



SUNFIRE® Acrylic Urethane

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PRODUCT DESCRIPTION:

SUNFIRE® Acrylic Urethane is extremely durable, provides high gloss, and is chemical/solvent resistant. SUNFIRE® can be air dried or force dried for a urethane-tough enamel that is ideal for OEM, Fleet, Truck, and Special Vehicle finishing. SUNFIRE® is available in over 2,000 intermix formulas including many fleet specified colors. SUNFIRE® when mixed 4:2:1 meets U.S. National Rule Requirement of 5.0 lbs/gal (599 g/l) maximum ready-to-spray VOC (volatile organic compounds).

TECHNICAL DATA:

• Viscosity (sprayable) #2 Zahn Cup	18-22 sec	• Performance after one week air dry	
• Flash point - PMCC	60°F	- Humidity resistance*	96 hrs No effect
• Theoretical coverage/sprayable gallon at 1 mil (dry)	427-539 sq.ft	- Impact resistance (direct at 80 in/lbs)	Pass
• Recommended minimum dry film thickness	2.0-2.5 mils	- Flexibility (1/8" con mandrel)	Pass
• Gloss	60°	- Solvent resistance (MEK/Xylene/Gasoline/Diesel/Oil)	No effect
	20°	- Chemical resistance, 24 hour contact	
• DOI		10% Hydrochloric acid	No effect
• Pencil Hardness at 48 hours	Excellent	10% Sulfuric acid	No effect
		10% Phosphoric acid	No effect
• Dielectric strength over steel (off whites)	2000 volts/mil	10% Acetic acid	No effect
• Max VOC as applied at 4:2:1		10% Ammonium hydroxide	No effect
VOC Less Exempt	5.0 lbs/gal, 599 g/l	10% Sodium hydroxide	No effect
		- Salt Spray resistance* - 500 hrs	No effect
		• Florida Black Box (gloss retention)	
		At 5° South exposure for 3 years	88%
		*Using 4.6 Epoxy Primer PSE4600	

SURFACE PREPARATION:

Bare Substrates:

1. Choose appropriate Sherwin-Williams primer and refer to product recommendations.

Prepainted Substrates:

1. Complete body work and priming according to product recommendations for appropriate Sherwin-Williams primer.
2. Finish sand repair area with 320 grit treated sandpaper on a random orbital sander.
3. **Prep entire blend area or panel by water sanding with 1000-1200 grit or scuff with a gray scuff pad and USP-90 Scuffing Gel.**
4. Re-clean thoroughly with R7K156, R7K158 or W4K157.
5. For best results on larger repairs, seal the area to be painted with an appropriate Sherwin-Williams primer (for the above products refer to the appropriate product data page for complete information).

(For the above products refer to the appropriate product data page for complete information.)

MIXING:

1. Stir or shake SUNFIRE® color thoroughly before using.
2. Mix by volume, **4 parts SUNFIRE® Color with 2 parts SUNFIRE® Reducer***, stir, then add **1 part SUNFIRE® Hardener V6V769**. Always reduce SUNFIRE® Color and stir before adding the SUNFIRE® Hardener V6V769. Stir Thoroughly and strain before use. **Pot life:** 6 hours at 75°F.

<u>* Reducer Selection</u>	<u>Temperature</u>
R7K6200	50-60°F
R7K6202	55-65°F
R7K6204	65-80°F
R7K6206	75-85°F

3. For **flexible parts:** Mix **4 parts SUNFIRE® color with 2 parts SUNFIRE® Reducer**, stir, then add **1 part Hardener and 2 parts MULTI-FLEX™ Urethane Flexible Additive V6V299**. **Pot life:** 6 hours at 75°F.
4. If **fisheyes** are a problem, add **1-2 ounces** of The LEVELER® Silicone Additive V3K780 per sprayable gallon of SUNFIRE® color. This addition affects VOC. See table below.
5. To speed **tape time** add 2.5 ounces of SUNFIRE® Accelerator V6V766 per sprayable gallon of SUNFIRE® color. Or add up to 4 ounces of GA1097 Accelerator per sprayable gallon of SUNFIRE®. **Pot life:** 3 hours @ 75°F. These additions affect VOC. See table below.
6. For more flow add 3-5 ounces of SUNFIRE® Retarder R7K6208 per sprayable gallon. This addition affects VOC. See table below.

