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## KEY USES

- Topcoat for plugs and patterns
- Mold resurfacing
- Other open-cure high gloss interior coatings
- Interior applications above 200°F

## FEATURES

- HIGH GLOSS**  
Transfers a brilliant gloss to tooling gelcoat to eliminate mold sanding.
- HIGH HDT**  
Up to 300°F (150°C)
- EASY APPLICATION**  
Sprays easily through HVLP spray guns.
- RESISTS FISHEYES**  
Unique additives reduce the risk of fisheyes, pinholes and surface defects.
- SMOOTH FINISH**  
Minimal orange peel.

## COLOR OPTIONS

- Black (1902-045)
- Clear (1904-045)
- Orange (1908-045)
- Red (1910-045)\*
- Tan (1911-045)\*
- White (1914-045)\*

\*specialty color. Will require a MOQ.

# DURATEC BLACK VINYL ESTER HI-GLOSS TOPCOAT

PRODUCT # 1902-045

## DESCRIPTION

The Duratec Vinyl Ester Hi-Gloss Topcoat is an easy-to-apply topcoat for pattern surfaces and resurfacing molds. Providing tremendous gloss transfer to the mold's gelcoat without the requirement of wax or other additives, this product is great for plug & pattern applications.

PRODUCT PROPERTIES	
All time calculations are based on temperatures of 77°F, 25°C Lab tested with Norox 925H MEKP	
<b>Viscosity</b> #5 spindle, Brookfield RFG at 2.5 RPM	700-1000 cps
<b>Thixotropic Index</b>	4
<b>Gel time @ 2% MEKP:</b> based on a 100g mass	11-19 minutes
<b>Weight per gallon:</b>	8.7 lbs/gal
<b>Coverage per gallon, 20 mil thickness:</b>	80 sq feet
<b>Color:</b>	black (color value not assigned)
<b>Shelf Life:</b>	Six (6) months from date of manufacture, unopened, with proper storage. See Shelf Life Statement for full details.

## SAFETY & HANDLING

Duratec Vinyl Ester Hi-Gloss Topcoat 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 Hi-Gloss Topcoat 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.

**Liability/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. All claim requests must be made in writing and are subject to review, including storage temperature verification and retain evaluations. The exclusive remedy for all proven claims is replacement of our materials. In no event shall we be liable for special, incidental or consequential damages, including damages caused in transit (exworks terms). 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 and trademark rights are reserved.



# DURATEC BLACK VINYL ESTER HI-GLOSS TOPCOAT

APPLICATION GUIDE | PRODUCT #1902-045

## PLEASE NOTE

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

## Prepare & Catalyze

Temperature should be at least 64°F for both the product and the part.

Black Vinyl Ester Hi-Gloss Topcoat should be mixed either by stirring, paint mixer (gallons), stand or drill-mounted mixer (pails or drums). Ensure thorough mix.

If topcoating, substrate/laminate surface should be sanded with 220 grit, and wiped down with an acetone damped rag, prior to application of Vinyl Ester Hi-Gloss Topcoat. Do not use tack cloth.

Catalyze the Duratec at 2.0 % by weight with a low hydrogen peroxide MEKP, like Norox 925H. Mix well.

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

**IN-MOLD USE:** Vinyl Ester Hi-Gloss Topcoat can be sprayed in mold, but equipment and technique will need to be adjusted in comparison to tooling gelcoat application in order to support the lower-viscosity Vinyl Ester Hi-Gloss Topcoat. We suggest use of an HVLP gun over a dump-gun and use of wax mold release agent like TR108 or honey wax rather than or in conjunction with semi-perm release agents. Wax allows the proper surface tension essential for the product to level and flow across the in-mold surface. If you are experiencing severe fisheyes when applying in-mold, it is likely the semi-perm release agent is preventing the necessary surface tension.

## Apply

Duratec Vinyl Ester Hi-Gloss Topcoat should be applied by spraying. We recommend an HVLP air-assisted spray guns or a gelcoat application system.

A 1.8 -2.2 mm tip is recommended (depending on part size). Use 34-40 psi air pressure (at the gun). Adjust the needle and fan to provide the proper spray.

The first coat should be a light dust coat. The dust coating does not completely cover the surface. Wait at least two minutes, and apply another light coat. After two additional minutes, begin build coats of 4-5 per pass, waiting 2 minutes or more between passes.

Apply at least 18 mils for an even and complete cure. Recoat before the topcoat has set up and lost it's tack.

If the topcoat cures completely, wait at least eight hours, sand, and recoat. Wait at least eight hours from the start of sanding before polishing or topcoating.

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# DURATEC BLACK VINYL ESTER HI-GLOSS TOPCOAT

TROUBLESHOOTING | PRODUCT #1902-045

Problem	Cause	Solution
<b>Alligatoring</b>	Not enough catalyst used.	Check for proper catalyst levels.
	Substrate/product incompatibility or chemical reaction.	Check compatibility of surface of product.
	Product sprayed on cold surface.	Expose surface to higher temperature before spraying when ambient temp is below 64°F, 18°C.
<b>Blisters</b>	Substrate not cured, gassing underneath product.	Completely cure putties, pastes and compounds before applying product.
<b>Cracking</b>	Product sprayed too thickly, too fast.	Increase the number of passes, adding dwell time between coats.
<b>Dimples (Craters)</b>	Film build up too rapid, solvent trapped in product.	Increase the number of passes to achieve desired thickness. Allow for "flash off" between passes.
<b>Fisheyes</b>	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.
<b>Orange Peel</b>	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.
<b>Pattern surface sticks to mold upon release</b>	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
<b>Pinholes</b>	Substrate porosity.	Fill porous areas with product using squeegee, brush or roller before spraying.
<b>Porosity</b>	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