



SHERWIN-WILLIAMS®

Automotive Finishes

GENESIS® 3.5

Low VOC Acrylic Polyurethane

Product Data Sheet

GC Series

PRODUCT DESCRIPTION

Genesis® 3.5 Low VOC Acrylic Polyurethane is extremely durable, provides high gloss and is chemical/solvent resistant. Genesis® 3.5 can be air-dried or force dried for a urethane-tough enamel that is ideal for OEM, Fleet, Truck, and special vehicle finishing. Genesis® 3.5 demonstrates many graffiti resistant properties that make it ideal for industries such as: airline ground support equipment, the waste industry, beverage industry, DOT, and public transportation equipment. Genesis® 3.5 offers excellent hiding with lead and chromate free formulas and is available in many intermix formulas including fleet specified colors.

TECHNICAL DATA

<ul style="list-style-type: none"> • Mixing ratio by volume 3:1 • Max VOC @ 3:1 <table border="0" style="margin-left: 20px;"> <tr> <td>VOC Total</td> <td>3.5 lbs/gal, 420 g/l</td> </tr> <tr> <td>VOC less exempt</td> <td>3.5 lbs/gal, 420 g/l</td> </tr> </table> • Viscosity (sprayable) Gardner #2 Zahn Cup (ISO calibrated) • Flash point PMCC (white) 80°F • Coverage @ 1 mil dry (white) 875 sq. ft./gallon • Recommended min. dry film thickness (2 coats) 2.0-2.5 mils • Gloss <table border="0" style="margin-left: 20px;"> <tr> <td>60°</td> <td>92</td> </tr> <tr> <td>20°</td> <td>85</td> </tr> </table> • DOI Excellent • Pencil Hardness <table border="0" style="margin-left: 20px;"> <tr> <td>at 48 hours</td> <td>H</td> </tr> <tr> <td>at 2 weeks</td> <td>2H</td> </tr> </table> <ul style="list-style-type: none"> - Florida Black Box (gloss retention) @ 5 degrees South exposure for 2 years 90% • Dielectric Strength 2000 volts/mil • Lead/Chromate color formulas Refer to MSDS 	VOC Total	3.5 lbs/gal, 420 g/l	VOC less exempt	3.5 lbs/gal, 420 g/l	60°	92	20°	85	at 48 hours	H	at 2 weeks	2H	<ul style="list-style-type: none"> • Performance after one-week air dry <ul style="list-style-type: none"> - Impact resistance (80 inch-pounds) <table border="0" style="margin-left: 20px;"> <tr> <td>Direct</td> <td>Pass</td> </tr> <tr> <td>Reverse</td> <td>Pass</td> </tr> </table> - Flexibility (1/8" conical mandrel) Pass - Solvent resistance (10 double rubs) (MEK/Xylene/Gasoline/Diesel/Oil) No effect - Chemical resistance (24 hr. covered contact) <table border="0" style="margin-left: 20px;"> <tr> <td>10% Hydrochloric acid</td> <td>No effect</td> </tr> <tr> <td>10% Sulfuric acid</td> <td>No effect</td> </tr> <tr> <td>10% Sodium hydroxide</td> <td>No effect</td> </tr> <tr> <td>Gasoline</td> <td>No effect</td> </tr> <tr> <td>Motor Oil</td> <td>No effect</td> </tr> <tr> <td>Antifreeze</td> <td>No effect</td> </tr> </table> - Salt spray resistance -500 hrs* No effect - Humidity resistance - 250 hours* No effect <p style="text-align: center;">* Over properly treated and primed metal</p>	Direct	Pass	Reverse	Pass	10% Hydrochloric acid	No effect	10% Sulfuric acid	No effect	10% Sodium hydroxide	No effect	Gasoline	No effect	Motor Oil	No effect	Antifreeze	No effect
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SUITABLE PRIMERS

