



**Skills 2024  
Reference Manual**

*SHERWIN-WILLIAMS®*





**SHERWIN-WILLIAMS®**  
**Automotive Finishes**

### ***Cleaners & Ancillaries***

UWC1 Surface Cleaner

FA1XPC Plastic Surface Cleaner

USP90 Scuffing Paste

### ***Undercoats***

UPO7228 Low VOC Plastic Adhesion Promoter

UV1 PRIMER

P27 SpectraSeal Primer Sealer

Spray Gun Chart Premium Undercoats

### ***Basecoat***

Ultra 9K Basecoat.

Spray Gun Chart Ultra 9K

### ***Clearcoat***

HPC21 HP Process 2.1 VOC Clearcoat

Spray Gun Chart Premium Clearcoats

### ***Best Demonstrated Practices***

BDP Unprimed Plastics

BDP Primed Plastics

BDP Blend Area Refinishing



**ULTRA**  
**9K<sup>TM</sup>**

**Cleaners &  
Ancillaries**



Questions? Ask us at 1-800-798-5872 or log onto [www.Sherwin-Automotive.com](http://www.Sherwin-Automotive.com)

## PRODUCT DESCRIPTION

Ultra System Surface Cleaner UWC1 is a waterborne cleaning solution that can be used, as packaged – no mixing or dilution required. UWC1 Surface Cleaner, can be used on OEM topcoats, primers and refinish undercoats to prepare the surface prior to painting. When used on plastic substrates, UWC1 Surface Cleaner minimizes static build-up. Ultra System UWC1 Surface Cleaner can also be used to remove most waterborne basecoats from waterborne spray equipment.

## SURFACE PREPARATION

### For Use as a Surface Cleaner:

Prior to repair, wash surfaces to be painted including adjacent panels with a mild detergent and water solution to remove heavy deposits of dirt, oil, and grease. Wipe dry with a clean, lint free cloth.

- Saturate a clean cloth with UWC1 Surface Cleaner.
- UWC1 Surface Cleaner can also be applied with a Sherwin-Williams Premium Hand Sprayer (A50100SW)
- Working in small areas, apply to area to be painted including adjacent panels.
- Wipe off with a second clean, dry cloth **before** UWC1 Surface Cleaner is allowed to dry.
- If drying occurs re-wet with UWC1 Surface Cleaner and wipe off with a clean, dry cloth.

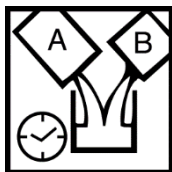
### For Use as a Spray Gun / Equipment Cleaner:

- Empty the waterborne spray gun of any remaining waterborne basecoat, rinse, and dispose into an approved waste collection drum dedicated to waterborne waste only. Do **not** mix waterborne waste with solventborne waste.
- UWC1 Surface Cleaner can be used in a dedicated waterborne gun washer or it can also be applied with a Sherwin-Williams Premium Hand Sprayer (A50100SW).
- Thoroughly clean the waterborne spray gun and cup.
- Blow off the interior and exterior of the waterborne spray gun with clean compressed air and towel dry.

## SUITABLE SUBSTRATES

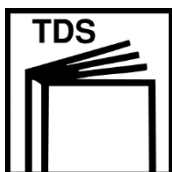
- |                  |                   |
|------------------|-------------------|
| • P27/P30 Primer | • Plastic         |
| • Surfacer       | • Aged Refinishes |
| • OEM Finishes   | • Equipment       |
| • Bare Metal     |                   |

## MIXING:



- **Use as packaged.** No mixing or dilution required. Compliant in all VOC restricted areas.

## NOTES



- Ultra System Surface Cleaner is not recommended for use on solvent sensitive substrates such as lacquer, or softening will occur.
- Protect Ultra System UWC1 Surface Cleaner from freezing. If freezing occurs allow Ultra System Surface Cleaner to slowly warm to room temperature and invert the closed container from top-to-bottom several times (hand agitation) before use.

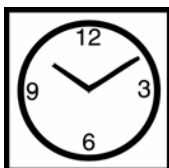


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## Ultra System™ Surface Cleaner UWC1

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### RECOAT



- Make sure Ultra System UWC1 Surface Cleaner has been completely removed and panel is dry before painting.

Regulatory Data	UWC1 is packaged Ready To Spray	
	As Packaged	
	lb/gal	g/l
Density	8.24	987
	% by weight	% by volume
Total Volatiles	100	100
Water	95.5	94.7
Exempt Compounds	2.5	3.1
Organic Volatiles	2	2.2
Percent Non-Volatile	0	0
	lb/gal	g/l
VOC Total	0.16	19
VOC Less Exempt	7.48	897
	lb/gal	kg/l
Volatile HAPS	0	0
VHAPS of Solids	0	0



### PERSONAL PROTECTION

- Read label, directions, and MSDS before use
- Refer to MSDS for specific information
- Wear a NIOSH approved organic vapor respirator when using this product
- Wear a NIOSH approved dust particulate mask when sanding, mixing, or applying this product
- Keep product, paint, and overspray off of the skin, wear goggles, coveralls, and chemical protective gloves when using this product



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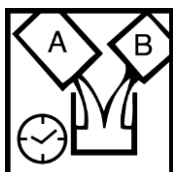
## Plastic Surface Cleaner / Anti-static FA1XPC

### PRODUCT DESCRIPTION:

Plastic Surface Cleaner / Anti-static FA1XPC is a solvent based cleaner specifically designed to remove solvent borne contaminants, while deep cleaning the plastic substrate to remove impregnated mold release agents. Plastic Surface Cleaner / Anti-static FA1XPC also removes static build up before painting.

### SURFACE PREPARATION:

Wash surfaces to be painted including adjacent panels with a mild detergent and water solution to remove heavy deposits of dirt, oil, and grease.

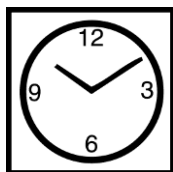


**MIXING:**  
No mixing required



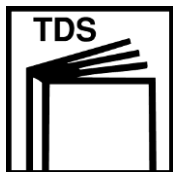
### APPLICATION

- Clean all surfaces thoroughly with Plastic Surface Cleaner / Anti-static FA1XPC and a gold nylon scuff pad.
- Dry excess with a clean cloth.
- Apply a second application following the procedure listed above
- Tack surface to be painted with a clean tack cloth



### RECOAT

- Make sure Plastic Surface Cleaner / Anti-static FA1XPC has been completely removed and panel is dry before painting.



### NOTES

- Plastic Surface Cleaner / Anti-static FA1XPC is not recommended for use on solvent sensitive substrates such as lacquer, as softening will occur.
- For best results maintain an ambient temperature of 70° F when using Plastic Surface Cleaner / Anti-static FA1XPC.



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## Plastic Surface Cleaner / Anti-static FA1XPC



### PERSONAL PROTECTION

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

### REGULATORY DATA

	As Packaged	
	Lb/Gal	G/L
Density	7.07	847
	% by Wt.	% by Vol.
Volatiles	100	100
Water	0	0
Exempt Compounds	0	0
	Lb/Gal	G/L
VOC Total	7.07	847
VOC Less Exempt	6.72	847
	Lb/Gal	KG/L
HAPs	0.00	0.00

### LABEL CAUTION INFORMATION

#### FA1XPC

**DANGER! FLAMMABLE! HARMFUL IF INHALED - MAY AFFECT THE BRAIN OR NERVOUS SYSTEM, CAUSING DIZZINESS, HEADACHE OR NAUSEA. IRRITATES EYES, SKIN AND RESPIRATORY TRACT. CAN BE ABSORBED THROUGH THE SKIN.**

Contents are **FLAMMABLE**. Vapors may cause flash fires. Keep away from heat, sparks, and open flame. During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition. **VAPOR HARMFUL**. Use only with adequate ventilation. Wear an appropriate properly fitted vapor/particulate respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. **FIRST AID: If INHALED:** If affected, remove from exposure. Restore breathing. Keep warm and quiet. If on **SKIN:** Wash affected area thoroughly with soap and water. Remove contaminated clothing. Launder before re-use. If in **EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention. If **SWALLOWED:** Call Poison Control Center, hospital emergency room, or physician immediately. **DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.** Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. **DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. FOR PROFESSIONAL USE ONLY. SEE MATERIAL SAFETY DATA SHEET.**



# ***USP90 Liquid Scuffing Agent***

## **Product Description**

Liquid Scuffing Agent USP90 is a water based product that contains a powerful natural cleanser/degreaser. It is designed to increase the effectiveness of a nylon scuffpad when preparing a panel for refinishing. It contains super fine micro-crystals which add to the cutting power of an abrasive pad.



