DURATEC WHITE VINYL ESTER PRIMER

PRODUCT #1794-006

Hawkeye Industries

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KEY USES

- Primer for patterns
- Primer for boat hulls
- Topcoat for patterns
- Use in-mold or post-apply
- All substrates (including some metals and 3D media with proper prep)

FEATURES

- QUICK CURE

Catalyze with MEKP Catalyst. Rapid curing; far faster than epoxy resin systems. Primer will be ready to sand in 1-4 hours, depending on thickness and ambient temperature.

- EASY APPLICATION Spray for a smooth, defect free surface. Can also be applied by brush or roller.

- OSMOSIS AND BLISTER RESISTANCE

Highly water and chemical resistant. Proven performance on more than 2000 boats for over a decade.

- HIGH BUILD

Up to 40 mils, 1000 microns, wet on wet, without sagging on vertical surfaces.

- HIGH HDT - 280°F (138°C)

COLOR OPTIONS

- Grey (1799-006)
- Black (1702-006)
- Untinted 1704-006

DESCRIPTION

The Duratec Vinyl Ester Primer is based upon a highly functional resin that brings unmatched strength and performance. Originally developed as the ultimate barrier coat for boat hulls, the Duratec Vinyl Ester Primer has proven its dynamic capability and solid value across many composite project uses.

PRODUCT PROPERTIES All time calculations are based on temperatures of 77°F, 25°C Lab tested with Norox 925H	
Viscosity As measured on a Brookfield Viscometer Model RVF, Spindle #5 at 2.5 rpm	2200 - 2600 cps
Thixotropic Index	min. 5.5
Gel Time Sample based on a 100g mass catalyzed at 2% with MEKP	15-20 minutes
Weight per gallon	11.20 lbs
Coverage per Gallon 10 mil thickness 250 micron thickness	100-115 ft 2 10.2-10.7 m2

SAFETY & HANDLING

Duratec Vinyl Ester 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 Vinyl Ester 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. 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.

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APPLICATION GUIDE | PRODUCT #1794-006

PLEASE NOTE

The following use instructions are broad to address multiple applications. We recommend testing for product compatability with your process. Please contact our Tech Team at (909) 546-1160 with any questions.

Prepare

Use either a paint shaker or a drill-mounted mixer. A paint stir stick will not be enough to mix up the Duratec. Mix until all the pigment is dispersed and the Duratec Vinyl Ester Primer is free of lumps. Filter through a cone filter or filter sock.

Spray gun: an HVLP spray gun with a 2.2 – 2.4 mm tip, or a standard gelcoat gun. Vinyl Ester Primer is easier to spray than gelcoat. Use a small tip and lower line pressure. Set up the gun to provide a fine spray. Spray from 12-18" from the mold holding the gun at a 90° angle.

Catalyze

Catalyze the Duratec at 2.0 % by weight with a full strength MEKP, like Norox 925. Mix for one minute (when using a cup gun). Only catalyze what can be sprayed in 12 minutes.

NOTE: Additional solvent is not needed for most spray guns. If solvent is required Duratec Reducer 39UCE-3 is the best choice. Methyl Ethyl Ketone Solvent (MEK) will work for most users. High quality urethane reducers are good choices. Lacquer thinners and acetone are not recommended.

If extended gel time is needed, check out Duratec Gel Time Extender. Gel-X is specially designed for use in our primers and extends the pot life.

Spray

The Duratec may need to be mechanically forced into severe porosity. The first 2-3 mil pass can be worked with a soft squeegee to fill the holes. The first pass should be a dust coat that sets up for a minimum of two minutes before further application. The dust coat should be a light fog, not a continuous film.

Apply 5-7 mils and immediately apply another 5-7 mils in the opposite direction for a crosshatch effect. Additional coats can be applied after a minimum of two minutes and while the surface is tacky.
For polyester/vinyl ester application: do not allow the primer to become tack-free between build coats. If the primer becomes tack-free, allow it to cure completely, sand with 180 grit, and recoat.

Additional coats of 4-5 mils can be applied, again allowing a minimum of two minutes to out-gas. Twelve mils will provide a nice finish. Up to 22 mils can be applied if the part requires aggressive post sanding. The coating needs to be tacky for each build coat to bond. Cure time varies with temperature and air flow.

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For epoxy, follow the steps provided - however, note that epoxy laminating systems require a tack free surface. Increased heat up to 120° F will speed this process. Remember the adhesion comes from the epoxy. Test the bond between the Duratec and your epoxy blend to assure good adhesion.

Sand & Buff

Work through sandpaper grits from 400- 1500, removing only the Duratec necessary to achieve a smooth flat profile. Wet sanding yields best results. We advocate a sanding guide coat or sanding dye.

Because of the tough, scratch resistant nature of the Duratec regular automotive compounds may not be aggressive enough to remove sanding scratches. We advocate the use of Aqua Buff as described below.

Allow at least eight hours between the start of sanding and the start of compounding. Pre-sand out any gas.

Beginning with Aqua Buff 1000F, remove the scratches, using a wool pad and mist bottle as your lubricant.

Exceptional final gloss will be achieved with Aqua Buff 2000 with a cotton/ wool blend pad. Again use a mist bottle to lubricate and cool the part as you polish the part. Finish with a foam pad for outstanding results.

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TROUBLESHOOTING | PRODUCT #1794-006

Problem	Cause	Solution
Alligatoring	Not enough catalyst used.	Check for proper catalyst levels.
	Substrate/primer incompatibility or chemical reaction.	Check compatibility of surface of product.
	Primer sprayed on cold surface.	Expose surface to higher temperature before spraying when ambient temp of below 64°F, 18°C.
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.
Fisheyes	Substrate contaminated.	Do not use a “tack rag”. Ensure rag does not leave contaminant on surface.
	Contamination in the air.	Spray in a clean area to minimize airborne dust, water, waxes, and/or silicones.
	Contamination in the line.	Spray with dry filtered air.
Orange Peel	Spray equipment set up incorrectly.	Follow the instructions for equipment set up.
	Spray pressure incorrect.	Set pressure at 34-40 psi.
	Pot pressure incorrect.	Set pressure at 10-12 psi
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 in the application guide for pattern surfacing.
	Excess gel time for tooling gel coat.	Follow manufacturer’s recs for gel time.
Pinholes	Substrate porosity.	Fill porous areas with product using squeegee, brush or roller before spraying.
Porosity	Spray pressure too high	Reduce pressure to 34-40 psi.
	Spray orifice too small.	Use larger orifice.
	Acetone used as thinner.	Use slower solvent such as MEK or Duratec Reducer.