hours at 72 °F (22 °C) before flight. Cure is complete after 24 hours at 72 °F (22 °C). The cure time of RP-2220 can be accelerated by gently and carefully heating it to 130 – 140 °F (54 - 60 °C) for 10 – 15 min. See *Figure 4*.



Figure 4: Gentle heating can accelerate the edge seal cure

Final Step

Allow the surface of the polyurethane protective tape and edge seal to dry and cure for 8 hours before flying the aircraft.

Precautionary Information

Refer to product label and Safety Data Sheet (SDS) for health and safety information before using this product. For SDS visit our website https://www.3m.com/3M/en_US/company-us/SDS-search/.

Additional Information

In the U.S. call toll free 1-800-235-2376, or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5714. If you are outside of the U.S., please contact your nearest 3M representative.

Authorization to Use

Ensure products meet all applicable specifications, standards, and maintenance manual requirements for the platform being worked on and validate all aircraft approvals against current technical documentation.



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