## **Mixing**

Ready for use as packaged



## **Application**

Dampen abrasive pad with water. Apply Liquid Scuffing Agent USP90 to pad or directly to the panel. Thoroughly clean and abrade the entire surface to be refinished. Rinse surface clean with water. Dry work area with a clean cloth and compressed air and continue paint process.



## **Notes**

In areas where you cannot use an abrasive pad (around mouldings, door locks, etc.) use Liquid Scuffing Agent with a stiff brush and abrade paint.

These pages are for a quick reference only. Refer to specific Technical Data Sheets for complete product and application recommendations. See Material Safety Data Sheets and labels for complete safety information.





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Undercoats



Questions? Call us at 1-800-798-5872 or log onto [www.Sherwin-Automotive.com](http://www.Sherwin-Automotive.com)

## PRODUCT TECHNICAL INFORMATION

### PRODUCT DESCRIPTION

UVP1 is a light grey primer with exceptional filling and self-leveling properties. The easy-to-use aerosol primer offers quick cure with a UV light and great transfer efficiency. The single component primer eliminates time taken to mix and dispose of a 2K primer surfacer.

Note: Do not underestimate the danger of UV light exposure. Review the *Personal Protection* section in detail.

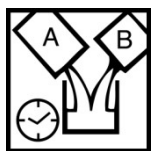
### SURFACE PREPARATION

1. Featheredge the repair area with P180-220 grit sandpaper.
2. Clean with the appropriate Sherwin-Williams® surface cleaner and wipe dry with a clean cloth.

### SUITABLE SUBSTRATES

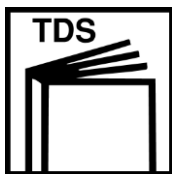
- OEM Finishes
- Properly Prepared Bare Metal
- Body Filler
- S-W Plastic Adhesion Promoter

### MIXING



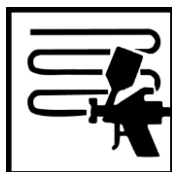
- Packaged ready-to-use.
- Hand shake for 2 minutes AFTER rattle ball begins to make noise.

### NOTES



- Repair area should be no larger than 8" x 8".
- Store UVP1 at room temperature.
- Do not heat the aerosol can.
- Each coat of UVP1 must be visually matte prior to applying the next layer.
- Final finish, after the clearcoat application, must be cured to achieve full properties. Please follow clearcoat recommended cure cycle from the clearcoat data sheet.

### APPLICATION



1. Shake UVP1 aerosol can until you hear the ball rattle, then continue to shake for 2 additional minutes.
2. Hold can 4-6 inches from substrate and apply 1 even coat; Allow to flash off until visually matte.
3. Apply 2<sup>nd</sup> even coat as needed (Note: allow for a visual matte appearance after the 1<sup>st</sup> coat prior to adding the 2<sup>nd</sup> coat).



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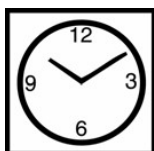
## UVP1 UV Primer (Aerosol)

### CURING

1 Coat Application				
# of Coats	Flash	55W	100W	250W
1	Visually Matte	90 seconds @ 2 inches (5cm)	60 seconds @ 2 inches (5cm)	2 minutes @ 12 inches (30 cm)

2 Coat Application				
# of Coats	Flash	55W	100W	250W
1	Visually Matte	No Cure Required	No Cure Required	No Cure Required
2	Visually Matte	3 minutes @ 2 inches (5cm)	2 minutes @ 2 inches (5cm)	4 minutes @ 12 inches (30cm)

### RECOAT



1. Clean the cured UVP1 with the appropriate Sherwin-Williams surface cleaner and wipe dry with a clean cloth until all residue is removed from the primed area.
2. Sand the cured UVP1 with P320 grit sandpaper.
3. Sand the cured UVP1 with P600 grit sandpaper.
4. Apply basecoat according to the appropriate Sherwin-Williams Product Data Sheet
  - a. Ultra 7000™
  - b. Ultra 9K™
  - c. Ultra BC8™
5. Apply clearcoat according to the appropriate Sherwin-Williams Product Data Sheet.
6. Completed repair **MUST** be baked to ensure full property achievement. Follow the baking recommendations for the selected clearcoat.

### PERSONAL PROTECTION



- When using any type of Ultraviolet (UV) curing products, it is important to closely follow all safety precautions recommended by the material or equipment suppliers.
- Light emitted from UV lights can be extremely harmful to exposed skin and eyes.
- **DO NOT** view UV light rays without specially designed UV glasses (short-term and long-term damage can be severe). These glasses **MUST** be used (common sunglasses with UV protection are NOT suitable to wear during the curing process).
- **DO NOT** point the light at anyone and use a welding screen when curing in the vicinity of others.
- Cover exposed skin while using the UV light as burning of the skin can occur.
- Read label, directions, and SDS before use and refer to SDS for specific information
- Wear a NIOSH approved organic vapor respirator when using this product
- Wear a NIOSH approved dust particulate mask when sanding, mixing or applying this product
- Keep product, paint and overspray off of the skin, wear goggles, coveralls, and chemical protective gloves when using this product.



## REGULATORY DATA

UVP1		
UVP1 Aerosol is packaged Ready To Spray		
Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)		
Regulatory Data	As Packaged	
	lb/gal	g/l
Density	7.70	923
	% by weight	% by volume
Total Volatiles	45.1	55.5
Water	0.0	0.0
Exempt Compounds	10.0	11.4
Organic Volatiles	35.1	44.2
Percent Non-Volatile	54.9	44.5
VOC Total	2.70	323
VOC Less Exempt	3.05	365
EPA Category	P	
EPA MIR Limit	1.2	
EPA MIR Actual	0.48	
California Category	P	
California MIR Limit	0.7	
California MIR Actual	0.42	
Hazardous Air Pollutants (Clean Air Act, Section 112(b))		
	lb/gal	kg/l
Volatile HAPS	0.77	0.092
VHAPS of Solids	1.73	0.207
LVP-VOC	35.10	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) 0.48

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) 0.42

## LABEL CAUTION INFORMATION

### UVP1 UV PRIMER

**DANGER!** Highly flammable liquid and vapor. Contains gas under pressure; may explode if heated. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs through prolonged or repeated exposure. Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Response: IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. Get medical attention if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Storage: Keep cool. Store in a well-ventilated place. Store locked up. Protect from sunlight. Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

**DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.** Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. **WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **FOR INDUSTRIAL USE ONLY.** Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 28.5% Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 39.5% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 7%

Product Information Telephone Number US / Canada: (800) 798-5872 Mexico: 01-800-022-7926 Emergency telephone number US / Canada: (800) 424-9300 Mexico: (52) 55-4160-8800 / (52) 55-4160-8819 Monday to Friday from 8:30 a.m. to 5:30 p.m.





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# UPO7228

## LOW VOC PLASTIC ADHESION PROMOTER - CLEAR

Questions? Ask us at 1-800-798-5872 or log onto [www.sherwin-automotive.com](http://www.sherwin-automotive.com)

### PRODUCT DESCRIPTION:

UPO7228 Low VOC Plastic Adhesion Promoter is a single-component, non-sanding, fast-drying adhesion promoter designed for refinishing thermoplastic bumper covers and other exterior and interior plastics. UPO7228 may be topcoated with Sherwin-Williams Premium Undercoats. Additionally, UPO7228 can be mixed together with P30 SpectraPrime® Color Primer Sealer, to create a tinted adhesion promoter to help with coverage on bare plastics. UPO7228 Low VOC Plastic Adhesion Promoter is also available in a convenient aerosol package.

### SURFACE PREPARATION:

**A clean substrate is essential to product performance. It must be clean and free of mold release agent.**

#### Non-Painted/Non-Primed new plastic parts or bumpers:

1. Perform a substrate test. Using P600, dry sand a small area on the inside of the plastic part. If the part powders, it must be sanded before proceeding to step 2. If substrate gums up during sanding, proceed directly to step 2.
2. Clean all surfaces (back and front) with SC155 Low VOC Surface Cleaner along with a gold nylon scuff pad. Thoroughly rinse with clean water and wipe dry.
3. Scuff sand using a gold nylon scuff pad along with USP90 Liquid Scuffing Gel, paying close attention to small grooves and depressions.
4. Thoroughly rinse off the scuffing gel with clean water and thoroughly dry the surface.
5. Thoroughly clean the plastic substrate with FA1XPC Plastic/Anti-Static Cleaner and a gold scuff pad. Dry excess material with a clean cloth and re-apply FA1XPC, followed by wiping the part dry with a clean cloth.

