Hawkeye Industries

Vacuum Infusion with Duratec

APPLICATION GUIDE

PRODUCTS

Duratec Vinyl Ester Primer - White - 1794-006, Grey - 1799-006, Black - 1702-006, Untinted - 1704-006
Duratec Vinyl Ester Hi-Gloss Topcoat - Clear - 1904-045

Use these Duratec products in-mold, as a gel coat alternative, for post-painted composite parts. Duratec, used in-mold, can eliminate porosity, reduce weight, and provides a smooth fine surface for topcoats. Most epoxy laminating resins will adhere to Duratec primers with surface prep.

Application Conditions

The surface should be clean, dry and free from oil, grease, wax or other contaminants. Mold surfaces should be treated with the proper release agents.

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

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.

Catalyze at 2% with full strength MEKP catalyst. We recommend Norox 925H for our Vinyl Ester products.

Vacuum Infusion on Polyester & Vinyl Ester Laminated Parts # 1799-006, # 1702-006, #1704-006

Application process
Applying at least one coat of a silicon free paste wax, even on a mold with a semi-perm release, will help prevent fish-eye defects. Apply wax as outlined by manufacturer.

Stir and catalyze as previously outlined. Due to rapid gel time, catalyze only what can be used in 12-15 minutes. Remember that higher temperatures yield a shorter pot life.

On a properly prepared mold, spray Duratec Vinyl Ester Primer using the same spray equipment used to spray gel coats, or siphon or pressure pot spray system.

Apply a “dust coat.” A dust coat is a light mist that does not completely cover the mold. The color of the tooling gelcoat should be clearly visible after the dust coat. This creates thousands of tiny islands of Duratec. As the solvent evaporates the viscosity increases anchoring the build coats to prevent fisheyes or crawling.

Wait 2-5 minutes after the dust coat, then apply two passes of 5-6 mils of Duratec, working in 90 degree opposed directions (crosshatch application). Allow 2-5 minutes between passes, building to your desired thickness.

After building to your desired thickness (15-20 mils), wait 30-45 minutes (64°F or warmer) prior to laminating with polyester or vinyl ester laminating systems.

For optimal bonding, sand the VE Primer with 180 grit paper. Then proceed to laminate.

Vacuum Infusion on Polyester & Vinyl Ester Laminated Parts

After de-molding, sand the primed surface. Start with the finest grit sand paper which is needed to improve surface profile. This grit will differ depending on the surface once pulled form the mold and the desired surface prior to post-painting.

Epoxy Laminated Parts # 1794-006, # 1799-006, # 1702-006, #1704-006

Application Process

Stir and catalyze as previously outlined. Due to rapid gel time, catalyze only what can be used in 12-15 minutes. Remember that higher temperatures yield a shorter pot life.

On a properly prepared mold, spray Duratec Vinyl Ester Primer using the same spray equipment used to spray gel coat or siphon or pressure pot spray system. Spray from 15-20 mils thickness and wait 3-4 hours, depending on temperature (64F or warmer) and thickness, until the primer is fully cured.

For optimal bonding between the Vinyl Ester Primer and the epoxy laminate sand the VE Primer with 180 grit paper. When working with epoxy and Duratec, the adhesion comes from a mechanical bond. Sanding improves the adhesion strength

After de-molding, sand the primed surface. Start with the finest grit sand paper which is needed to improve surface profile. This grit will differ depending on the surface once pulled form the mold and the desired surface prior to post-painting.

Duratec Clear Hi-Gloss Topcoat

Use Duratec Vinyl Ester Clear Hi-Gloss Topcoat with Vacuum Infusion Molding in place of Duratec Vinyl Ester Primer when a clear gloss finish and additional surface hardness are desired. A silicon-free wax will help prevent fish-eyes.

Check the material safety data sheet of your product for recommendations on protective equipment. The Duratec products are extremely flammable. 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.