To maintain 5.0 VOC Compliance:				
If the VOC of SUNFIRE 5.0 is:	Add up to the following amounts of R7K6208	OR Add up to the following amounts of GA1097	OR Add up to the following amounts of V6V766	OR Add up to the following amounts of V3K780
VOC (Less exempt) of Intermix Color	# of ounces to RTS gallon	# of ounces to RTS gallon	# of ounces to RTS gallon	# of ounces to RTS gallon
4.31-4.51	5	4	2.5	2
4.61	4	4	2.5	2
4.71	2	3.5	2.5	2
4.81	0.5	1	1.5	1.5
4.85	0	0	0	0
<p>If the VOC of a color does not allow for a required additive level, OR if combinations of additives are needed, remove reducer according to the following:</p> <ul style="list-style-type: none"> For every 1 ounce of R7K6208 added, remove 2.5 ounces of SUNFIRE® Reducer. For every 1 ounce of GA1097 added, remove 2 ounces of SUNFIRE® Reducer. For every 1 ounce of V6V766 added, remove 1.5 ounces of SUNFIRE® Reducer. For every 1 ounce of V3K780 added, remove 1 ounce of SUNFIRE® Reducer 				
<p>Some Low Gloss colors will exceed 5.0 VOC if mixed 4:2:1. The reducer level must be lowered for these colors to maintain 5.0 VOC compliance. A mixing ratio of 4:1.5:1 will maintain 5.0 VOC compliance for all of these colors. See table below for VOC specific reducer levels:</p>				
To maintain 5.0 VOC Compliance for Low Gloss Colors:				
VOC (less exempt) of Low Gloss Intermix Color	Mixing Ratio Color : Reducer : Hardener			
4.92	4 : 1.9 : 1			
4.96	4 : 1.8 : 1			
5.00	4 : 1.7 : 1			
5.08	4 : 1.6 : 1			

APPLICATION:

- Pressure Feed: Adjust air pressure at the gun to 50-70 psi for siphon feed or pressure feed (adjust pot pressure to 5-10 psi for 12-16 fluid ounces per minute delivery). Apply 2 full crosscoats at a gun distance of 8-10 inches allowing each coat to become hand slick (15-20 minutes flash) before applying the next coat. Spray to hiding. To uniform metallic colors apply a mist coat immediately after previous coat by increasing the gun distance to 12-14 inches. Note: Recommended minimum dry film thickness is 2.0-2.5 mils.

<u>Gun</u>	<u>JGA 502</u>	<u>Binks Gold Gun</u>	<u>Binks Model 62</u>	<u>Sharpe</u>
Fluid Tip	FF or FX	63C	63C	.070
Air Cap	765	63PW	63PB	#10
Fluid Delivery	12-16 oz/min	12-16 oz/min	12-16 oz/min	12-16 oz/min
Atomizing air psi	50-70 psi @ gun	50-70 psi @ gun	50-70 psi @ gun	50-70 psi @ gun
Gun Distance	8-10 inches	8-10 inches	8-10 inches	8-10 inches

- Electrostatic: Apply one medium coat followed by a second medium coat perpendicular to direction of first coat. The second coat may be applied immediately after the first coat.

<u>Gun</u>	<u>Binks Model 85B</u>	<u>Kremlin KMP Conventional</u>	<u>Nordson AN8 Conventional</u>	<u>Graco Pro-3500</u>
Fluid Tip	63B	#15 (.055")	0.060"	1.5 mm
Needle	63AE	—	—	—
Air Cap	PW	KP53	987	033 or 739
Atomizing air psi	35-45 psi @ gun	55-60 psi @ gun	55-60 psi @ gun	50-70 psi @ gun
Fluid Delivery	8-12 oz/min	8-12 oz/min	8-12 oz/min	8-12 oz/min
Fluid Pressure	—	25-30 psi	—	—
Kilovolts	60 KV	85 KV	60-75 KV	65 KV
Gun Distance	10-12 inches	10-12 inches	10-12 inches	10-12 inches

- HVLP: Apply one medium crosscoat for non-metallics. Metallic colors require two medium coats with a 3-5 minute flash-off between coats, followed immediately by a light crosscoat to even out metallic mottling.

<u>Gun</u>	<u>Binks Mach 1</u>	<u>DeVilbiss JGHV-530</u>	<u>Accuspray</u>	<u>Sata Jet B NR95</u>
Fluid Tip	92 (.046)	FF (.055)	.036	1.2 mm
Air Cap	97P	46	#8 or #9	supplied
Fluid Delivery	10-12 oz/min	10-12 oz/min	10-12oz/min	10-12 oz/min.
Air Pressure	10 psi/pot	8 psi/pot	8 psi/pot	
	60 psi/gun	40-50 psi/gun	60-70 psi/gun	Approx. 43 psi/gun
	8-10 psi/cap	9-10 psi/cap	6-7 psi/cap	10 psi/cap
Gun Distance	6-10"	6-10"	6-10"	5-7"

- For more flow add 1-2 ounces of SUNFIRE® Retarder R7-K6208 per reduced quart.
- Clean spray gun immediately after use with a quality lacquer thinner.

