

## *FRL*

# *FIBERGLASS REINFORCED LINING*

### **INSTRUCTIONS**

This hand lay-up application is made up of two components: FRL Resin and standard fiberglass matting. If applied properly, the application will be a long lasting durable finish with a consistent textured appearance. While there is no implied warranty of these materials and techniques, the success of this system and final appearance lies with the experience and skill of the individual performing the application.

### **Kit Components**

- FRL RESIN paste for filling and surface preparation
- COLOR-MATCHED VINYL ESTER RESIN
- STANDARD FIBERGLASS MAT
- CATALYST to harden resin and paste
- MEASURING CUPS, STIR STICKS, GLOVES, RESIN BRUSHES, AND TEXTURE ROLLER

### **Recommended Miscellaneous Materials and Equipment**

- 3" Standard Enamel Paint Roller (Med. Mat., Lint Free) for roll-out
- 1" x 3" Enamel Paint Roller for roll-out on radius and tight corners
- 1 ½" x 3" Bristle Laminating Roller – Also for roll-out

Due to the various shapes and contour of most surfaces and flexibility needed from laminating rollers, we do not recommend using steel, plastic or aluminum laminating rollers. Some mini and radius rollers may perform well in applicable areas.

- 2" x 4" Resin Brushes (Disposable)
- Acetone or Lacquer Thinner for clean up
- 80 to 100 Grit Wet/Dry Sandpaper
- Grinding and Sanding Tools: 3" – 5" Disc Sander with 36 to 50 Grit Discs, Dremel/Die Grinder for cracks and surface preparation
- Masking Tape (Good Quality) for trimming and protection from resin
- Razor Blades or Razor Knife for trimming
- Fan or Blower for ventilation
- Old Shoes and Protective Clothing

### **Safety Precautions**

Most fiberglass repair and resurfacing applications require personal contact with a variety of solvents, each having its own characteristics. Avoid contact with skin during mixing. Gloves are provided. Ventilation is required. Wear a vapor/particulate respirator (NIOSH/MSHA TC-23C). Eye protection is required when grinding, drilling, sanding and mixing. Keep away from heat, sparks and flames. Vapors may cause a flash fire. Close containers after use. Dispose of waste properly.

## PROCEDURES

### **I. Surface Preparation**

- A. Prepare the cracked, damaged, blistered or delaminated areas by using proper surface and damage filling techniques. Be sure to use the FRL Resin paste as a filler. Use 12.5 cc's MEKP per quart (proportionate for smaller quantities). Do not use bondo or polyester fillers. On blistered and delaminated areas, dry the structure sufficiently with a heat gun.
- B. Sand or grind entire surface area with 36 to 50 grit sandpaper. Be sure to remove all gloss and clean the surface using a soft clean cloth with acetone, lacquer thinner or isopropyl alcohol.
- C. Tape off jets, intakes and edges to be resurfaced. Be sure to use high quality tape. Resin will attack and absorb through low quality tape.

### **II. Mat Preparation**

Plan out the application, starting first with trimming around all the jets, intakes and skimmer within a 3" radius application. Then applying to the remaining bulk of the surface, working areas no larger than 3' x 3' at a time. Working time is limited. Allow easy access.  
(For example: Start at the top lip, down the sides towards the footwell, and complete by finishing the steps last.)

- A. Pre-measure mat to be laid to size. The mat will be applied to large flat areas in sections no larger than 36" x 36". Apply smaller sections to tight areas (from radius to radius). Do not overlap radiuses because large air pockets could form and it also prevents easy rollout.
- B. Fray the edges of the mat to be overlapped with other frayed mat sections next to it and so on. This will feather the mats together giving it an appearance of one whole piece.

### **III. Resin Preparation**

- A. Catalyze 1 to 2 quarts of resin with 12.5 cc's of catalyst per quart (50 cc's per gallon) in measuring cup provided. Working time is 25 to 30 minutes depending on temperature. Adjust catalyst accordingly. A 36" x 36" working area will require approximately 1 to 1½ quarts.

### **IV. Application**

- A. Using a 4" resin or paint brush, apply catalyzed resin to desired working surface generously but evenly. Remember to start with the jets and intakes first then continue with approximately 36" x 36" areas or smaller until well practiced.
- B. Immediately apply the prepared unsaturated mat to the surface by hand (wear gloves) over the uncured resin. The resin will begin to saturate the mat.

- C. Using the remainder of the catalyzed resin and a paintbrush, apply more resin to the mat to evenly saturate throughout.
- D. Use a standard enamel 3" paint roller (or desired laminating roller) to roll out the mat smoothly. It is helpful to saturate the roller with resin first. The object is to roll out any air pockets and to lay the mat down as smooth as possible so there will be minimal sanding before final finishing.
- E. Once the application is satisfactory, the saturated mat will begin to cure (or gel). It should take approximately 45 minutes to set depending on temperature.
- F. Prior to the resin setting too hard, trim the edges at the taped lines and remove any excess matting with a razor knife.
- G. Allow the resin to cure overnight to ensure a full cure. Applying heat may be necessary in cooler temperatures.
- H. Prepare the surface for the final coat by sanding resurfaced area and removing any roughness. Some filling may be required. The surface may still be a little tacky. This is acceptable for good adhesion for final coats. Remember, the surface does not need to be perfectly smooth.... a slight texture is acceptable. Re-taping may be necessary.
- I. **The Final Finish** – Catalyze appropriate amount of resin (approximately 1 to 2 quarts) and apply to the surface (approximately a 36" x 36" working area) with a clean 4" paint brush until even. Immediately using the texture roller, smooth out the resin to create an even "orange peel" texture. **Do not dip roller in resin.** Continue until textured stage is complete. Be sure to feather texture over previous sections which will begin to cure. The objective with this coat is to create a consistent texture. Do not be concerned so much with cooler coverage. The final coat will allow for that. Remember to leave an exit.
- J. Once the first coat has cured 45 to 60 minutes, apply another final coat using the same procedure as the first coat. No sanding is required between coats unless previous coat has cured tack-free (24 to 48 hours). Allow this to cure overnight.
- K. Once cured, please note that if the final surface has any dust or roughness, only sand the rough areas with 100 grit wet/dry sandpaper. Wipe the surface with liberal amounts of acetone and a soft clean cloth. This will bring back the shine on the sanded areas and remove most of the tackiness.

Remove tape. Be sure to cut at edge of tape before removing.

Allow 3 days to cure before filling with water.

## General Notes

- To be efficient, utilize a helper.

- Use scissors to cut mat.
- Do not overlap the frayed mat excessively. At the most 2”.
- Make template for redrilling air channel holes in seat of footwell.
- Soak and clean brushes and rollers in a bucket of acetone between applications.
- Rotate resin mixing containers between applications to ensure gelled or half-cured resin does not contaminate proceeding mixture.
- A better quality paintbrush may be necessary for the final texture coats. Disposable resin brushes lose their bristles.
- To prevent dirt and foot prints in final stages, it may be necessary to lay a piece of plastic in the footwell and steps to stand and walk on.
- If the surface is still tacky after the final 48-hour cure, wipe the surface with generous amounts of acetone and allow 24 more hours to cure.
- Be sure the jets and intakes do not leak water onto the applied surface. Water may inhibit the cure of the resin.

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