

## SP500 Polishing Machine Process for MT-RJ Epoxy and Polish Single-Mode Connectors with Thermoset Ferrules

SP500-MTRJ-S single-mode MT-RJ Epoxy and Polish Connector Polishing Kit contains all film consumables required for this process.\* Other necessary items include alcohol, compressed air, glass plate, rubber pad (70 durometer) and distilled water.

Process for MT-RJ Epoxy and Polish Connectors with Thermoset Ferrules					
STEP NO.	FILM Part # Description	PRESSURE Setting	TIME (in seconds)	Lubricant	PUCKS per film usage
1	95-415-SC-PSA Gray	See Note "b"	N/A	None	4
2	95-415-SC-PSA Gray	B Glass Plate	30	Distilled Water	1
3	95-405-SC-PSA Gray	E Glass Plate	40	Distilled Water	1
4	95-401-SC Tan	B Rubber Pad	35	Distilled Water	1
5	95-403-SC-FL-PSA Gray Textured	E Glass Plate	50	Distilled Water	1
6	95-403-AO-FL-PSA Mint	E Glass Plate	50	Distilled Water	1
7	95-4005-CO-FLOCK Peach	E Glass Plate	50	Distilled Water	1
8	95-4005-CO-FLOCK Peach	E Glass Plate	50	Distilled Water	1

Table 1

\*Film (pack of 50 sheets) may be ordered separately using the part numbers provided in Table 1.

**⚠ CAUTION:** *Fiber optic cable is sensitive to excessive pulling, bending and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink. Doing so may cause damage that can alter the transmission characteristics of the cable. The cable may have to be replaced.*

**Notes:**

- a. Prior to loading the ferrules into the polishing puck, ensure that the puck is clean and all excess epoxy has been removed from the ferrule. Any debris between the puck and ferrule will cause an angled end-face and degrade performance.

- b. To load the puck, place the ferrules in the slot with the window facing out.
- 1) Tighten the outside latch until it just touches the ferrule.
  - 2) Tighten the top clamp onto the ferrule shoulder completely by twisting the thumbscrew.
  - 3) Tighten the outside latch again until it is firm.
- NOTICE:** *The ferrules cannot be moved into their seated position and will not polish correctly if the outside latch is completely tightened before the top clamp is adjusted in paragraph 2) above.*
- c. After placing the connectors into the polishing fixture, gently flush the fiber to the epoxy bead by hand, using the gray film in a circular motion. Be careful not to remove material from the ferrule itself. Make sure the bead height is consistent or the paper may tear during process step 2.
- d. Set pressure adjustment to “A” while raising or lowering the overarm. This step is very important to prevent crashing connector end-faces.
- e. This process requires a glass plate (p/n SP500-GPP) and rubber pad (p/n 95-501-78) that must be purchased separately.
- f. When using the glass plate in process steps 2,3,5-7, remove backing from film and center on the plate. When using the rubber pad in process step 4, secure film using a 0.5-inch piece of double-sided tape placed in the center of the pad. Remove air bubbles using a lint-free wipe.
- g. Clean film used in steps 1-4 with alcohol and blow dry prior to use. Blow away possible debris from film used in steps 5-8 prior to use. Keep all film in a sealed bag/container when not in use.
- h. Process steps 2-8 require the polishing film to be lubricated with distilled water.
- i. Lower arm and start timer cycle with the pressure adjustment set on “A”. After the film is rotating, set pressure as indicated in the process.
- j. Bead removal (process step 2) cycle time is dependent on bead size and epoxy type. Larger beads of epoxy may require more time. (All epoxy must be removed before starting step 3.)
- k. When performing step 2 of Table 1, the film may tear if any ferrule is out of position, if one or more of the ferrules has a significantly larger epoxy bead than the other ferrules, or if the epoxy beads are large. Replace film, if torn, and repeat this step with a new sheet of film. Reposition the ferrule or remove more of the epoxy bead by hand using the gray film.
- l. Rework: If the fiber end-face has minor scratching or pitting, repeat step 8 with a new sheet of film for 50 seconds. (Repeat step 8 a maximum of two times, at 50 seconds each.) If the fiber end-face is heavily scratched, pitted, or has excessive edge imperfections, etc., repeat steps 2 - 8 (repeat steps 2 - 8 only once). If the end-face is still not acceptable after the maximum allowable reworks, scrap the ferrule. Be careful to clean the polishing puck and the ferrules between each polishing step.
- m. Careful cleaning of the ferrule, guide pin holes in the ferrule, and the puck itself is required throughout the polishing process. First spray with water followed by air to remove debris. Then wipe the end-faces clean using alcohol and a lint-free wipe.
- NOTICE:** *If the guide pin hole(s) are clogged and cannot be cleaned, the ferrule must be scrapped. The final assembly will not mate correctly with clogged guide pin holes.*
- n. All times and pressures are based on Corning Cable Systems connectors and fiber using BA-F123 epoxy and small bead size.



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Drill                        No

GBC Punch                No

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