



# U280 Single Stage

**FOR PROFESSIONAL USE ONLY**

## Description

The U-Tech single stage system offers 3 VOC points to meet regulatory requirements nationwide. The U280 system, is designed to meet a regulatory limit of 340 g/L (2.8 lbs/gal) for use in Maryland, Delaware, California and other areas subject to this limit.

Of the five possible gloss levels available with the addition of F100 (antique, eggshell, semi-gloss, matte and flat) ONLY matte and flat are to be used with the U-Tech U280 single stage system in areas subject to a 340 g/L (2.8 lb/gal) VOC regulatory limit for auto refinishing single stage coatings. In these areas, antique, eggshell, and semi-gloss may NOT be used in U280 due to the potential to exceed the VOC regulatory limit. This limitation on the gloss levels does not apply to auto refinishing uses outside of areas subject to a regulatory limit of 340 g/L (2.8 lbs/gal) and/or to auto refinishing uses otherwise exempt from VOC regulatory limits under applicable law.



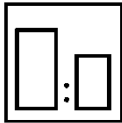
### Safety Considerations

- Use suitable personal protection.
- AkzoNobel recommends the use of a fresh air supply respirator.
- Refer to the product Safety Data Sheet (SDS) for more complete safety information.



### Surface Sanding

- Cured existing finishes
  - P320 to P400 Dry
  - P400 to P600 Wet



Stick #106

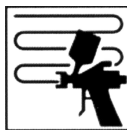
### Mixing

- 3 Parts by volume U280 Single Stage ready mix color
- 1 Parts by volume U280/U350 Hardener



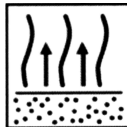
### Spray-Gun Set-Up:

RP – Pressure Feed	0.8 – 1.4mm	30 – 36psi	12 – 16 oz/min
RP – Gravity Feed	1.2 – 1.4mm	30 – 35psi	
HVLP – Pressure Feed	1.0 – 1.2mm	Max 10psi (cap)	12 – 16 oz/min
HVLP – Gravity Feed	1.4 – 1.5mm	Max 10psi (cap)	



### Application

- Apply two to three single flowing coats.



### Flash Between Coats at 70°F (21°C)

- 10-15 minutes

### Flash Before Force Drying at 70°F (21°C)

- 5-10 minutes



### Drying

	70°F (21°C)	140°F (60°C)
Dust Free	50 min	N.A.
Dry to handle	12 hrs	45 min

Read complete TDS for detailed product information.



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## Suitable Substrates

- Existing finishes, degreased and sanded with #P320 to #P400 grit paper dry.
- 2K Surfacer
- 2K100 Surfacer
- 460 Tintable Sealer
- 460 Flex Tintable Sealer
- E250 Epoxy Primer
- E350 Epoxy Primer
- Plastic Adhesion Promoter

## Products and Additives

<b>Product</b>	<ul style="list-style-type: none"> <li>• U280 Single Stage Intermix Tints</li> </ul>	<ul style="list-style-type: none"> <li>- Item # Please reference price list</li> </ul>
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<b>Hardeners</b>	<ul style="list-style-type: none"> <li>• U280/U350 Hardener</li> </ul>	<ul style="list-style-type: none"> <li>- Item #484507 (Quart)</li> <li>- Item #483668 (Gallon)</li> <li>- Item #518451 (5 Gallon)</li> <li>- Item #516071 (53 Gallon)</li> </ul>
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<b>Additives</b>	<ul style="list-style-type: none"> <li>• 998 Accelerator – Shortens dry times.</li> <li>• 997 Enhancer – Pot-life extender that slows flash off, allows for better melt in at high temperatures</li> <li>• LV Flex – For flexible substrate application</li> <li>• F100 Flattening Agent – Low gloss additive</li> <li>• B92 Reducer LV SRA</li> <li>• B91 Reducer SRA (In national rule areas B91 may be used in place of B92 Reducer LV SRA)</li> </ul>	<ul style="list-style-type: none"> <li>- Item #483670 (250 mL)</li> <li>- Item #398679 (Pint)</li> <li>- Item #398767 (Quart)</li> <li>- Item #483673 (Gallon)</li> <li>- Item #509407 (Quart)</li> <li>- Item #510324 (Quart)</li> </ul>
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## Basic Raw Materials

- U280 Single Stage – Polyol resins
- U280/U350 Hardener – Polyisocyanate resins
- U92 Reducer LV SRA – solvent blend
- Additives- Refer to the individual TDS for information.