See the appropriate [AWX Performance Plus™](#) Best Demonstrated Practices for Primed and Unprimed Plastic Parts Refinishing for instructions on how to properly prepare panels, for further information please call your Sherwin-Williams Automotive Finishes Technical Representative, Sales Representative, or Customer Service Representative.

### SUITABLE SUBSTRATES:



- Exterior Grade Thermoplastic Polyolefin – TPO
- Rigid, semi-rigid plastic parts and bumper covers
- **NOTE:** Do not use UPO7228 for vinyl plastic or for polycarbonate, the solvent in the product will weaken the plastics.

### MIXING:

Stir or shake thoroughly and strain before using. Do not stir contents with a metal stick. Do not agitate contents on mixing machine.



There are two options for using UPO7228 Low VOC Plastic Adhesion Promoter:

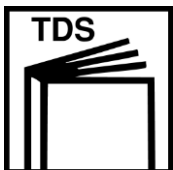
#### OPTION 1) UPO7228 – Ready to Spray

1. Apply UPO7228
  2. Then apply P30 or P27 SpectraSeal® Color Primer Sealer
- Adhesion Promoter / Sealer / AWX Performance Plus™ Basecoat / Clearcoat

#### OPTION 2) UPO7228 and P30 SpectraPrime® Color Primer Surfacer – 4:1

1. Mix 4 Parts UPO7228 to 1 Part P30 tint or intermix (unreduced) and apply.
  2. Optional: For best performance – Apply P30 or P27 SpectraSeal® Color Primer Sealer.
- P30 Tinted Adhesion Promoter / Sealer (Optional) / AWX Performance Plus™ Basecoat / Clearcoat

### NOTES:



- Clean equipment immediately with Lacquer Thinner. **DO NOT USE 4600800.**
- UPO7228 is **not** recommended for vinyl plastics or polycarbonate.
- UPO7228 can not be tinted with P27 SpectraPrime® Color Primer Surface
- UPO7228 can be taped for two-toning in 10-20 minutes.



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# UPO7228

## LOW VOC PLASTIC ADHESION PROMOTER - CLEAR

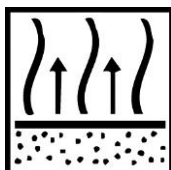
Questions? Ask us at 1-800-798-5872 or log onto [www.sherwin-automotive.com](http://www.sherwin-automotive.com)

### APPLICATION:



- Apply one medium wet, even coat of UPO7228
- 6-8 psi HVLP, or 20-24 psi inlet pressure for compliant spray guns
- Dry Film Thickness of 0.2-0.4 mils. **DO NOT EXCEED 0.4 MILS DRY FILM THICKNESS.**
- For best results, clean spray gun with R7K156 or R7K158 immediately after use. **DO NOT USE 4600800.**

### RECOAT:

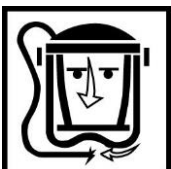


- Allow UPO7228 Low VOC Plastic Adhesion Promoter to dry at least 10 minutes.
- If sand scratch filling is desired apply sealer after UPO7228.
- UPO7228 should be topcoated within 1 hour to ensure proper adhesion and avoid surface contamination.
- If allowed to dry over 24 hours, wash with hot water and mild detergent, rinse with clean water, dry thoroughly, and continue with repair process.
- *Do not use solvent cleaners on UPO7228 after applying.*
- If UPO7228 is allowed to dry over 7 days, scuff sand with 400 grit or finer sandpaper and re-apply.
- Recoat with P30/P27 SpectraPrime® Color Primer Sealer.

### REGULATORY DATA:

UPO7228 PLASTIC ADHESION PROMOTER - CLEAR				
	OPTION 1) UPO7228 – Ready to Spray		OPTION 2) UPO7228 and P30 SpectraPrime® Color Primer Surface – 4:1	
Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)				
Regulatory Data	OPTION 1) As Packaged		OPTION 2) As Applied	
	lb/gal	g/l	lb/gal	g/l
Density	10.64	1274	11.12	1332
	% by weight	% by volume	% by weight	% by volume
Total Volatiles	95.0	94.1	78.7	84.5
Water	0.0	0.0	0.0	0.0
Exempt Compounds	88.3	84.2	67.6	67.3
t-Butyl Acetate	0.0	0.0	0.0	0.0
Organic Volatiles	6.7	10.0	11.1	17.2
Percent Non-Volatile	5.0	5.9	21.3	15.5
	lb/gal	g/l	lb/gal	g/l
VOC Total	0.71	85	1.23	148
VOC Less Exempt	4.51	540	3.78	453
Hazardous Air Pollutants (Clean Air Act, Section 112(b))				
	lb/gal	kg/l	lb/gal	kg/l
Volatile HAPS	0.00	0.000	0.37	0.044
VHAPS of Solids	0.00	0.000	2.39	0.15

### PERSONAL PROTECTION:



- Read label, directions, and SDS before use
- Refer to SDS for specific information
- Wear a NIOSH approved organic vapor respirator when using this product
- Wear a NIOSH approved dust particulate mask when sanding, mixing or applying this product
- Keep product, paint and overspray off of the skin, wear goggles, coveralls, and chemical protective gloves when using this product



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# SpectraSeal®

## 2.1 VOC Color Primer Sealer

(Waterborne Basecoats Only)  
P27- Gray, P27B- Black, P27G- Green,  
P27L- Blue, P27R- Red, P27T- Tan,  
P27W- White, P27Y- Yellow

### PRODUCT DESCRIPTION

SpectraSeal® 2.1 VOC Color Primer Sealer is a premium quality 2K-urethane primer sealer that utilizes state of the art Ure-Flex® Technology to provide the ultimate in performance, versatility, and productivity. The P27 system offers eight factory packaged colors that can be used by themselves or in combination with each other to provide an unlimited color palette. SpectraSeal® 2.1 VOC Color Primer Sealer provides the best in topcoat hiding, gloss holdout, resistance to film shrinkage, is easy sanding, and does not require the addition of a flex additive for plastic parts repair/refinishing. P27 SpectraSeal® Color Sealer can be recoated in as little as 5 minutes and up to 2 hours with S47 Sealer Converter! From underhood topcoats, direct to OEM E-coat, Direct-to-Metal recommendations, plastic repair process, to typical collision repair scenarios, the P27 system is the most versatile product on the market.

### SURFACE PREPARATION\*

SpectraSeal® Color Primer Sealer is designed for use under the Ultra 9K™ and AWX Performance Plus™ refinish systems.

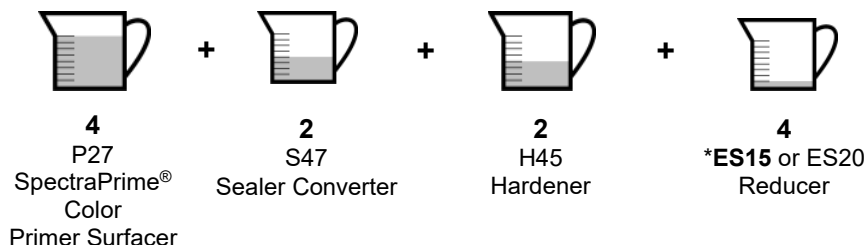
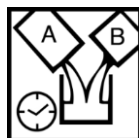
1. Final sand repair area when sealing with P400 grit or finer sandpaper.
2. Solvent clean with an appropriate Sherwin-Williams® surface cleaner. Wipe dry with a clean cloth.
3. An etch primer is **NOT** required for small sand throughs or areas of bare metal that are 5" x 5" or smaller. Apply first coat of SpectraSeal® Color Sealer over the sand through area, allow to flash (2-3 minutes), then apply second coat over the entire repair area requiring sealer to ensure adequate film build before topcoating.

