CLEAR HV SUNSHIELD POLYESTER TOPCOAT

PRODUCT # 904-070

Hawkeye Industries

909-546-1160

hawkeyesales@hawkeyeind.com

PO BOX 415,
BLOOMINGTON, CA 92316

WWW.HAWKEYEIND.COM

KEY USES

- In-Mold Clear
- Exterior carbon fiber parts
- Exterior fiberglass parts
- Marine applications

FEATURES

- UV RESISTANCE
Resists yellowing when exposed to sunlight.
- IN-MOLD APPLICATION
Ease of use in-mold processes.
- PRE-PROMOTED
For safety, consistency and easy use. Air-cure with no wax required.
- HIGH GLOSS
Polishes to a high gloss – wet look surface.
- CHEMICAL RESISTANCE
Highly cross-linked coating provides excellent chemical resistance.
- STRENGTH & FLEXIBILITY
Excellent flexibility and impact resistance.

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DESCRIPTION

The 904-070 is a higher viscosity version of our 904-061 Sunshield, designed specifically for in-mold applications. HV Sunshield 904-070 features the same resistance to UV light as the traditional Sunshield 904-061, while improving in-mold sprayability for a high quality finish.

PRODUCT PROPERTIES All time calculations are based on temperatures of 77°F, 25°C Lab tested with Norox 925	
Viscosity Brookfield RVF, Spindle #2 at 20 rpm	Minimum 1550 cps
Thixotropic Index	Minimum 3.0
Gel Time Based on 100g mass catalyzed at 2% MEKP	15 - 18 minutes
Weight per gallon	8.85 lbs
Coverage per gallon, 20 mil thickness	80 sq ft

SAFETY & HANDLING

Duratec HV Sunshield Clear Polyester Topcoat is extremely flammable. Do not apply near sparks, open flames or heat. Keep area ventilated. Do not smoke. Avoid continuous breathing of vapor. Sunshield 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 #904-070

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 & Catalyze

Temperature should be at least 64°F for both the product and the part. Mix Duratec with either a paint shaker or a drill-mounted mixer. A paint stir stick will not be enough.

Catalyze the Duratec at 2.0 % by weight with a low hydrogen peroxide MEKP, like Norox 925. Only catalyze what can be used in 12 minutes.

Sunshield is best applied by spraying. We recommend HVLP air-assisted spray guns. A 2.0mm tip is recommended. Use 34-40 psi air pressure. Adjust the needle and fan to provide the proper spray.

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

Apply

Option #1: In-Mold Prior to Laminating

Ensure mold is clean and free of silicone. When sprayed in-mold Sunshield we suggest use of a wax mold release agent like TR108 or honey wax rather than or in conjunction with semi-perm release agents. This will allow the proper surface tension essential for Sunshield to level and flow across the in-mold surface.

Adjust fluid pressure and atomizing air to achieve an even pattern with fine droplets prior to spraying the mold. The first pass should be a dust coat that sets up for two minutes before further application. The dust coat should be a light fog, not a continuous film.

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 with UV protection. Up to 22 mils can be applied if the part requires aggressive post sanding.

The coating needs to be tacky free for each build coat to bond. Laminate polyesters and vinyl esters when the Duratec has set up and does not transfer, but retains some tack. Cure time varies with temperature and air flow.

For epoxy laminating systems, a tack free surface is required. 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.

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Option #2: Finishing Parts

NOTE: This high viscosity version of Sunshield is designed for use in-mold. It can be used in post-paint applications, but the traditional version, 904-061, may be a better fit in a finishing application.

Abrade the entire surface with 180 grit, providing mechanical tooth. Remove dust and acetone-wipe the surface.

For epoxy laminate, water washing with clean water and a heavy duty scrub sponge pad is necessary before and after sanding. It is not necessary to water wash polyester or vinyl ester laminates

Set up gun, mix, and catalyze as previously mentioned.

Pro Tip: Sunshield can by applied by brush or roller when topcoating wood.

The Duratec may need to be mechanically forced into severe porosity. The first 2-3 mil passes can be worked with a squeegee to fill the holes.

Additional coats can be applied after two minutes and while the surface is still tacky.
If re-coating the full cured Duratec is necessary, first sand with 180 grit.

The final spray should be sanded with 400 grit and allowed to cure for 8 hours prior to final polishing.

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TROUBLESHOOTING | PRODUCT #904-070

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.
	Product sprayed on cold surface.	Expose surface to higher temperature before spraying when ambient temp is below 64°F, 18°C.
Cracking	Product sprayed too thickly, too fast.	Increase the number of passes, adding dwell time between coats.
Dimples (Craters)	Film build up too rapid, solvent trapped in product.	Increase the number of passes to achieve desired thickness. Allow for "flash off" between passes.
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.
	Not using silicone free paste wax	Use a silicone free paste wax, like TR 108
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 Duratec Reducer or MEK