



3.5 HSP (HIGH SOLIDS POLYURETHANE) LOW VOC

DESCRIPTION: 3.5 HSP (High Solids Polyurethane) is a low VOC single-stage topcoat designed for commercial and automotive refinishing. This product provides Superior UV durability as well as commercial grade chemical resistance. 3.5 HSP has excellent coverage. It may be applied with a single pass application, saving time and material.

PRODUCT & ADDITIVES:

PRODUCT: 3.5 HSP

ACTIVATORS: —3.5 Activator: An activator/hardener designed for all refinishing. Temperatures from 60°F–100°F (38°C).

ACCELERATORS: —994 Super Accelerator: a very fast accelerator for spot and panel repairs.
—995 Blocked Accelerator: speeds cure and increases potlife. Designed for larger areas and warmer temperatures. Temperatures up to 90°F (32°C).
—996 Supercharger: speeds cure and increases potlife. Designed for larger areas and cooler temperatures. Temperatures from 60°F–75°F (16°C–24°C).

ADDITIVES: —997 Enhancer: increases potlife and slows flash-off, allowing for better sprayability and overspray melt-in at high temperatures. Temperatures from 100°F (38°C) and above.
—U-Tech LV Flex Agent: Additive to increase flexibility of 3.5 HSP for use on flexible parts.
—T890 Flatting Agent: A matting agent designed to reduce the gloss level of single stage topcoats down to eggshell or matte if desired.

BASIC RAW MATERIALS: —3.5 HSP: polyurethane resins.
—3.5 Activator: polyisocyanate resins





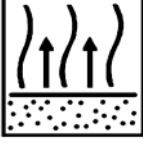

SUITABLE

SUBSTRATES:

3.5 HSP single stage can be directly applied on top of the following surfaces:
—All existing finishes degreased and sanded with #P320 to #P400 grit paper dry (DA) or #P500 to #P600 grit wet.
—All U-Tech preparatory products.

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APPLICATION:

1.  Wear a positive pressure-fresh air mask when applying U-Tech products.
2.  **3:1**
3.5 HSP single stage color
3.5 Activator
3.  Use the U-Tech measuring stick and stir thoroughly.
4.  1.5 x 1 or 2-3 x 1
Spray one coat followed by a cross coat or two to three single flowing coats.
5.  **For Single Coat Application**
Flash time between coats:
10 - 15 minutes at 70°F (20°C)
6.  15 hours at 70°F (20°C)
45 min. at 140°F (60°C).

SPRAY GUN & PRESSURE:

	Fluid Tip	Spraying Pressure	Fluid Pressure
Pressure Feed	1.0–1.2 mm	40–50 psi	8–10 psi
HVLP Siphon	1.8–2.2 mm	max. 10 psi	
HVLP Gravity	1.4–1.5 mm	max. 10 psi	

APPLICATION METHOD:

Most solid colors can be sprayed in one coat followed by a cross coat. 3.5 HSP can also be applied in two to three single flowing coats after the stated flash-off time.

Metallics: Apply two (2) single flowing coats. After the stated flash-off time, apply the second coat. The coats of 3.5 HSP should be applied with sufficient flow, but should not be applied too heavily or excessive mottling will occur.

If required, after a flash off time of 5-10 minutes, even out the metallic pattern with a final mist coat by holding the spray gun at a 45° angle to the panel. Adjust the material flow from the spray gun by means of trigger control. Do not make this coat too wet. Application affects the final color. A light mist coat lightens the color. A heavy or wet mist coat will make the color darker.



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SPRAYING

VISCOSITY:

39 seconds ZAHN cup #2 (33 seconds DIN #4) at 70°F (20°C).

POT LIFE:

1.5 hours at 70°F (20°C)
with 2 oz per gal 994: 1 hour at 70°F (20°C)
with 2 oz per gal 995: 3 hours at 70°F (20°C)
with 2 oz per gal 996: 3½ hours at 70°F (20°C)
with 2 oz per gal 997: 4 hours at 70°F (20°C)

POLISHING:

Dust and minor damage can be polished out after the stated dry times listed in the table below.