**\*See the appropriate [Ultra 9K™](#) or [AWX Performance Plus™](#) Best Demonstrated Practices for instructions on how to properly prepare panels, for further information please call your Sherwin-Williams Automotive Finishes Technical Representative, Sales Representative, or Customer Service Representative.**

### SUITABLE SUBSTRATES

- Treated Steel
- Treated Galvanized Steel
- Treated Aluminum
- OEM Enamels
- Refinish Enamels
- Fiberglass
- Body Filler
- SW Plastic Adhesion Promoter
- If Etch Primer is required, isolate with P27 Primer before Sealing

### MIXING



ES15 is the recommended reducer for most applications, ES20 may be used in high temperature situations if ES15 is found to be too fast  
\*For larger repairs or hot weather, SpectraSeal® 2.1 VOC Color Primer Sealer P27 can be mixed using 50% additional ES15 or ES20 reducer (Example: For 12 ounces of ready to spray sealer you can add 2 additional ounces of ES15 or ES20 reducer)  
Please refer to the color formula retrieval system for mix by weight amounts for exact mixing



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**Automotive Finishes**

**SpectraSeal®**

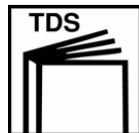
## **2.1 VOC Color Primer Sealer**

**(Waterborne Basecoats Only)**

**P27- Gray, P27B- Black, P27G- Green,  
P27L- Blue, P27R- Red, P27T- Tan,  
P27W- White, P27Y- Yellow**

Questions? Ask us at 1-800-798-5872 or log onto [www.Sherwin-Automotive.com](http://www.Sherwin-Automotive.com)

### **NOTES**



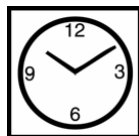
- Clean application equipment with appropriate Sherwin-Williams® equipment and gun cleaner.
- On soluble substrates, use P27 system surfacer on complete panels only.
- If topcoating directly over P27 system surfacer, sand with P600 grit sandpaper.
- When applying SpectraSeal® Primer Sealer over PE995 Corrosion Shield® LCF Etching Primer or E2G970 LCF Wash Primer, allow PE995/E2G970 to dry at least 10 minutes - refer to Product Data Sheets.
- Do not use an agitator lid on S47 2K Primer Sealer Converter.
- Pot Life: 45 minutes.

### **APPLICATION**



- Sealer application is the foundation of the repair. The application should be smooth and uniform to produce the best final appearance.
- Make sure to use a good quality topcoat spray gun: Primer guns are not recommended.
- [Refer to the spray gun set up chart for proper equipment.](#)
- **Wet-on-Wet Application:** Apply 1 smooth uniform coat to achieve 0.8 – 1.2 mils.
- **Exterior E-Coat Application:** SpectraSeal® Color Sealer can be applied directly to properly cleaned, lightly scuffed, OEM e-coat. To remove factory imperfections, sand with 600 grit sandpaper on an interface pad.
- **Jamming Parts:** SpectraSeal® 2.1 VOC Color Primer Sealer can be applied direct to properly cleaned unsanded OEM e-coat.

### **RECOAT**



- Ultra 9K™ Waterborne Basecoat.
- AWX Performance Plus™ Waterborne Basecoat.
- P27 SpectraSeal® 2.1 VOC Color Primer Sealers may be re-coated with basecoat as early as 5 minutes (10 minutes if going over etch primer) and up to 2 hours.
- If P27 SpectraSeal® 2.1 VOC Color Primer Sealer is left to sit for longer than 2 hours, you must air dry for 8 hours or bake at 140°F for 25-30 minutes and scuff sand before recoating. Maximum recoat time after sanding is 7 days. After 7 days, scuff sand using a gray nylon pad.





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## 2.1 VOC Color Primer Sealer

(Waterborne Basecoats Only)

P27- Gray, P27B- Black, P27G- Green,  
P27L- Blue, P27R- Red, P27T- Tan,  
P27W- White, P27Y- Yellow

Questions? Ask us at 1-800-798-5872 or log onto [www.Sherwin-Automotive.com](http://www.Sherwin-Automotive.com)

### REGULATORY DATA

SpectraSeal® 2.1 VOC Color Primer Sealer				
	4-PARTS	2-PARTS	2-PARTS	4-PARTS
	SpectraSeal®	S47	H45	ES15
Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)				
Regulatory Data	P27B As Packaged		As Applied	
	lb/gal	g/l	lb/gal	g/l
Density	12.95	1551	9.95	1192
	% by weight	% by volume	% by weight	% by volume
Total Volatiles	31.2	46.6	54.3	65.6
Water	0.0	0.0	0.0	0.0
Exempt Compounds	17.0	21.0	44.7	52.4
t-butyl acetate	0.0	0.0	2.4	3.3
Organic Volatiles	14.2	25.6	9.6	13.2
Percent Non-Volatile	68.8	53.4	45.7	34.4
VOC Total	1.84	220	0.95	114
VOC Less Exempt	2.32	279	2.00	240
Hazardous Air Pollutants (Clean Air Act, Section 112(b))				
	lb/gal	kg/l	lb/gal	kg/l
Volatile HAPS	0.25	0.031	0.01	0.001
VHAPS of Solids	0.48	0.058	0.03	0.004

### PERSONAL PROTECTION



- Read label, directions, and MSDS before use
- Refer to MSDS for specific information
- Wear a NIOSH approved organic vapor respirator when using this product
- Wear a NIOSH approved dust particulate mask when sanding, mixing or applying this product
- Keep product, paint and overspray off of the skin, wear goggles, coveralls, and chemical protective gloves when using this product



# PREMIUM UNDERCOATS SPRAY GUN SETTINGS

## P30 & 27 Spectraprime - All Colors

### AIR PRESSURE SETTINGS

These are recommended starting points using the spray guns listed. Due to inconsistencies that exist between various brands of Air Pressure Regulators, these recommended pressures may need to be adjusted based on the specific equipment you are using. It is important to select spray guns according to your spray environment.

MANUFACTURER	MODEL	PSI AT THE GUN SEALER COATS	PSI AT THE GUN PRIMER COATS	FLUID TURNS OUT	FLUID TIP SIZE
SATA	5000 B HVLP	28	N/A	FULL OPEN	1.2
SATA	5000 B RP	28	N/A	FULL OPEN	1.2
SATA	X 5500 HVLP	28	N/A	FULL OPEN	1.2
SATA	X 5500 RP	28	N/A	FULL OPEN	1.2
SATA	MINIJET 4400 HVLP	N/A	24 - 28	FULL OPEN	1
SATA	MINIJET 4400 RP	N/A	24 - 28	FULL OPEN	1.0 - 1.2
DEVILBISS	DV1	18	12 - 14	FULL OPEN	1.2
DEVILBISS	TEKNA PROLITE TE20 AIR CAP	24	20 - 22	FULL OPEN	1.2
DEVILBISS	SRI PRO PURPLE TS1 CAP	N/A	22 - 26	2.5 - FULL OPEN	1.2
ANEST IWATA	LPH400-LV SILVER CAP	16 - 18	12 - 14	FULL OPEN	1.3
ANEST IWATA	LS400 ENTECH HVLP	20 - 24	15 - 18	2.5 - FULL OPEN	1.3, 1.4
ANEST IWATA	SUPERNOVA WS400	28	N/A	FULL OPEN	1.2 HD
3M*	PERFORMANCE SPRAY GUN	18 - 20	18 - 20	FULL OPEN	1.3 - 1.4

\*Must be used with the fan control set at 2.5 turns closed

### NOTE:

- A dirty or worn nozzle set/air cap will not produce the results of a clean, properly maintained one.
- For questions regarding the correct spray equipment for your environment, please contact your local Sherwin-Williams® Automotive Technical Representative for assistance.



ULTRA  
9K<sup>TM</sup>

Basecoat



**SHERWIN-WILLIAMS®**  
**Automotive Finishes**

# Ultra 9K™ Waterborne Basecoat Intermix Color (U9K)

Questions? Call us at 1-800-798-5872 or log onto [www.Sherwin-Automotive.com](http://www.Sherwin-Automotive.com)

## PRODUCT TECHNICAL INFORMATION

### PRODUCT DESCRIPTION

The Ultra 9K™ Waterborne Basecoat is one of the most user-friendly basecoat systems on the market. Perfected in the lab and proven in the shop, this innovative basecoat is well-suited for premium collision center, dealerships and multi-shop owners.

### SURFACE PREPARATION

1. Sealer: Final sand repair area with P400-P600 grit or finer sandpaper.
2. Primer Surfacer: Final sand primer surfacer with P600 grit sandpaper. Dry sanding of the primer surfacer is recommended on a random orbital sander. – Do not wet sand the primer surfacer
3. Blend Panels: If blending is required, sand with P800 grit sandpaper on a random orbital sander.
4. Clean with appropriate Sherwin-Williams® surface cleaner and wipe dry with a clean cloth.