- PRIME-SHIELD™ Urethane Primers, E2A820/R822/W823
- 3.5 VOC DTM Epoxy Primers, E2B931/W932/A933
- 2.1 VOC DTM Epoxy Primers, PSE2110/2120/2130
- DTM Urethane Primers, E2W817/B818/A819
- Dimension 3.5 VOC 1K Enamel Sealer, DS675/676/677/678/679
- SPECTRAPRIME™ Color Surfacer, P30A
- SPECTRASEAL™ Sealer System P30A
- ULTRA-FILL® HS DTM, NP75
- ELEMENT-SHIELD™ Urethane Primer, E2W840

MIXING

1. Stir or shake Genesis® 3.5 Low VOC thoroughly before mixing.
2. Mix by volume, **3 parts Genesis® 3.5 Color with 1 part GH1091 Genesis® 3.5 Hardener**. Stir thoroughly and strain before use. Pot life: 2 Hours @ 70°F.
 - Up to 10% Genesis® Reducer GR1088 or VS100 may be added based on sprayable volume to customize application properties without affecting VOC. Pot life: 3 hours @ 70°F.
3. One of the following reducers are included in the intermix formula.

Reducer	Temperature Range
VS-100	50-75°F
GR-1088	55-80°F
GR-1070	50-75°F
GR-1073	75-85°F
GR-1086	85°F+

Additional reducer may be added while maintaining 3.5 VOC compliance by using VS100 or GR1088 exempt solvents.
4. To speed cure time, add up to 3 ounces of Genesis® Accelerator GA-1097 per sprayable gallon or up to 2 ounces GA-1098 Accelerator per sprayable gallon. Refer to **Drying Schedule** section for details about cure times with Genesis® Accelerators GA-1097 and GA-1098.

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APPLICATION

Overall

1. Adjust air pressure at the gun to 55-65 psi for siphon, gravity or pressure feed (adjust pot pressure to 5-10 psi for 8-15 fluid ounces per minute delivery).
2. For Pressure/Siphon feed, apply 2 medium coats at a gun distance of 8-10 inches. Spray to hiding. For HVLP, apply 1 full wet coat with 50% overlap, applying the second coat in a cross-coat method. Recommended dry film thickness is 2.0-2.5 mils.
3. Clean spray gun immediately after use with Gun and Equipment Cleaner, R7K5200.

Repair

1. Repair process must be performed using a two-gun method. Apply Genesis® 3.5 over the repaired area carrying out the wet edge just beyond the repair.
2. Allow Genesis® 3.5 to flash per data sheet recommendations. Apply a second coat to achieve proper hiding and blending of the color into the repaired area and lightly feather the outer edge.
3. Immediately after feathering the final coat, melt the feathered edge with a wet-on-wet application using Ure-Blend™ BS10 1K Urethane Blending Solvent.

Buffing Blend Area

- Allow finish to cure according to recommended drying schedule.
- If sanding is needed for dirt or smoothing the blend area, use 2000 to 2500 grit wet paper.
- Buff blend area by machine with a quality micro-finishing compound followed by machine glaze. Hand glaze if needed.

Equipment

<u>Gun Type</u>	<u>Nozzle</u>	<u>Air Pressure</u>
Conventional Siphon Feed	1.3-1.5 mm	50-55 psi
Conventional Gravity Feed	1.3-1.5 mm	50-55 psi
Conventional Pressure Feed	0.8-1.1 mm at 8-12 oz/min	50-55 psi
HVLP Gravity Feed	1.3-1.5 mm	10 psi at cap
HVLP Pressure Feed	0.8-1.1 mm at 8-12 oz/min	10 psi at cap
Reduced Pressure Gravity	1.3-1.5 mm	follow gun manufacturer recommendations
Reduced Pressure	0.8-1.1 mm	follow gun manufacturer recommendations

DRYING SCHEDULE

Dry times are based on the recommended dry film thickness of 2.0 - 2.5 mils; thicker films will extend drying times.

