



SHERWIN-WILLIAMS®
Automotive Finishes

PRIME SHIELD™
HS Urethane Primer-Sealer
E2A820 Gray
E2R822 Red Oxide
E2W823 White

PRODUCT DESCRIPTION

PRIME-SHIELD™ HS Urethane Primer-Sealer is an air dry or low bake, high performance, high solids, urethane primer designed for Fleet, Truck and Original Equipment Manufacturers that require a VOC compliant system. HS Urethane Primer-Sealer, depending on reduction, has a VOC of 1.95 to 3.5 lbs/gal.

TECHNICAL DATA

Mixing Information

Components	Vol Ratio	VOC	#2 Zahn RTS Visc	Vol Solids	Coverage @ 1mil dry
E2A820/R822/W823 : R7K7210 : V6V825	10:4:1*	1.95 lbs/gal	11-14 sec	46-61%	739-979 sq. ft/gal
E2A820/R822/W823 : R7K7209 : V6V838	3:1:1	2.08 lbs/gal	13-15 sec	52.8%	847 sq. ft/gal
E2A820/R822/W823 : R7K7204 : V6V825	10:2:1	2.80 lbs/gal	22-28 sec	60.2%	966 sq. ft/gal

• Performance after one week air dry (over treated steel and using GENESIS® as topcoat)

- Humidity resistance – 100 hours Pass
- Impact resistance (direct @ 80 in/lbs) Pass
- Flexibility (1/8" conical mandrel) Pass
- Salt spray resistance – 250 hours Pass

- Gloss holdout Excellent
- Recommended Film Build 2.0-2.5

*Note: The addition of R7K7210 does not affect VOC. R7K7210 can be added up to 6 parts per sprayable gallon.

MIXING

- Stir or shake HS Urethane Primer thoroughly before mixing.
- | | | |
|-------------------------|------------------|-----------|
| <u>2.8 lbs/gal VOC</u> | E2A820/R822/W823 | 10 parts |
| | R7K7204 | 2 parts |
| | V6V825 | 1 part |
| | | |
| <u>1.95 lbs/gal VOC</u> | E2A820/R822/W823 | 10 parts |
| | R7K7210 | 2-6 parts |
| | V6V825 | 1 part |
| | | |
| 3:1:1 System | | |
| <u>2.08 lbs/gal VOC</u> | E2A820/R822/W823 | 3 parts |
| | R7K7209 | 1 part |
| | V6V838 | 1 part |
- Stir thoroughly and strain before using.
Pot life: at 2.8 VOC – 1 hour
at 1.95-2.03 VOC – 10 : 2 : 1 = 1 hour, 10 : 3-6 : 1 = 2 hours
at 2.08 VOC 2 ½ hours

Note:

- For accelerator adding information, refer to Dry Schedule Section with dry times with Genesis Accelerators; GA1097 & GA1098
- E2A820/R822/W823 : R7K7209 : V6V838 mixed 3:1:1 cannot be used over E2G973 Wash Primer or E2G980. The 3:1:1 mix can be applied direct to cold rolled steel, galvanized steel and SMC.**

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TINTING

E2A820/R822/W823 can be blended together by volume, or can be tinted by using 10% by volume maximum of Genesis Monochromatic toners. Do not use Genesis metallic toners or Lead containing Genesis toners (GT1035, GT1036, GT1041) to tint Primer Shield.

PLURAL COMPONENT MIXING ONLY

For use with proportioners (plural component systems), R7K7204 can be premixed with either V6V825/V829 or primer side. Note: Full body primer has caused pumping problems.

1.95-2.03 #/gal VOC - Consult your local Sherwin-Williams Technical Representative

2. 8 #/gal VOC – 5.5 : 1 ratio pump

Separately mix 1 part V6V825 to 1 part R7K7204. Then mix 10 parts Primer to 1 part R7K7204. Then use a 5.5:1 plural system (5.5 parts Primer/R7K7204 to 1 part V6V825/R7K7204 mixture).

3/1/1 System (2.08 #/gal VOC - for 4:1 ratio pump)

Separately mix 1 part R7K7209 with 3 parts E2A820/E2R822/E2W823. Then use a 4:1 plural system (4 parts E2A820/E2R822/E2W823 with R7K7209 mixture to 1 part V6V838).

- **MIX NO MORE REDUCER AND HARDENER THAN WILL BE USED WITHIN A 24-HOUR PERIOD. CONTAINER MUST BE TIGHTLY SEALED.**

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.

Repair

1. Repair process must be performed using a two-gun method. Apply Genesis® M over the repaired area carrying out the wet edge just beyond the repair.
2. Allow Genesis® M 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.
- 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 Pressure	0.8-1.1 mm	follow gun manufacturer recommendations

▪ **Electrostatic:**

Meg-Ohm rating: with R7K7204 = .85 Meg-Ohms

Meg-Ohm rating: with R7K7210 = .09Meg-Ohms

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DRYING SCHEDULE

Standard

- **Air dry:** at 75°F and 2.0 mils, dry times will be extended by thicker films. Higher temperatures and/or humidity will decrease dry times.