### SUITABLE SUBSTRATES

- OEM Finishes
- Aged Refinishes
- P27/P30 Primers and Sealers
- E2A960
- E2W963

### NR CLEARCOATS

- CC200 - Dynamic Clearcoat
- HPC15 - HP Process Clearcoat
- 1100755 - Elegance Clearcoat
- 1100727 – Matte Clearcoat
- CC950 – Appearance+ Performance Clearcoat

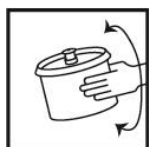
### COMPLIANT CLEARCOATS

- HPC21 - HP Process Clearcoat
- 1100755 - Elegance Clearcoat
- 1100727 – Matte Clearcoat
- CC250 – Dynamic+ Clearcoat

### GRAY SHADES

If a gray shade undercoat is recommended, you must use as directed in Color Access to ensure proper color match.

### MIXING



- Use a new dosing cap each time you replace a new toner.
- When replacing a toner, hand agitate packaging for ~ 45 sec. **Only hand agitate ULTRA 9K™ Toners.**
- Before use, hand agitate toner package for 10 sec. before dispensing.
- Use the Dispensing Extender to dispense paint.

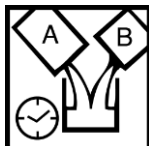


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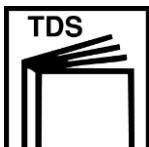
Ultra 9K™ Basecoat Color

U9R1 Standard Reducer



- Recommended Potlife of reduced Ultra 9K™ basecoat is 6 months (prepare a spray out panel to confirm color).
- Incorporate reducer into Ultra 9K™ Basecoat with a plastic stir stick. **Hand stir only.**

### NOTES



- Ultra 9K Basecoat products must be stored/transported at temperatures between 40°F and 90°F.
- Recommended strainer: 125 micron.
- Do not add fisheye eliminator to Ultra 9K™ Basecoat Color.
- Ultra 9K™ Basecoat Color may be dry sanded after dehydration with P800 grit or finer sandpaper to remove imperfections. Apply additional basecoat to sanded areas prior to clearcoating.
- Refer to [Ultra 9K™ Best Demonstrated Practices: Achieving Color Excellence](#) for shelf life details.





## BASECOAT APPLICATION



- See individual methods for application instructions below.
- Adhere to the outlined spray gun settings for optimal sprayability and color match.
- Dehydrate basecoat till hand slick (see below) prior to dropcoating.
- Dehydrate basecoat till thumbtwist (see below) prior to clearcoating.
- Refer to the Ultra 9K™ basecoat spraygun chart for individual [Spraygun settings](#).

For additional information and details by repair scenario please refer to the Ultra 9K™ Refinish System [Best Demonstrated Practices](#).

## TACK COAT

It is recommended that a tack coat be applied prior to coverage coats. The application of this tack coat is threefold:

- 1) To reveal irregularities on the surface
- 2) As a "grip coat" for the wet on wet double coat to lay into
- 3) For faster coverage

Apply a tack coat on all sanded areas. This would include a refinish panel or a blend panel in the event a blender is not used.

*Note: The tack coat can be dehydrated using the air flow from the spray gun or a hand held venturi unit. If using the spray gun to blow air, pay close attention that there is no dried material that could transfer onto the panel.*

### APPLICATION METHOD 1:

#### WET-ON-WET APPLICATION METHOD

Preferred application method; provides better metal control, speed, ease of application and material transfer.

- Tack Coat (as needed)
- Dehydration
- 1<sup>st</sup> coat: Full Wet Coat (Coverage Coat)
  - No Dehydration – Immediately followed by
- 2<sup>nd</sup> Coat: Medium Wet Coat (Orientation Coat)

*Note: Back spray gun up 2" as compared to 1st full coverage coat.*

- Dehydration (hand slick)
- Drop Coat

*Note: Double distance, half the pressure to achieve a uniform dropcoat. Dropcoat for effect colors only*

#### Troubleshooting

Blotchy after 1<sup>st</sup> coat → Proceed with orientation coat  
Streaky after 1<sup>st</sup> coat → Dehydrate and repeat 1<sup>st</sup> full coverage coat  
Blotchy after orientation coat → Repeat orientation coat

### APPLICATION METHOD 2:

#### OPTIONAL APPLICATION METHOD

Recommended for black solid colors and formulas containing more than 80% black, large repair sizes, and high humidity conditions.

- Tack Coat (as needed)
- Dehydration
- 1<sup>st</sup> coat: Medium Wet Coat (Coverage Coat)
- Dehydration (hand slick)
- 2<sup>nd</sup> coat: Medium Wet Coat (Orientation Coat)

*Note: Maintain spray gun distance to allow for sufficient wetting.*

- Dehydration (hand slick)
- Drop Coat

*Note: Double distance, half the pressure to achieve a uniform dropcoat. Dropcoat for effect colors only*

#### Troubleshooting

Blotchy after 1<sup>st</sup> coat → Proceed with orientation coat  
Streaky after 1<sup>st</sup> coat → Repeat 1st coverage coat  
Blotchy after orientation coat → Repeat orientation coat

### MID-COAT APPLICATION METHOD (FOR 3-STAGE COLORS)

Preferred application method for mid-coat; provides better metal control, speed, ease of application and material transfer.

- 1<sup>st</sup> coat: Medium Wet Coat
- Dehydration Between Coats -OR- Wet-on-Wet Application Between Coats
- 2<sup>nd</sup> Coat: Medium Wet Coat (Orientation Coat)

*Note: Back spray gun up 2" as compared to 1<sup>st</sup> full coverage coat.*

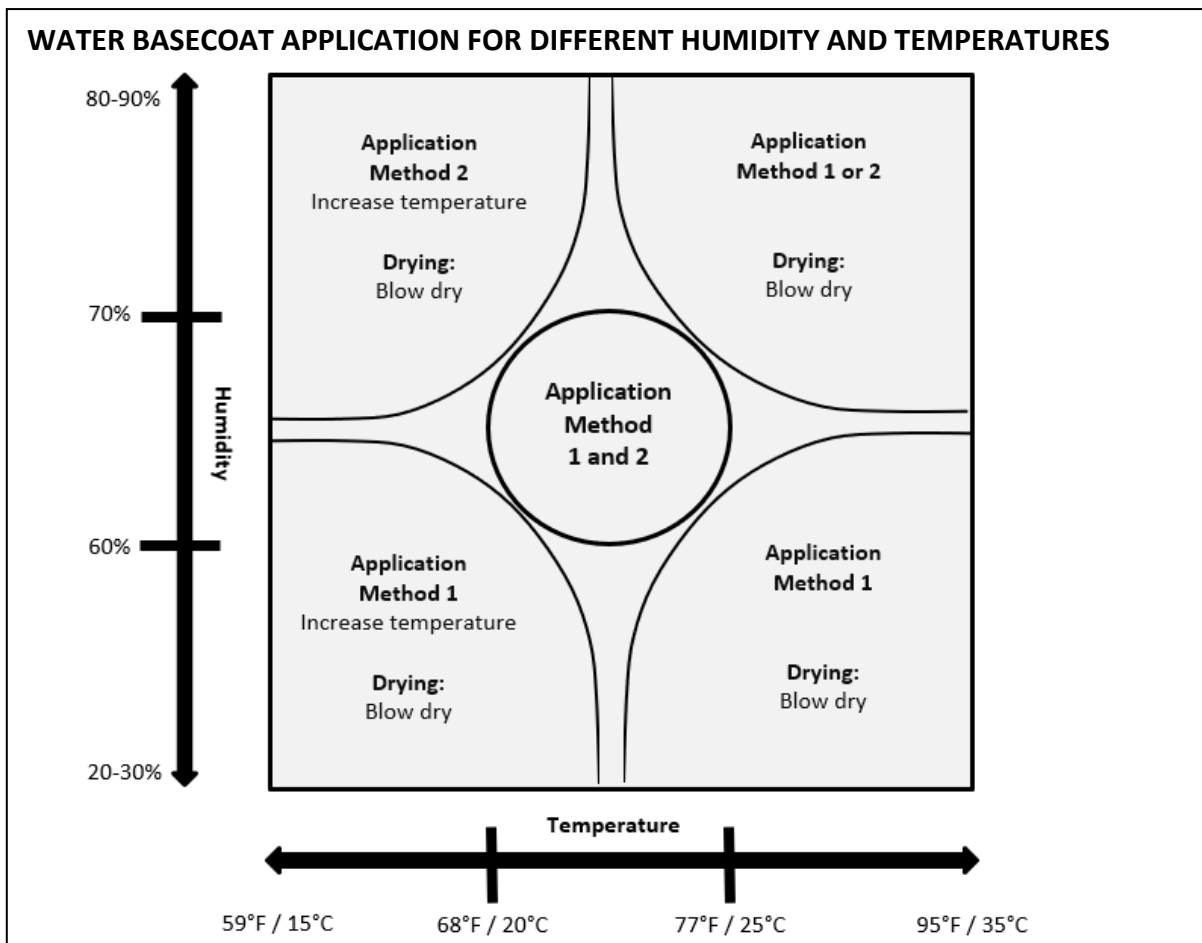
- Dehydration (hand slick)
- Optional Dropcoat (As Needed)

