Hawkeye Industries

Surfacing Urethane Tooling Board

APPLICATION GUIDE

PRODUCTS

Duratec Vinyl Ester Primer - Grey- 1799-006, Black - 1702-006, Untinted - 1704-006

Using Duratec 1799-006 to surface urethane tooling board provides a smooth, polished primer surface over a stable substrate. The Vinyl Ester primer provides a strong adhesive bond for a durable pattern surface, has an HDT of 285° F, and does not require a sealer between the tooling board and Duratec VE Primer. The Vinyl Ester Primer can be sanded and and polished to a gloss of up to 85% (60°). The VE primer retains its gloss as the mold is made, and tooling gelcoat will have a gloss of up to 80% after the mold is pulled from the pattern.

Application Conditions

The surface should be clean, dry and free from oil, grease, wax or other contaminants.

Ambient temperatures should be in excess of 64°F, 18°C to ensure a rapid & complete cure. Time calculations are based on temps of 77°F

Thoroughly stir products before use. A pain shaker or drill-mounted mixer is necessary - a stir stick is not enough.

Catalyze at 2% with full strength MEKP catalyst. Only catalyze the amount that can be applied in about 10 minutes.

Application Preparation # 1799-006, # 1702-006, # 1704-006

Catalyze as outlined previously.

The pot-life will be extended by cool temperatures, and shortened by temperatures above 77° F. 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.

We advocate HVLP air-assisted spray guns. A 2.2 mm tip is ideal for the Duratec VE Primer. Use 30-40 psi air pressure (at the gun). Adjust the needle and fan to provide a fine spray.

Additional solvent is not needed for most spray guns. If thinning is required, we suggest the use of Duratec 39UCE Reducer.

Application Process # 1799-006, # 1702-006, # 1704-006

Applying by spray

The Vinyl Ester Primer can be applied by spray, brush or roller. However, application by spray provides the best surface and fastest film build.

Spray the Duratec 1799-006 onto the Urethane tooling board. If the board has a porous surface the primer will immediately indicate pinholes and porosity. Use a plastic card or putty knife to force the Vinyl Ester Primer into the voids. It is necessary to drag the vinyl ester surface to break the surface tension and fill pinholes.

Application Process CONTINUED

Apply 2-3 mils, and immediately apply another 2-3 mils in the opposing direction for a crosshatch effect (this provides the most even application). Wait at least two minutes, then apply another build coat. A wet coating thickness of 14 mils should lead to about 12 mils when dry. We advocate at least 12 mil wet film build to prevent cracking and to provide a strong film.

Do not allow the VE Primer to become tack-free between build coats. If the VE Primer becomes tack free, allow to cure completely, sand, and recoat.

The Duratec VE Primer is designed to be sanded to provide full solvent release and resin cure. The primer can be sanded as soon as the surface is hard enough to sand without filling the paper.

If the pattern will be topcoated, sand the VE primer with 220 grit paper, and allow to stand for at least 8 hours before topcoating.

If the mold will be made against the Duratec VE Primer, follow the following steps:

- Evaluate the surface. If it is free of orange peel start with a fine grit: 320 or 400.
- If the surface shows orange peel, start with a coarser grit like 220 or even 180 grit sandpaper.
- Use progressively finer grits: 400, 600, 800,1000. Allow at least eight hours between the start of sanding and the start of compounding.

The VE Primer can be wet-sanded. Wet sanding prevents unintentional deep scratches and keeps the surface cool. We advocate a sanding guide coat or sanding dye.

For a Class A finish, use the Duratec Vinyl Ester Topcoat over the sanded VE Primer. The VE topcoat can be sanded and polished to a sharp, high 90's gloss.

Compound with Aqua-Buff 1000-W and polish with Aqua-Buff 2000. The result is a smooth, hard and glossy finish.

Note: glue lines are a common problem with patterns made from tooling board. We advcoate a high HDT glue between the tooling board plies, and heat cycling the pattern to cure the glue. Build a deeper Duratec film over the glue line to prevent the line from showing through the Duratec primer.

Check the material safety data sheet of your product for recommendations on protective equipment. Each product has a corrosponding Technical Data Sheet available on our website, which includes a troubleshooting guide, general use instructions and other helpful information.

Limited/ warranty statement: Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special, incidental or consequential damages.

WWW.HAWKEYEIND.COM