

# Application Guide



## Resurfacing Application: *Polyester and Vinyl Ester Contact Molds*

Use these Duratec® products to resurface polyester and vinyl ester contact molds:

Duratec Vinyl Ester Mold Repair Putty (1804-007 Untinted, 1802-007 Black)

Duratec Polyester Surfacing Primer (702-003 Black, 707-002 Gray, 714-002 White)

Duratec Polyester Hi-Gloss Coating (904-040 Clear, 602-021 Black, 604-041 Tint Base)

Duratec Vinyl Ester Hi-Gloss Topcoat (1902-045 Black, 1904-045 Clear, 1908-045 Orange)

Duratec Thinner (39LAC-1)

### Application Conditions

The surface should be clean, dry and free from oil, grease, wax or other contaminants. Ambient temperatures should be in excess of 60°F, 16°C to ensure a rapid and complete cure. Time calculations are based on temperatures of 77°F, 25°C.

### Duratec Vinyl Ester Mold Repair Putty Application

Use Duratec Vinyl Ester Mold Repair Putty to repair cracks, holes and chips in the mold surface.

### Surface and Product Preparation

Mask off the area to be repaired. This will minimize the surface that will be puttied. For maximum bonding, rout or sand all cracks and chips into the glass substrate.



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Aggressively sand the adjoining surface with 80-grit sandpaper to bevel the edge of the routed area. It is important to eliminate the sharp repair line. Follow by wiping the area clean with solvent-soaked white cloth or paper towel. **Do not use a tack rag.**

Thoroughly stir Duratec Vinyl Ester Mold Repair Putty in the can using a spatula or putty knife prior to catalyzing. Due to the rapid gel time of the putty, catalyze only what can be applied in 6-8 minutes. Catalyze at 3 percent with BPO catalyst and mix thoroughly.

Note: *Always massage or knead the BPO cream hardener (catalyst) as separation can occur in the tube.*

### Application Procedures

To ensure proper adhesion, rub the catalyzed putty into the repair area and follow by applying with a spatula, putty knife or squeegee. Fill the void completely by working the putty in all directions. For exceptionally deep repairs, repeat the process to ensure a porosity-free surface. Slightly mound the putty to allow for shrinkage.

When cured (20-30 minutes), sand the cured putty to a 600- or 800-grit finish. Compound, polish and prep as you would a new mold surface. No tooling gelcoat is required. The air-cured putty is the finished surface, and it will develop to a hardness and gloss equal to or greater than the original mold surface. Continue the resurfacing application with Duratec Polyester Surfacing Primer.

### Duratec Polyester Surfacing Primer Application

#### Surface and Product Preparation

Starting from a correctly shaped and dimensionally stable mold, sand the entire surface with a coarse sandpaper (80- or 120 grit), making sure to feather in puttied and filled areas. Wipe the sanded surface with a fast solvent and a clean white cloth or paper towel. **Do not use a tack rag.**

Thoroughly stir Duratec Polyester Surfacing Primer in the can prior to catalyzing. Due to the rapid gel time of the primer, mix only the amount that can be applied within 16-18 minutes @77°F, 25°C. (Higher temperatures yield a shorter pot life



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and gel time, while lower temperatures yield a longer pot life and gel time.) Catalyze at 2 percent with mekP catalyst (20 cc per quart). Thin 10-20 percent if necessary to a desired spray viscosity with Duratec Thinner or mek solvent after catalyzation.

*Note: If excessive porosity of the sanded mold surface is exposed, roll, brush or pour catalyzed primer onto the mold surface. With a metal squeegee work the primer in all directions until the porosity is filled. Follow by immediately spraying the primer onto the mold surface.*

### Application Procedures

*Note: Spray pressures should be 35-50 psi. If a pressure pot is used, provide 10-15 psi pot pressure.*

Apply a "tack coat" to the entire surface and allow it to flash for 2 minutes. Follow with wet passes, slowly building to the desired thickness (10-40 mils, 250-1000 microns). Heavier thickness can be achieved by repeating the process immediately after gel has occurred. The primer will be dry to the touch in 1-4 hours, depending on thickness and temperature, and ready to sand within 2-4 hours.

Dry sand the entire surface with 80- or 120-grit sandpaper. Wipe the surface with fast solvent and a clean white cloth or paper towel. **Do not use a tack rag.**

### Duratec Polyester Hi-Gloss Coating Application

To achieve a high gloss mold finish apply Duratec Polyester Hi-Gloss Coating.

### Surface and Production Preparation

Sand the primed surface to a 180-grit finish. Thoroughly stir Duratec Polyester Hi-Gloss Coating in the can prior to catalyzing. Due to the rapid gel time of the coating, mix only the amount that can be applied within 15-18 minutes. (Higher temperatures yield a short pot life and gel time while lower temperatures yield a longer pot lie and gel time.) Catalyze at 2 percent with mekP catalyst (20 cc per



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quart). Thin with Duratec Thinner or mek solvent, if desired.

### Product Application

Spray a mist coat of Duratec Polyester Hi-Gloss Coating over the sanded surface and wait 2 minutes for the solvents to flash off. Follow with wet coats building to 15-20 mils, 375-500 microns, thickness. When cured, sand first with 320- or 400-grit sandpaper then finish with 800 or higher-grit wet/dry sandpaper.

**Note:** *For best results, after sanding, wait at least overnight at 77°F, 25°C before compounding and polishing the surface.*

### Duratec Vinyl Ester Hi-Gloss Topcoat Application

For the ultimate gloss mold finish use Duratec Vinyl Ester Hi-Gloss Topcoat.

### Product Preparation

Thoroughly stir Duratec Vinyl Ester Hi-Gloss Topcoat in the can prior to catalyzing. Due to the rapid gel time of the topcoat, mix only the amount that can be applied within 16-18 minutes @77°F, 25°C. Higher temperatures yield a shorter pot life and gel time while lower temperatures yield a longer pot life and gel time. Catalyze at 2 percent with mekP catalyst (20 cc per quart).

### Product Application

*Equipment Note: Use air aspirated or pressure pot spray equipment. The recommended line air pressure is 35-50 psi and pot pressure is 10-15 psi. Airless, air-assisted airless and air aspirated gelcoat plural-component spray systems can also be used.*

Spray the entire surface with a fine mist coat and wait 2 minutes for the solvents to flash off. Follow with wet coats building to 15-20 mils, 375-500 microns, thickness.



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Note: *Do not inhibit cure by adding wax surfacing agents. The topcoat will cure to a hard, glossy finish in approximately 4-6 hours.*

When cured, dry sand the surface to remove entrapped dirt and dust beginning with 320-400-grit sandpaper. Finish with 800-or higher-grit wet/dry sandpaper. Wait a minimum of 8 hours (@77°F, 25°C) for the solvent to release prior to compounding and polishing.

### Compounding and Polishing the Surface

Remove scratches with Aqua-Buff 1000-F Fast-Cut Compound or Aqua-Buff 1000-W Fast-Cut Compound and polish with Aqua-Buff 2000 Compound/Polish for a glossy, swirl mark-free finish. No surface cleaning is necessary prior to the application of release materials.

**SAFETY PRECAUTIONS:** Duratec Vinyl Ester Mold Repair Putty, Polyester Surfacing Primer, Polyester Hi-Gloss Coating, Vinyl Ester Hi-Gloss Topcoat, and Thinner are extremely flammable. Do not apply near sparks, open flame or heat. Keep area ventilated. Do not smoke. Avoid continuous breathing of vapor. Do not take internally.



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