#### Troubleshooting

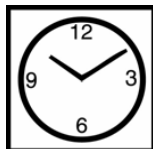
Blotchy after 1<sup>st</sup> coat → Proceed with orientation coat  
Streaky after 1<sup>st</sup> coat → Dehydrate and repeat 1<sup>st</sup> full coverage coat  
Blotchy after orientation coat → Repeat orientation coat



**BASECOAT APPLICATION (continued)**



**BASECOAT RECOAT**



- Apply recommended [Sherwin-Williams® Premium Clearcoats](#) over Ultra 9K™ Basecoat Color once fully dehydrated.
- To avoid surface contamination it is recommended to clearcoat Ultra 9K™ Basecoat Color within 24 hours, preferably same day.

- Beyond 24 hours it is advised to scuff, clean and reapply.

**DRYING SCHEDULE**

Dehydration times between coats of base and base to clearcoat are dependent on temperature, humidity, and airflow. The use of Venturi and heated air diffuser equipment will shorten flash times.

**Hand Slick -** When a finger is dragged lightly across the paint film and no marks are left behind on the painted surface.

**Thumb Twist –** Apply moderate pressure with a thumb and rotate or twist the thumb adjacent to the repair panel (i.e. masking tape) Note the reaction of the paint film - if no movement of the film is observed, this is considered passing.

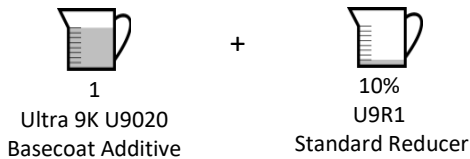
*NOTE: Higher humidity will extend flash times. Lower humidity will shorten flash times.*



**SHERWIN-WILLIAMS®**  
**Automotive Finishes**

## Ultra 9K™ Waterborne Basecoat Intermix Color (U9K)

### BLENDER



- The blender once reduced at 10% with U9R1 has a potlife of 6 months.
- Incorporate reducer into Ultra 9K™ U9020 with a plastic stir stick. **Hand stir only.**
- Recommended strainer: 125 micron.
- Refresh container and filter when using previously reduced or stored material.

### BLENDER APPLICATION



- Apply one full even wet coat of blender.
- Dehydrate blender till hand slick.
- Refer to the [Ultra 9K™ Basecoat Spraygun Chart](#) for individual spray gun settings.

### PERSONAL PROTECTION



- Read label, directions, and SDS before use and refer to SDS for specific information
- Wear a NIOSH approved organic vapor respirator when using this product
- Wear a NIOSH approved dust particulate mask when sanding, mixing or applying this product
- Keep product, paint and overspray off of the skin, wear goggles, coveralls, and chemical protective gloves when using this product.



**SHERWIN-WILLIAMS®**  
**Automotive Finishes**

**Ultra 9K™**  
**Waterborne Basecoat**  
**Intermix Color (U9K)**

**REGULATORY DATA**

ULTRA 9K™ Waterborne Basecoat INTERMIX COLOR PREFIX U9K						
Mix:	As Packaged		1-PART Ultra 9K™ Basecoat Color		1-PART Basecoat Additive U9020	
			10% U9R1		10% U9R1	
Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)						
Regulatory Data	As Packaged		Ultra 9K™ Basecoat Color As Applied		Basecoat Additive As Applied	
	lb/gal	g/l	lb/gal	g/l	lb/gal	g/l
Density	8.49	1017	8.47	1015	8.38	1004
	% by weight	% by volume	% by weight	% by volume	% by weight	% by volume
Total Volatiles	82.1	85.4	83.7	86.7	85.5	86.6
Water	71.3	72.9	73.6	75.1	82.6	83.3
Exempt Compounds	0.0	0.0	0.0	0.0	0.0	0.0
t-butyl acetate	0.0	0.0	0.0	0.0	0.0	0.0
Organic Volatiles	10.8	12.5	10.1	11.6	2.9	3.3
Percent Non-Volatile	17.9	14.6	16.3	13.3	14.5	13.4
	lb/gal	g/l	lb/gal	g/l	lb/gal	g/l
VOC Total	0.91	109	0.85	102	0.24	29
VOC Less Exempt	3.37	404	3.42	410	1.46	175
Hazardous Air Pollutants (Clean Air Act, Section 112(b))						
	lb/gal	kg/l	lb/gal	kg/l	lb/gal	kg/l
Volatile HAPS	0	0	0	0	0	0
VHAPS of Solids	0	0	0	0	0	0

**LABEL CAUTION INFORMATION**

**See Safety Data Sheet and Labels for additional safety information and handling instructions.** Safety Data Sheets for the products contained on this Product Data Sheet can be located at <http://www.sherwin-automotive.com>. Products shall not be repackaged, modified, blended, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Before opening the packages, **READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.** WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For additional product information, please contact (216) 566-2917.





# SPRAY GUN SETTINGS

## AIR PRESSURE SETTINGS

These are recommended starting points using the spray guns listed. Due to inconsistencies that exist between various brands of Air Pressure Regulators, these recommended pressures may need to be adjusted based on the specific equipment you are using. It is important to select spray guns according to your spray environment.

## SPRAY GUN DISTANCES

Use the below spray gun distance ranges as starting points based on your spray conditions.

- For dry conditions (< 20% RH), the lower end of the listed distance range is recommended.
- For humid conditions (> 55% RH), the higher end of the listed range is recommended.

Manufacturer	Model	PSI Coverage/ Orientation Coat	Gun Distance Coverage Coat*	Gun Distance Orientation Coat	PSI Dropcoat	Dropcoat Gun Distance	Fluid Turns Out	Fan Settings	Tip Size		
Iwata	LS400 (Entech) HVLP	24	6-8"	8-11"	14	10-12"	Full Open	1.5-2 Turns Closed	1.3	1.4	1.4
Iwata	WS400 (Evotech)	28	6-10"	9-13"	14	10-12"	Full Open	1.5-2 Turns Closed	1.3	1.3	1.4
Sata	5000/5500 HVLP	28	4-8"	7-11"	14	11-15"	Full Open	Full Open	1.3	1.3	1.4
Sata	5000/5500 RP	28	8-10"	11-13"	14	14-18"	Full Open	Full Open	1.3	1.3	1.4
DeVilbiss	Tekna Prolite (TE20)	26	8-11"	9-12"	14	13-15"	Full Open	Full Open	1.3	1.3	1.4
DeVilbiss	Tekna 7E7	22	8-11"	9-12"	14	13-15"	3 Turns - Full Open	Full Open	1.3	1.4	1.4
DeVilbiss	DV1	20	8-11"	9-12"	14	13-15"	Full Open	Full Open	1.3	1.4	1.4
3M	PSG	20	4-6"	8-10"	15	8-12"	Full Open	2 Turns From Closed	1.3	1.3	1.4

\* If applying single coats with full dehydration between coats (see Application Method 2 on the PDS), please refer to "coverage coat" gun distance.

\*\* In "Cool and Humid" conditions a 1.2 fluid tip may be preferred for small repairs.

## NOTE:

- For questions regarding the correct spray equipment for your environment, please contact your local Sherwin-Williams Automotive Finishes Technical Representative for assistance.

### COOL AND HUMID\*\*

Temp: 60-68°F

Humidity: >55%

### MODERATE WEATHER

Temp: 68-95°F

### HOT/WARM AND DRY

Temp: 85+°F

Humidity: <20%



**ULTRA**  
**9K<sup>TM</sup>**

Clearcoats



# HPC21

## HP Process™ 2.1 VOC

### Clearcoat

Questions? Ask us at 1-800-798-5872 or log onto [www.sherwin-automotive.com](http://www.sherwin-automotive.com)

#### PRODUCT DESCRIPTION:

Sherwin-Williams® HP Process™ 2.1 VOC Clearcoat HPC21 is an extremely productive clearcoat designed for a range of speed applications from single to multi-panel repairs. This clearcoat offers outstanding application properties, gloss, appearance, and buffability. HP Process™ 2.1 VOC Clearcoat HPC21 offers a very fast cycle time and does not require the use of a high temperature bake cycle, which allows for increased productivity and energy savings. This clearcoat is workable and buffable in as little as 20 minutes at 75 degrees Fahrenheit.