Preparation: Carefully color sand, removing dust particles with P1500 grade paper wet. Final sand (in a direction perpendicular to the direction of the P1500) with P2000 grit paper wet. Make sure water is fresh and clean and no contaminants enter during this process, as this will scratch the surface. Clean and dry the surface to be polished.

Polishing: High quality 3M compounds are recommended.

Step 1: Use Perfect-It II Rubbing Compound, Part No. 05984 or Perfect-It Rubbing Compound, Part No. 05981. Either compound should be applied with a white wool pad, Part No. 05711.

Step 2: Perfect-It Foam Polishing Pad Glaze, Part No. 05995 or Perfect-It Foam Polishing Pad Glaze, Part No. 05995. Either polishing glaze should be applied with a yellow wool pad, Part No. 05713, or a Perfect-It Foam Polishing Pad, Part No. 05725.

NOTE:

When heavy color sanding and rubbing are required, all 3.5 HSP colors must be clearcoated. Apply 1 coat of the appropriate U-Tech clearcoat.

DECALS:

Decals can be applied after 48 hours at 70°F (20°C)

LETTERING:

Striping or lettering on 3.5 HSP topcoat must be applied within 24 hours for good adhesion. After 24 hours, scuff with gray scuffing pad.

DRY FILM

THICKNESS:

Approximately .9 – 1.1 mils per coat. 1.8 – 2.2 mils dry are required.



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DRYING TIMES:

Below is a chart indicating various drying times:

Metal Temp.	Drying	3.5 Activator
70°F (20°C)	Dust Free	1 hour
	Dry	15 hours
140°F (60°C)	Dry	45 min.

Below is a chart indicating various drying times with the U-Tech accelerators:

Metal Temp.	Drying	994 Super Accelerator	995 Blocked Accelerator	996 Supercharger
70°F (20°C)	Dust Free	30 minutes	2 hours	1 ½ hours
	Dry	8 hours	12 hours	10 hours
140°F (60°C)	Dry	25 minutes	35 minutes	30 minutes

PRODUCT SPECIFICATIONS:

(Testing at 70°F Ready to Spray)

	3.5 Activator
Pencil Hardness:	2H
Electrostatic Sprayability: Rating 1-10 (10 being best)	.4 MΩ 8 Rating
Chemical Resistance	200 MEK RUBS – no failure

QUV WEATHERING:

(6500 HOURS WHITE UVA 340 BULB)

60°	93% gloss (Initial)
20°	84% gloss (Initial)
60°	93% gloss (Final)
20°	84% gloss (Final)

CLEANING OF EQUIPMENT:

Use Extra Strong Cleaning Solvent, or lacquer thinner.

COVER RATE:

Approximately 817 sq. ft./gallon at a film thickness of 1 mil. For best performance 3.5 HSP should be applied at a film thickness of approximately 2.0 mils, applying 1 cross coat or 2 single coats achieve this, depending on color.



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STOCK KEEPING:

- AVAILABILITY:** U-Tech 3.5 HSP is available ready mixed or can be mixed by means of the U-Tech mixing machine.
- COLOR:** See the U-Tech Color Documentation.
- SHELF LIFE:**
- 3.5 HSP Toners: Two years if stored unopened at room temperature.
 - 3.5 Activator: One year if stored unopened at room temperature.

SAFETY ASPECTS:

**READY TO
SPRAY VOC:**

3.5 HSP System Single Stage:	3.5 lb/gal	420 g/liter
3.5 HSP System Single Stage with 994:	3.8 lb/gal	455 g/liter
3.5 HSP System Single Stage with 995:	3.8 lb/gal	457 g/liter
3.5 HSP System Single Stage with 996:	3.8 lb/gal	457 g/liter
3.5 HSP System Single Stage with 997:	3.8 lb/gal	456 g/liter

NOTICE:

Do not handle until the Material Safety Data Sheets have been read and understood. Regulations require that all employees be trained on Material Safety Data Sheets for all chemicals with which they come in contact. The manufacturer recommends the use of an air-supplied respirator when exposed to vapors or spray mist.