	<u>Using V6V825</u>		
	<u>Unaccelerated</u>	<u>4 oz. GA1097 or 2 oz. of GA 1098 per Sprayable Gallon</u>	<u>Using R7K7209 and V6V838 with Primer</u>
Hand Slick	45 minutes	20 minutes	20 minutes
Topcoat	45 minutes	15 minutes	15 minutes
Dust Free	2 hours	Not Available	Not Available
Tack Free	2 hours 15 minutes	1 hour	50 minutes
Tape Free	Overnight	1 hour 15 minutes	1 hour 5 minutes
Dry to Sand	Overnight	1 hour 15 minutes	1 hour 5 minutes

- **Bake:** 30 minutes at 180°F without accelerator.
Dry to sand – after 15 minutes cool down.
Dry to recoat – after 15 minutes cool down and a thorough sanding using 320 or 400 grit paper.

RECOATING:

Note: After 5 hours, primer must be scuff sanded thoroughly with a gray nylon scuff pad, if Sunfire® 3.5 Single Stage or Acryld® 5.0 is the topcoat to be applied.

Standard Using V6-V825 with or without Accelerator, Air Dry

1. HS Urethane Primer-Sealer may be topcoated after 45 minutes without accelerator and in 15 minutes with accelerator.
2. Recoat within 12 hours for optimum topcoat adhesion in non-sanding applications.
3. After 12 hours, scuff sand thoroughly with a gray nylon scuff pad.
4. After 48 hours or baking, thoroughly sand with 320 or 400 grit paper before topcoating.

Standard Using R7-K7209 & V6-V838

1. HS Urethane Primer-Sealer may be topcoated after 15 minutes.
2. Recoat within 7 days at 75°F/50% humidity with Dimension 2.8 / 3.5 HS Urethane Single Stage and GENESIS 3.5 / 2.8 Single Stage.
3. Except where noted, recoat within 24 hours when using other recommended topcoats.
4. After maximum recoat, thoroughly sand with 320 or 400 grit paper before topcoating.

PRODUCT -AT -A- GLANCE

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PRODUCT USE

- A premium quality, low VOC, air dry or low bake, urethane primer.
- High solids provides cross-coat coverage (double pass) instead of multiple coats.
- Sprayable Volatile Organic Content of 1.95 to 3.5 pounds/gallon.
- Ideal as an OEM finish and refinish coating for fleets, trucks, and special vehicles.

SUITABLE SUBSTRATES

- Treated steel
- Galvanized steel
- Fiberglass
- E2G973 CORROSION SHIELD®†
- Treated Aluminum
- Cold rolled steel

† Note: E2A820/R822/W823 : R7K7209 : V6V838 mixed 3 : 1 : 1 should not be applied over CORROSION SHIELD® E2G973 OR E2G890.

Note: HS Urethane Primer-Sealer may be applied to clean bare cold rolled steel. Additional corrosion resistance is realized when cold-rolled steel is treated. For maximum corrosion resistance, use with CORROSION SHIELD® E2G973.

SURFACE PREPARATION

- **Wash** surfaces with a mild detergent in hot water. Rinse well and wipe dry with a clean cloth.
- **Solvent clean** with an appropriate Sherwin-Williams solvent cleaner, and wipe dry with a clean cloth.
- **Treat** bare metal with an appropriate Sherwin-Williams metal conditioner or etching primer. Check local regulations to verify that etching primers are VOC exempt.

Bare Substrates*: Steel, Galvanized Steel, Aluminum

*Note: With the inconsistencies of substrates, consult your local Sherwin Williams Representative for system recommendations and substrate testing.

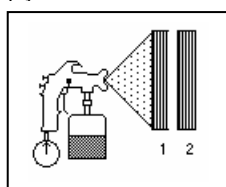
MIXING

- Mix thoroughly before applying.
 - For 1.95 VOC, mix 10 parts E2A820/R822/W823 to 4 parts R7K7210 to 1 part V6V825.
 - For 2.08 VOC, mix 3 parts E2A820/R822/W823 to 1 parts R7K7209 to 1 part V6V838.
 - Pot life at 3 : 1 : = 2 ½ hours.
 - See previous pages for additional mixing options.



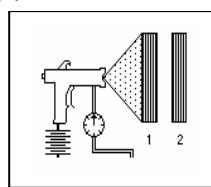
APPLICATION

Pressure Feed*
Apply 1 wet or 2 medium coats.



50-55 psi
Fluid Delivery:
8-12 oz/min

Electrostatic
Apply 1 wet or 2 medium coats.



Fluid Delivery:
8-12 oz/min

- 10:4:1 with V6V825 hardener - Dry to recoat: 45 minutes. Dry to sand: Overnight
- 3:1:1 with V6V838 hardener - Dry to recoat: 15 minutes. Dry to sand: 4-6 hours
- Dry times may be accelerated – see DRYING SCHEDULE on previous page.

RECOAT

- SUNFIRE® Acrylic Urethane Enamel
- SUNFIRE Low VOC Acrylic Urethane Enamel
- ACRYLYD® 5.0 and HS
- SUNFIRE® BC/CC Acrylic Urethane Enamel
- GENESIS® Basecoat/Clearcoat
- GENESIS® 2.8/3.5 Low VOC Acrylic Urethane
- GENESIS® M Low VOC Acrylic Urethane
- WesThane® 5.0/3.5

NOTES

- Clean equipment immediately with R7K5200 or a ketone solvent.
- Thicker film build will extend drying times.
- Higher temperatures and/or humidity will shorten dry times.
- If wet sanding PRIMESHIELD™ excess water must be driven-out by heat or time (48 hours) prior to topcoating.
- Recommended 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

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