Air dry times @ 75°F and 50% Relative Humidity:

	<u>Unaccelerated</u>	<u>Accelerated</u> 3 oz. GA-1097 or 1 oz. GA-1098 per sprayable gal	<u>Accelerated</u> 2 oz. GA-1098 per sprayable gal
- Dust free	2-3 hours	1 hour	40 minutes
- Tack free	6-7 hours	3 ½ hours	2 hours
- Tape free	24 hours	3 ½ hours	2 ½ hours
- Nib Sand	24+ hours	2 ½ hours	2 hours

Force dry times:

<u>Temperature</u>	<u>Tape Free</u> <u>Unaccelerated</u>	<u>Tape Free with 2 oz</u> <u>GA-1097 per sprayable Gallon</u>	<u>Tape Free with 2 oz.</u> <u>GA-1098 per sprayable gallon</u>
140°F	80-120 minutes	30 minutes	20 minutes
160°F	60-80 minutes	---	---
180°F	45-60 minutes	---	---

NOTES

- Decals may be applied after air-drying 72 hours at 75°F. Lower temperatures, heavy film thickness, poor air movement, thick decals, foil-based decals, etc., will extend the 72 hour dry time before decal may be applied.
- Infra-Red Recommendation: 10 min. on low for flash and 20 min. on high or until firm. Lamp should be no closer than 36 inches.
- May be recoated with itself anytime. Must be scuffed or sanded after 24 hours air dry when using accelerator.

PRODUCT USE

- Ideal for OEM, Fleet, Truck, Special Vehicle finishing.
- Provides a high gloss, extremely durable, chemical/solvent resistant finish.
- Resists marring, stone chips, harsh environments

SUITABLE SUBSTRATES

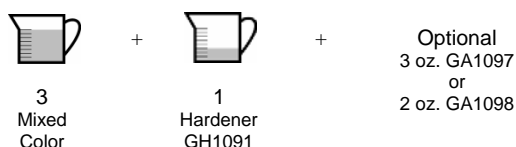
- PRIME-SHIELD™ Urethane Primers
- 3.5 VOC DTM Epoxy Primers
- 2.1 VOC DTM Epoxy Primers
- DTM Urethane Primers
- ULTRA-FILL II® Primer-Sealers
- ULTRA-FILL II® Primer-Surfacers
- ELEMENT SHIELD E2W840

SURFACE PREPARATION

- **Wash** surfaces with a mild detergent in hot water. Rinse well and wipe dry with a clean cloth.
- **Solvent clean** with Low VOC Surface Cleaner W4K157 and wipe dry with a clean cloth.
- **Sand** all areas to be refinished and featheredge all broken film areas.
- **Treat** bare metal with a Sherwin-Williams conditioner or etching primer. Check local regulations to verify etching primers are VOC exempt.
- **Prime** with Sherwin-Williams primer.

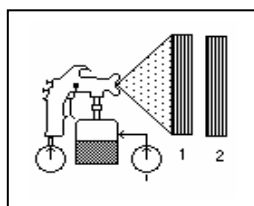
MIXING

- Stir or shake Genesis® 3.5 Low VOC color thoroughly before mixing.
- Mix by volume 3 parts of Genesis® 3.5 Low VOC Color with 1 part hardener GH1091.
- Pot life: 2 hours



APPLICATION

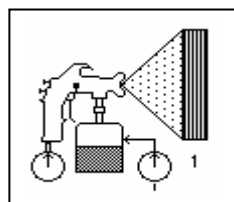
Pressure Feed/Siphon Feed*
 Apply 2 medium coats.
 Allow each to become hand slick



Air pressure: 50-55 psi
 5-10 psi pot pressure

Fluid delivery: 8-12 oz/min.

HVLP*
 Apply 1 full wet coat
 With 50% overlap.



10 psi at the cap

Fluid delivery: 8-12 oz/min.

***See APPLICATION on previous page for complete equipment recommendation.**

RECOAT

- Decals may be applied after 72 hours. Lower temperatures, heavy film thickness, poor air movement, thick decals, foil based decals, etc., will extend the dry time before the decal may be applied.
- May be recoated at any time with itself. Must be scuffed or sanded after 24 hours.

NOTES

- To speed tape time, add up to 3 ounces Genesis® Accelerator GA-1097 per sprayable gallon or up to 2 ounces GA-1098 Accelerator per sprayable gallon.
- Recommended minimum dry film thickness is 2.0-2.5 mils.

PERSONAL PROTECTION

- For use by trained professionals only.
- Read label, directions, and MSDS before use.
- Use appropriate Personal Protective Equipment while mixing and spraying