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** – at 75°F and 50% R.H.:

Dust Free	15 minutes
Tack Free	1-1.5 hours
Tape Free	16 hours
Tape Free with Accelerator V6V766	6-8 hours
Tape Free with GA1097 Accelerator	4 hours

- **Force Dry Times** (With infrared/radiant heat add 3-5 ounces SUNFIRE® Retarder R7K6208 per ready-to-spray gallon of SUNFIRE® Color. See table in MIXING for maximum additions to maintain 5.0 VOC):

<u>Temperature</u>	<u>Tape Free</u>
120°F	120-140 minutes
140°F	60-80 minutes
160°F	50-70 minutes
180°F	20-30 minutes

NOTES:

Decal Application: 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. Refer to your local Sherwin-Williams Representative for recommendations.

PRODUCT AT-A-GLANCE
SUNFIRE® Acrylic Urethane

PRODUCT

USE

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

BASECOAT SUITABLE SUBSTRATES

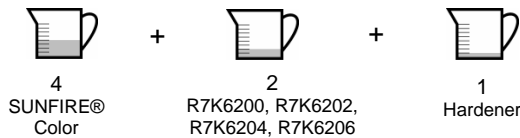
- G.B.P.® Etching Filler
- PRIMESHIELD™ E2A820/R822/W823
- SHER-JET™
- SpectraPrime™/SpectraSeal™ P30
- 2.1 DTM Urethane Primers
- JET SEAL®
- ULTRA-FILL II® Sealer
- COLOR PRIME® Tintable Primer
- 3.5 VOC DTM Epoxy Primers
- 2.1 VOC DTM Epoxy Primers

SURFACE PREPARATION

- **Wash** surfaces with a mild detergent in hot water. Rinse well and wipe dry with clean cloth.
- **Solvent clean** with the appropriate solvent cleaner, and wipe dry with a clean cloth.
- **Grind** repair area to remove paint and all rust as needed.
- **Apply body filler** to clean bare metal as needed.
- **Sand** all areas to be refinished and feather edge all broken film areas.
- **Treat** bare metal with an appropriate metal conditioner or etching primer.
- **Surface** with appropriate surfacer. Finish sand with 320 grit sandpaper.
- **Seal** with appropriate sealer for best results.

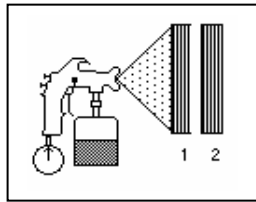
MIXING

- Stir or shake SUNFIRE® color thoroughly before mixing.
- Mix by volume 4 parts of color with 2 parts of reducer, stir, then add 1 part hardener.



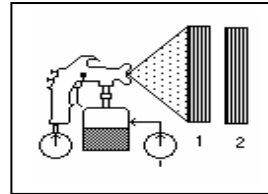
APPLICATION

Siphon Feed
 Apply 2 full crosscoats.
 Allow each coat to become hand slick.



Pot life: 6 hours at 75°F with Hardener
65-70 psi

Pressure Feed
 Apply 2 full crosscoats.
 Allow each coat to become hand slick.



Pot life: 6 hours at 75°F with Hardener
65-70 psi
Pot Pressure: 5-10 psi, 12-16 fl.oz/min

RECOAT

- Recoat any time without a recoat lift.
- 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. Refer to your local Sherwin-Williams Representative for recommendations.

NOTES

- If fisheyes are a problem, add 1-2 ounces of The LEVELER® Fisheye Eliminator V3K780 per sprayable gallon of SUNFIRE® color.*
 - For flexible parts add MULTI-FLEX™ V6V299.
 - With infrared/radiant heat add 3-5 ounces SUNFIRE® Retarder R7K6208 per ready-to-spray gallon of SUNFIRE® Color.*
 - Recommended minimum dry film thickness is 2.0-2.5 mils.
- *These additions affect VOC. See table in MIXING for limits.**

PERSONAL PROTECTION

- Read all label directions before use.
- Refer to MSDS for specific information.
- Wear a positive air respirator or when mixing and applying.
- Wear a NIOSH approved dust particulate mask when sanding.
- Wear safety glasses, shoe covers, coveralls and latex gloves, stretch hood when using this product.