# U280 Single Stage

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## Product Characteristics

- Weight per gallon (Ready mix color): 8.8-10.5 lbs/gal
- Volume Solids (Ready to mix color): 45% +/- 2%
- Gloss – High
- Color – Solid, metallic and pearl

## Product Agitation



### Stirring

- Because U-TECH U280 is a high solids product it needs to be thoroughly agitated before use.
- Stir the several times per day.

## Mixing Colors

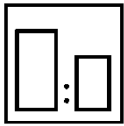
### Formulas

- A wide range of formulas are available to match the most popular colors. These are available in MixitPro.

### Hand Mixing Colors

- Colors can be custom mixed.

## Mixing – High Gloss

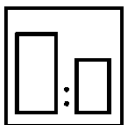


#106 Stick

**3** Parts by volume U280 Single Stage RM  
**1** Parts by volume U280/U350 Hardener

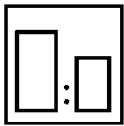
- You may add up to 1 ounce of 998 Accelerator per ready to spray gallon of U280 to speed up cure. This will however also shorten pot-life.

## Mixing – Low Gloss



#107 Stick

- Mix 100 parts by weight of mix color formula with F100 Flattening Agent according to the table below.
  - High amounts of F100 Flattening Agent may cause a drop in coverage. The amount of F100 to achieve a desired gloss level may vary from color to color.
- In VOC restricted areas U280 colors that contain F100 may not use 997 Enhancer or 998 Accelerator



#107 Stick

**5** Parts by volume U280 Single Stage color with F100 Flattener  
**1** Parts by volume U280/U350 Hardener



# U280 Single Stage

**FOR PROFESSIONAL USE ONLY**



BY WEIGHT  
VOC RESTRICTED

The table below shows the amount of F100 that can be added in regions subject to a 340 g/L (2.8 lb/gal) VOC regulatory limit for auto refinishing single stage coatings.

Gloss Range	Grams of Color	Grams of F100
Antique (70 – 80)	Not Permitted	Not Permitted
Eggshell (50 – 60)	Not Permitted	Not Permitted
Semi gloss (40 – 50)	Not Permitted	Not Permitted
Matte (20 – 30)	100	225-240
Flat (10 - 20)	100	240-300



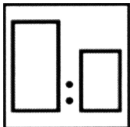
BY WEIGHT  
NATIONAL RULE

The table below shows the amount of F100 that can be added in regions NOT subject to a 340 g/L (2.8 lb/gal) VOC regulatory limit for auto refinishing single stage coatings.

Gloss Range	Amount of RM Color	Amount of F100 by
Antique (70 – 80)	100	10-70
Eggshell (50 – 60)	100	100-140
Semi gloss (40 – 50)	100	140-180
Matte (20 – 30)	100	213-240
Flat (10 - 20)	100	240-300

## Mixing – Flexible Parts

If the part to be painted can be deformed by hand, increase the flexibility of U280 Single Stage as follows.

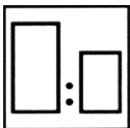


**100**  
**15**

When spraying U280 over flexible substrates that have been primed with a U-TECH primer that has been flexed, use the following ratio by volume.

Parts by volume U280 Single Stage color  
Parts by volume LV Flex Additive

**Stir the paint with LV Flex together then -**

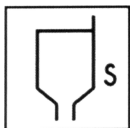


**3**  
**1**

Parts by volume Flexed U280 Single Stage color  
Parts by volume U350/ U280 Hardener

#106 Stick

## Viscosity When Mixed



**25-35**  
**seconds**

Measured with an Zahn #2 viscosity cup at 70°F (21°C).