- See special note for colder climates with high humidity – HP Process™ 2.1 VOC Clearcoat HPC21 over AWX Performance Plus™ Waterborne Basecoat Colors.

#### SURFACE PREPARATION:

HP Process™ 2.1 VOC Clearcoat HPC21 is designed for use over:

- AWX Performance Plus™ Basecoat color
  - Allow AWX Performance Plus™ Basecoat to flash to [thumb twist](#) before applying clearcoat
- ULTRA 7000® Basecoat color
  - Allow ULTRA 7000® Basecoat to flash 10-20 minutes before applying clearcoat
- ULTRA BC8™ Basecoat Color
  - Allow ULTRA BC8™ Basecoat Color to flash 10-20 minutes before applying clearcoat.
- Properly prepared OE clearcoat in the case of blending\*

**\*See the appropriate [U9K™](#) or [Ultra 7000®](#) Best Demonstrated Practices for instructions on how to properly prepare panels for blending, for further information please call your Sherwin-Williams Automotive Finishes Technical Representative, Sales Representative, or Customer Service Representative.**

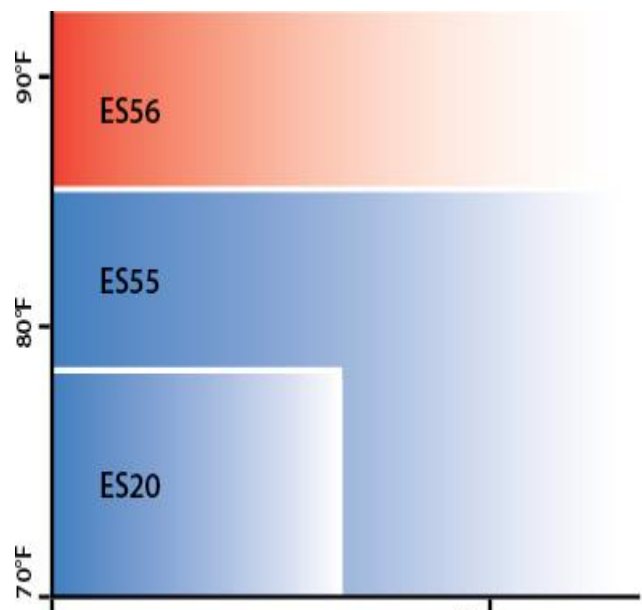
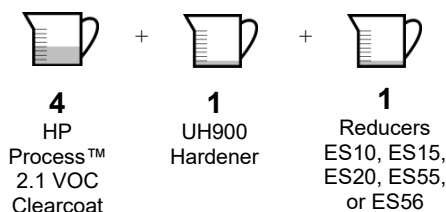
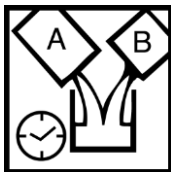
#### SUITABLE SUBSTRATES:



- OEM topcoats
- ULTRA BC8™
- Aged Refinishes

- AWX Performance Plus™ Basecoat
- Ultra 7000® Basecoat

#### MIXING:



**Reducer Selection Chart** – to be used for baking situations. Please refer to [Premium Clearcoat Selection Guide](#) for more information.



**SHERWIN-WILLIAMS®**  
Automotive Finishes

# HPC21

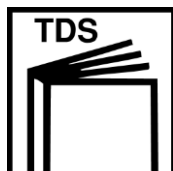
## HP Process™ 2.1 VOC

## Clearcoat

Questions? Ask us at 1-800-798-5872 or log onto [www.sherwin-automotive.com](http://www.sherwin-automotive.com)

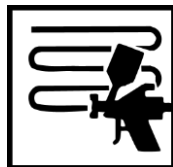
Temperature Range	Reducer Selection for HPC21			Optional Reducer Selection for HPC21	
	ES10 – #1	ES15 – #2	ES20 – #3	ES55 – Medium	ES56 – Slow
70-75°F	Spot and Single Panel Repairs	Spot and 1-3 Panel Repairs	1-3 Panel Repairs	1-4 Panel Repairs	Not Recommended
70-80°F	Spot and Single Panel Repairs (over 75° F Spot Repairs only)	Spot and 1-3 Panel Repairs	1-3 Panel Repairs	1-4 Panel Repairs	Not Recommended
80-90°F	Not Recommended	Spot and 1-3 Panel Repairs (over 85 ° F Spot Repairs only)	Spot and 1-3 Panel Repairs	1-4 Panel Repairs	Not Recommended
90-95°F	Not Recommended	Not Recommended	Spot and Single Panel Repairs on vertical surfaces only	1-3 Panel Repairs	1-3 Panel Repairs on vertical surfaces only
<b>Note:</b> Above 90°F, HPC21 is NOT recommended on horizontal surfaces. For best results use on vertical surfaces only.					
<b>HPC21 is not recommended for temperatures over 95°F.</b>					

### NOTES:



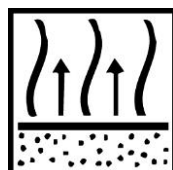
- Pot life: 2 hours at 75° F.
- Do not add accelerator to this clearcoat.
- If fisheyes are a problem, add ½ ounce of Sherwin-Williams® Fisheye Eliminator V3K780 per sprayable quart of HPC21 clearcoat. Do not use fisheye eliminator in Basecoat Color.
- If a second application (double wet coat) is desired, the first application must be fully cured (45 minutes at 75°F). Scuff sand with P800 grit or finer sandpaper on a DA with interface pad. Remove sanding dust, and tack clean before applying more clearcoat.

### APPLICATION:



- Refer to the [spray gun set up chart](#) for proper equipment and settings.
- Gun distance of 5 – 7 inches.
- Apply an even wet first coat, without missed areas.
- Allow to flash for up to 2 minutes before applying second coat or apply 2 wet coats back to back.
- Recommended film build is 1.8 – 2.5 mils (dry).
- For extra flow and leveling, use next higher ES reducer or blend ES reducers that best fit the application conditions.
- TO BLEND CLEARCOAT EDGE: Use BS12 Ure-Blend® Clearcoat Blender, apply only enough clearcoat blender necessary to melt blend edge.
- **SPECIAL NOTE FOR COLDER CLIMATES WITH HIGH HUMIDITY**  
When using HP Process™ 2.1 VOC Clearcoat HPC21 over AWX Performance Plus™ Waterborne Basecoat Color, it is recommended to perform an Infra Red (IR) "After-Bake" prior to placing the vehicle out into a cold, damp environment. IR "After-Bake" application should be done outside the booth to avoid slowing booth productivity. We recommend allowing the HP Process™ 2.1 VOC Clearcoat HPC21 to "Air-Bake" for 15-20 minutes inside the booth then move the vehicle to an area of the shop where a 5-minute IR "After-Bake" at 120°F can be applied to the repair area. This will ensure that the AWX Performance Plus™ Waterborne Basecoat Color and the HP Process™ 2.1 VOC Clearcoat HPC21 are sufficiently cured to safely go out into a cold, damp environment.

### DRYING SCHEDULE:



	Air-Dry
Dust Free	5-10 minutes
To Sand / Buff*	20-35 minutes

Sherwin-Williams Company  
Cleveland, OH 44115

SW-COMPANY USE-OTHER

AS2845  
09/2020



**SHERWIN-WILLIAMS®**  
**Automotive Finishes**

# HPC21

## HP Process™ 2.1 VOC

### Clearcoat

Questions? Ask us at 1-800-798-5872 or log onto [www.sherwin-automotive.com](http://www.sherwin-automotive.com)

\* 20 minutes = 1.8-2.5 mils at 75°F

\*\* Applying higher film builds will extend the time to sand and buff.

#### RECOAT:

If a second application of clearcoat is desired, the first application must be fully cured. Scuff sand with P800 grit or finer sandpaper on a DA with interface pad. Remove sanding dust, and tack clean before applying more clearcoat.

