

#1041 Duratec Gray Surfacing Primer



Overview:

Duratec Surfacing Primer is the best choice for coating your plug or reconditioning your mold. It can be thinned using Duratec Thinner to be sprayed through a siphon or HVLP gun minimizing costly sanding steps to remove orange-peel. This surface primer can be applied as heavily as 45 mils to fill fabric pores on plugs or over repairs. With a higher heat distortion temperature, shrinkage is reduced. This further hides the repair. The gray primer sands easily and is then buffed to a Class 'A' mirror finish before building the mold. Catalyze with 2% MEKP. Available in gallons and 4 gallon cases.

Features & Benefits:

- Low Porosity: provides super fine leveling and filling system on a variety of substrates with superior release properties.
- Adhesion to most epoxies: with heat distortion level of 201°F, 94°C, the primer also adheres to fiberglass, properly prepared metal, wood, MDF, brick, concrete and polyurethane foam.
- Rapid coat buildup: to 40 mils, 1000 microns, wet on wet, on composite plugs and master mold surfaces; saves time and labor cost.
- Easy sanding: also saves time and labor. The primer cures to a surface that polishes to a high gloss, when required

Typical Product Properties:

	#1041
Viscosity	2,700 Cps
Thixotropic Index	5
Gel Time	16-18 Min*
Weight per Gallon	10.90 lb.
Coverage per Gallon 10 mil thick	110-115 ft ²

*Sample base on a 100 gram mass, catalyzed at 2 percent with MEKP. Based on temperatures of 77°F, 25°C

Mixing Directions:

Thoroughly mix this coating in can prior to use. Catalyze the coating with two percent (2%) by weight (approximately 20cc per quart) of MEKP.

Warning: once catalyzed, Duratec coatings have limited pot lives. Do not catalyze more material than can be applied within 15 minutes at 77°F.

Surface Preparation:

- The surface should be clean, dry and free from oil, grease, was or other contaminants. Ambient temperature should be in excess of 60 degrees F, or 16 degrees C to ensure a rapid and complete cure. Time calculations are based on temperatures of 77 degrees F.
- Starting from a correctly shaped and dimensionally stable plug, sand the entire surface with coarse sandpaper (80-120 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. (Higher temperatures yield a shorter pot life and gel time, while lower temperatures yield a longer pot life and gel time). Catalyze at 2% with MEKP catalyst. Thin 5-15% if necessary to a desired spray viscosity with Duratec Thinner after catalyzation.

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Application:

- 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). 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 the thickness and temperature, and ready to sand within 24 hours.
- Dry sand the entire surface with 80-120 grit sandpaper. Wipe the surface with fast solvent and a clean white cloth or paper towel. Do not use a tack rag. Wait overnight for the solvent to release and complete cure to develop. Again spray the primer as directed.
- If an even higher gloss is desired, blend the primer one-to-one with Duratec Polyester Clear Hi-Gloss Additive (#01040-B), thin with Duratec Thinner and spray to the desired thickness following equipment directions. Sand to a 600 or higher grit finish. (Note: For best results, after sanding, wait overnight before compounding and polishing the surface.)
- Remove scratches with #01102 Polishing Compound and polish with #01103 Polishing Compound for a glossy, swirl mark-free finish. No surface cleaning is necessary prior to the application of release materials.

Troubleshooting:

Problem	Cause	Solution
Alligatoring	Not enough catalyst used.	Check for proper catalyst levels.
	Substrate/primer incompatibility Chemical reaction.	Check compatibility of surface of product
	Primer sprayed on cold surface.	Expose surface to higher Temperature before spraying When ambient temp if below 60 degrees F.
Blisters	Substrate not cured, Gassing underneath primer.	Completely cure putties, pastes and compounds before applying primer.
Cracking	Primer spray too thickly, too fast.	Increase the number of passes, adding dwell time between coats. For exceptionally thick buildup, allow for gel to occur before spraying further.
Curing occurs on surface but not on substrate interface.	Primer sprayed on cold surface; primer cure inhibited.	Increase the number of passes to achieve desired thickness. Allow for "flash off" between passes.
Dimples (Craters)	Film buildup too rapid, solvent trapped in primer.	Increase the number of passes to achieve desired thickness. Allow for "flash off" between passes.
Dry over-spray	Acetone used as thinner.	Use slower solvent such as a fast acrylic lacquer thinner.
	Spray gun orifice too small.	Use larger orifice.
	Spray pressure too high.	Set line pressure at 35-50 psi.
Fisheyes	Substrate contaminated.	Do not use a "tack rag", slow evaporating solvent.
	Contamination in the air.	Spray in a clean area to minimize airborne dust, water, waxes, and/or silicones.
	Contamination in the air line.	Spray with dry filtered air.
Gelling in the container	Outdated Product.	Replace with new primer.
Lifting or Peeling	Substrate not cured or substrate/primer incompatibility.	Completely cure putties, pastes, and compounds before applying primer. Check compatibility of surfaces and products.

Troubleshooting, continued:

Problem	Cause	Solution
Orange Peel	Spray equipment set up incorrectly.	Follow the instructions for equipment set up.
	Spray pressure incorrect.	Set pressure at 35-50 psi.
	Pot pressure incorrect.	Set pressure at 10-12 psi.
	Viscosity too high.	Thin with fast acrylic lacquer thinner.
Pattern surface sticks to mold upon release.	Improper release preparation.	Follow manufacturer's instructions when applying release materials.
	Primer not fully cured before compounding and polishing.	Follow instructions above for pattern surfacing
	Excessive gel time for tooling gel coat.	Follow manufacturer's recommendations for gel time.
Pinholes	Substrate Porosity.	Fill porous areas with product using squeegee, brush or roller before spraying.
Plug/Pattern surface not hard or glossy	Primer not allowed to "breathe" after sanding.	Allow time for solvents to escape before compounding and polishing.
	Surface wet sanded when under cured; primer absorbed water.	Dry sand with initial sanding step. Wet sand after breathing occurs.
	Ambient temperature under 60 degrees F when sprayed	Expose surface to higher temperature before spraying
	Low reactivity catalyst used.	Do not use a catalyst with less than 8.8 percent active oxygen.
Plug/Pattern surface loses porosity.	Primer not fully cured prior to compounding and polishing.	Dry sand with initial sanding step. Wet sand after "breathing" occurs.
	Spray pressure too high.	Reduce pressure to 35-50 psi.
	Spray orifice too small.	Use larger orifice.
	Acetone used as a thinner.	Use a fast acrylic lacquer thinner.
Print through (developed during mold building) transfers to mold.	Putties, pastes and compounds under primer not fully cured.	Completely cure putties, pastes and compounds before priming.
	Putties, pastes and compounds post-shrink with exposure to excessive exotherm.	Qualify putties, pastes and compounds for acceptable heat distortion temperatures.
	Exposure to excessive exotherm during modl building.	Maintain exotherm below 200 degrees F during mold building.

Safety and Handling:

Duratec Gray Surfacing Primer is extremely flammable. Do not apply near sparks, open flames or heat. Keep area ventilated. Do not smoke. Avoid continuous breathing of vapor.

Duratec Gray Surfacing Primer contains ingredients which could be harmful if mishandled. Contact with skin and eyes should be avoided and necessary protective equipment and clothing should be worn. Individuals should wash with soap and water before eating or drinking. For more detailed instructions on handling, please see the MSDS sheet.

All containers should be properly labeled to prevent accidental ingestion or improper disposal. Individuals should reseal any partly used material back in the container. Store under cool, dry conditions and away from open flames and high temperatures. For more detailed instructions on storage, please see the MSDS sheet.