EZ Zahn #2



# U280 Single Stage

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## Pot-Life When Mixed

Product Mix	70°F (21°C)
U280 Single Stage RM ready to spray	4 hours
U280 Single Stage RM ready to spray with 998 Accelerator	1 hour
U280 Single Stage RM ready to spray with 997 Enhancer	5 hours

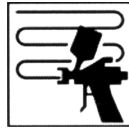
## Spray Gun Set-Up

**Consult spray gun manufactures instructions for specific spray gun pressure specifications.**



Spray Gun	Fluid Tip	Application Pressure	
RP – Pressure Feed	0.8 – 1.4mm	30 – 36psi	12 – 16 oz/min
RP – Gravity Feed	1.2 – 1.4mm	30 – 35psi	
HVLP – Pressure Feed	1.0 – 1.2mm	Max 10psi (cap)	12 – 16 oz/min
HVLP – Gravity Feed	1.4 – 1.5mm	Max 10psi (cap)	

## Application



### Solids

- Apply two (2) to three (3) single flowing coats. Follow recommended flash time between coats.

### Alternate Application for High Hiding Solid Colors Only:

- Apply one (1) single wet coat followed by a cross- coat (½). Only spray a maximum of 3 panels then go back and cross coat your first coat. If the system is flashed longer than 5 minutes prior to cross coat proper flow may not be achieved. If so wait the full flash time of 10 -15 minutes than reapply another full wet coat.

### Metallics

- Apply two single flowing coats for coverage. Follow a 15 minute flash time between coats. Each coat of U280 Single Stage should be applied with sufficient flow, but should not be applied too heavily or excessive mottling will occur.
- Once hiding has been achieved an orientation coat may be applied if required. Allow a short flash of 5 - 10 minutes @ 70°F (21°C) then even out the metallic pattern with a final mist coat by lowering air pressure 3 - 5 psi and hold the spray gun at a 45° angle to the panel with increased distance of about 10 - 15 inches. Adjust the material flow from the spray gun by means of trigger control. Do not make this coat too wet. A light mist coat lightens the color. A heavy or wet mist coat will make the color darker. Proper application greatly affects the final color appearance.

**Note:** U280 Single Stage will continue to flow and level during flash and bake.



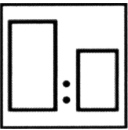
# U280 Single Stage

**FOR PROFESSIONAL USE ONLY****Clearcoat Options****Integrated Clearcoat (solid colors only)**

- Apply two (2) to three (3) coats of U280 Single Stage for coverage. Allow single stage to flash 10 – 15 minutes. Activate HS21 Clearcoat (see HS21 Clearcoat TDS). Then integrate RTS HS21 Clearcoat with U280 Single Stage RM color 1:1 by volume. Apply final wet coat.

**Clearcoat**

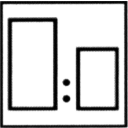
- For added durability one (1) wet coat of HS21 Clear may be applied over U280 Single Stage. Allow single stage to flash for at least one hour prior to clear coating. Recommend using 998 Accelerator in U280 Single Stage when clear coating.

**Solid Color Spot Repairs****Mixing Single Stage:**

3 parts by volume U280 Single Stage  
1 part by volume U280/U350 Hardener



- Spray single coats in sanded area until coverage is achieved. Extend each coat beyond the previous one.

**Mixing the color for blending :**

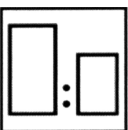
100 parts by volume U280 ready to spray color  
200 parts by volume B92 Reducer LV SRA



- Apply one coat of U280 over reduced color to repaired area and fade.
- Allow a 10-15 second flash before applying pure B92 Reducer LV SRA.



- Apply pure B92 Reducer LV SRA to over spray edge.
- Allow a 10-15 second flash between applications.
- If necessary, apply an additional thin coat of B92 Reducer LV SRA.

**Metallic Color Spot Repairs****For optimal invisible repairs begin with the following blending foundation mixture:**

100 parts by volume U-TECH HS21 Clearcoat ready to spray  
50 parts by volume B92 Reducer LV SRA



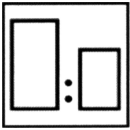
- Spray blending foundation mixture onto repair area into blend panel ensuring foundation extends further than color blend.
- After a short flash, melt the edge of this application with pure B92 Reducer LV SRA.