#### REGULATORY DATA:

HPC21 HP Process™ 2.1 VOC Clearcoat				
	4-PARTS		1-PART	1-PART
	HPC21		ES55	UH900
Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)				
Regulatory Data	As Packaged		As Applied	
	lb/gal	g/l	lb/gal	g/l
Density	8.43	1009	8.82	1057
	% by weight	% by volume	% by weight	% by volume
Total Volatiles	63.7	66.6	63.1	65.1
Water	0.0	0.0	0.0	0.0
Exempt Compounds	51.1	52.1	51.8	51.2
t-butyl acetate	0.0	0.0	0.0	0.0
Organic Volatiles	12.5	14.5	11.3	13.9
Percent Non-Volatile	36.3	33.4	36.9	34.9
	lb/gal	g/l	lb/gal	g/l
VOC Total	1.05	126	0.99	119
VOC Less Exempt	2.2	264	2.04	244
Hazardous Air Pollutants (Clean Air Act, Section 112(b))				
	lb/gal	kg/l	lb/gal	kg/l
Volatile HAPS	0.00	0.000	0.00	0.000
VHAPS of Solids	0.00	0.000	0.00	0.000

#### PERSONAL PROTECTION:



- Read label, directions, and MSDS before use
- Refer to MSDS for specific information
- Wear a NIOSH approved organic vapor respirator when using this product
- Wear a NIOSH approved dust particulate mask when sanding, mixing or applying this product
- Keep product, paint and overspray off of the skin, wear goggles, coveralls, and chemical protective gloves when using this product

#### Label Caution Information:

#### HPC21 HP Process™ 2.1 VOC Clearcoat

**Highly flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Wear eye or face protection. Wear protective clothing. **Response: IF ON SKIN:** Wash with plenty of soap and water. Wash contaminated clothing before reuse. **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water or shower. **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Call a **POISON CENTER** or physician if you feel unwell. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. Get medical attention if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. **Storage:** Keep cool. Store in a well-ventilated place. Store locked up. **Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations.





# HPC CLEARCOATS SPRAY GUN SETTINGS

HPC15, HPC21

## AIR PRESSURE SETTINGS

These are recommended starting points using the spray guns listed. Due to inconsistencies that exist between various brands of Air Pressure Regulators, these recommended pressures may need to be adjusted based on the specific equipment you are using. It is important to select spray guns according to your spray environment.

MANUFACTURER	MODEL	PSI AT THE GUN COVERAGE COATS	FLUID TURNS OUT	TIP SIZE
SATA	5000 B HVLP	20 - 24	FULL OPEN	1.3 1.4
SATA	5000 B RP	20 - 24	FULL OPEN	1.3 1.4
SATA	5500 HVLP	20 - 24	FULL OPEN	1.3 1.4
SATA	5500 RP	20 - 24	FULL OPEN	1.3 1.4
DEVILBISS	DV1	14 - 16	FULL OPEN	1.3 1.4
DEVILBISS	TEKNA PROLITE TE10 / TE20 AIR CAP	18 - 20	FULL OPEN	1.3 1.4
DEVILBISS	TEKNA 7E7 AIR CAP	18 - 20	FULL OPEN	1.3 1.4
ANEST IWATA	LS400 ENTECH HVLP	20 - 24	FULL OPEN	1.3 1.4
ANEST IWATA	WS400 EVO TECH	20 - 24	FULL OPEN	1.3 1.4
3M*	PERFORMANCE SPRAY GUN	18 - 20	FULL OPEN	1.3 1.4

\*Must be used with the fan control set at 2.5 turns closed

## NOTE:

- A dirty or worn nozzle set/air cap will not produce the results of a clean, properly maintained one.
- For questions regarding the correct spray equipment for your environment, please contact your local Sherwin-Williams® Automotive Technical Representative for assistance.



**ULTRA**  
**9K**<sup>TM</sup>

**Best Demonstrated  
Practices**

## **AREA: PAINT PREP**

### **STEP 1:**

- Perform a substrate test. Using P600, dry sand a small area on the inside of the plastic part. If the part powders, it must be sanded and cleaned with UWC1 Premium Waterborne Spray Gun and Surface Cleaner before proceeding to Step 2. If substrate gums up during sanding, clean with UWC1 Premium Waterborne Spray Gun and Surface Cleaner before proceeding directly to Step 2.

### **STEP 2:**

- Scuff all surfaces (back and front) with gold scuff pad along with USP90 Liquid Scuffing Agent, paying close attention to small grooves and depressions.

### **STEP 3:**

- Thoroughly rinse off the scuffing agent with clean water and completely dry the surface.

### **STEP 4:**

- Thoroughly clean the plastic substrate with FA1XPC Aerosol Plastic Anti-Static Cleaner and a gold scuff pad. Dry excess material with a clean cloth and re-apply FA1XPC Aerosol Plastic Anti-Static Cleaner, followed by wiping the part dry with a clean cloth.

## **AREA: SPRAY BOOTH**

### **STEP 5:**

- Apply 1 medium coat of Clear Adhesion Promoter UPO7228 for low VOC or UPO7229 for National Rule to the bare plastic. Allow 10 minutes to flash.

### **STEP 6:**

- Apply 1 smooth and uniform coat of P30 or P27 Primer Sealer. Allow to flash handslick before topcoating.

**NOTE:** For VOC Restricted areas use P27.

### **STEP 7:**

- Apply Ultra 9K™ Basecoat Color until desired coverage is achieved.

**STEP 8:**

- Allow the Ultra 9K™ Basecoat Color to flash 15–30 minutes or until fully dehydrated before clearcoating (thumbtwist).

**STEP 9:**

- Apply one of the Sherwin-Williams Automotive Finishes Premium Clearcoats - check local VOC regulations. Follow all mixing and application recommendations on the Product Data Sheets.

See Safety Data Sheet and Labels for additional safety information and handling instructions. Safety Data Sheets for the products contained on this Product Data Sheet can be located at [www.sherwin-automotive.com](http://www.sherwin-automotive.com). Products shall not be repackaged, modified, blended, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For additional product information, please contact (216) 566-2917.

## **AREA: PAINT PREP**

### **STEP 1:**

- Solvent test factory-primer. If insoluble, please proceed to Step 2. If factory-primer is soluble, remove the primer and follow the “Unprimed Plastic Parts” procedure.

### **STEP 2:**

- Clean part with FA1XSC Surface Cleaner or for VOC restricted areas use UWC1 Premium Waterborne Spray Gun and Surface Cleaner.

### **STEP 3:**

- Thoroughly scuff with gray nylon scuff pad and USP90 liquid scuffing agent.

### **STEP 4:**

- Thoroughly rinse off with clean water and completely dry the surface.

### **STEP 5:**

- Re-clean the part with FA1XSC Surface Cleaner or for VOC restricted areas use UWC1 Premium Waterborne Spray Gun and Surface Cleaner. Make sure all residue is removed.

## **AREA: SPRAY BOOTH**

### **STEP 6:**

- Apply 1 smooth and uniform coat of P30 SpectraSeal® Primer Sealer or P27 2.1 VOC Sealer to the exterior of panel. Allow Sealer to flash at least 5 minutes before topcoating. (Use P27 in Low VOC areas.)

### **STEP 7:**

- Apply Ultra 9K™ Basecoat Color until desired coverage is achieved.

### **STEP 8:**

- Allow the Ultra 9K™ Basecoat Color to flash 15–30 minutes or until fully dehydrated before clearcoating (thumbtwist).

**STEP 9:**

- Apply one of the Sherwin-Williams Automotive Finishes Premium Clearcoats - check local VOC regulations. Follow all mixing and application recommendations on the Product Data Sheets.

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## **AREA: PAINT PREP**

### **STEP 1:**

- Clean blend areas with FA1XSC Surface Cleaner. VOC restricted areas use UWC1 Premium Waterborne Spray Gun and Surface Cleaner.

### **STEP 2:**

- Sand blend areas with P800-P1000 grit sandpaper on a random orbital sander. Thoroughly scuff un-sanded areas with gray nylon scuff pad. Blend surface should be uniform and dull.

### **STEP 3:**

- Re-clean with FA1XSC Surface Cleaner or for VOC restricted areas use UWC1 Premium Waterborne Spray Gun and Surface Cleaner.

## **AREA: SPRAY BOOTH**

### **STEP 4:**

- Apply Ultra 9K™ Basecoat Color until desired coverage is achieved. Refer to the AS9801 Ultra 9K™ Basecoat Color Product Data Sheet.

### **STEP 5:**

- Allow Ultra 9K™ Basecoat Color to flash 15–30 minutes or until fully dehydrated before clearcoating (thumbtwist).

### **STEP 6:**

- Apply one of the Sherwin-Williams Automotive Finishes Premium Clearcoats - check local VOC regulations. Follow all mixing and application recommendations on the Product Data Sheets.

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