# U280 Single Stage

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## Metallic Color Spot Repairs – Continued



### Mixing Metallic Single Stage:

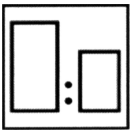
3 parts by volume U280 Single Stage color  
1 part by volume U280/U350 Hardener



- Spray single coats of color onto repair area until coverage is achieved. Extend each coat beyond the previous one.
- Spray a final fade out of metallic color over entire panel.



- Allow a flash time of 10-15 minutes.



### Optional uniform finish mixture:

100 parts by volume U-TECH HS21 Clearcoat ready to spray  
50 parts by volume B92 Reducer LV SRA



### Application of optional uniforming finish

- Apply 1 thin coat of the uniform finish mixture over entire repair area.
- Flash 3-5 minutes and apply one to two single coats over the entire panel.



1. The use of 998 Accelerator will help speed up the spot repair cure time.
2. Timing is important
  - a. Having multiple spray guns available is helpful
  - b. Mix all materials prior to beginning the repair
  - c. Ensure all equipment is working properly
3. For an optimal, invisible repair, perform repairs around a vehicle radius, corners, ends of panels or zones.
4. Repair of basecoat / clearcoat systems with single stage metallic is not recommended. Only use this metallic single stage process on single stage metallic vehicles.

## Drying / Curing Time

- Drying times are stated a recommended application method, film thickness and object temperature.

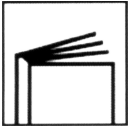


	U280 Single Stage		1 oz 998 Accelerator per RTS Gallon		2 oz 997 Enhancer per RTS Gallon	
	70°F (21°C)	140°F (60°C)	70°F (21°C)	140°F (60°C)	70°F (21°C)	140°F (60°C)
<b>Dust Free</b>	50 minutes	NA	20 minutes	NA	70 minutes	NA
<b>Dry to Handle</b>	12 hours	45 minutes	90 minutes	30 minutes	12 hours	45 minutes

- 998 will decrease pot-life.
- In extreme temperatures 997 may be used to lengthen flash/flow or to extend pot-life.



# U280 Single Stage

**FOR PROFESSIONAL USE ONLY****Recoating**

- U280 Single Stage can be recoated with itself at any stage or clear coated after 1 hour flash at 70°F (21°C). Sanding is necessary after 24 hours.

**Film Thickness – Using Suitable Application**

- 2 Coats will achieve a thickness of 1.8-2.2 mils (45 – 55µm).

**Polishing**

- Dust and minor damage can be polished out after recommended dry times. If baking, allow a cool down period of the object to ambient temperature.
- Carefully de-nib out dust particles with #1500 then #2000 grit paper. Clean and dry the surface
- Mechanically polish area using quality rubbing compounds followed by polishing glaze
- For extensive color sanding and buffing of solid colors, it is necessary to apply one (1) or two (2) HS21 Clear.

**Cleaning of Equipment**

- Clean equipment following local and federal regulations.
- In compliant localities, use a VOC compliant high quality solvent borne gun cleaner. For national rule regions, a use high quality lacquer thinner.
- For efficient cleaning and less evaporated cleaning solvents, an enclosed automatic gun cleaning machine is suggested.

**Theoretical Coverage**

Theoretical coverage is dependent of many factors. These may include; the shape of the object, surface smoothness, application technique and other application variables among others.

- 642 ft<sup>2</sup> / gallon
- 15.7 M<sup>2</sup> / liter

**VOC / Regulatory Information**

- U280 Single Stage RM ready to spray at 3:1 mix ratio – <2.8 lbs/gal (<336 g/L)





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## Product Storage



Stock unopened or used products in approved closed containers with proper labeling. Store in moderate temperatures between 40°F - 95°F (5°C – 35°C). Avoid too much temperature fluctuation. Optimum storage temperature is approximately 70°F (21°C).

• Intermix Tints	2 years
• U280 Binder	2 year
• U280/U350 Hardener	1 year
• 998 Accelerator	1 year
• 997 Enhancer	1 year
• LV Flex Additive	1 year
• F100 Flattening Agent	2 years
• B92 LV SRA Reducer	2 years

### FOR PROFESSIONAL USE ONLY

**IMPORTANT NOTE** The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Safety Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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