
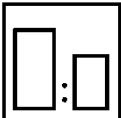


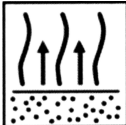


	North America	Technical Data Sheet	
	U500 Single Stage	Topcoat	
		03/24/2017	
FOR PROFESSIONAL USE ONLY			

Description

U500 Single Stage is two-component polyurethane designed for original equipment and repairs for commercial vehicles. U500 Single Stage is a cost-effective durable finish with good color capability that is simple to mix and easy to apply. U500 Single Stage is HAPs compliant with a ready to spray VOC less than 5.0 lbs/gal.

	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.																		
 Stick #106	Mixing 3 1	Parts by volume U500 Single Stage ready mix color Parts by volume U500 Hardener																	
	Spray-Gun Set-Up: <table border="1" data-bbox="315 827 1419 957"> <tr> <td>RP – Pressure Feed</td> <td>0.8 – 1.4mm</td> <td>30 – 36psi</td> <td>12 – 16 oz/min</td> </tr> <tr> <td>RP – Gravity Feed</td> <td>1.2 – 1.4mm</td> <td>30 – 35psi</td> <td></td> </tr> <tr> <td>HVLP – Pressure Feed</td> <td>1.0 – 1.2mm</td> <td>Max 10psi (cap)</td> <td>12 – 16 oz/min</td> </tr> <tr> <td>HVLP – Gravity Feed</td> <td>1.4 – 1.5mm</td> <td>Max 10psi (cap)</td> <td></td> </tr> </table>			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)	
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	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 <table border="1" data-bbox="315 1318 899 1417"> <tr> <td></td> <td>70°F (21°C)</td> <td>140°F (60°C)</td> </tr> <tr> <td>Dust Free</td> <td>35 min</td> <td>N.A.</td> </tr> <tr> <td>Dry to handle</td> <td>12 hrs</td> <td>45 min</td> </tr> </table>				70°F (21°C)	140°F (60°C)	Dust Free	35 min	N.A.	Dry to handle	12 hrs	45 min							
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Read complete TDS for detailed product information.

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Suitable Substrates


- | | |
|---|---|
| <ul style="list-style-type: none"> Existing finishes, degreased and sanded with #P320 to #P400 grit paper dry. 2K Surfacer 2K100 Surfacer 460 Tintable Sealer 460 Flex Tintable Sealer | <ul style="list-style-type: none"> E250 Epoxy Primer E350 Epoxy Primer Plastic Adhesion Promoter |
|---|---|

Products and Additives

Product	U500 Single Stage Intermix Tints	Item # Please reference price list
Hardeners	U500 Hardener	Item #484507 (Quart) Item #483668 (Gallon) Item #518451 (5 Gallon) Item #516071 (53 Gallon)
Reducer	U99 Reducer Added to color mix automatically in MixIt	Item #483664 (Gallon) Item #484506 (5 Gallon)
Additives	998 Accelerator – Accelerate dry times 997 Enhancer – Potlife extender that slows flash off, allows for better melt in at high temperatures LV Flex – For flexible substrate application F100 Flattening Agent – Low gloss additive B91 Reducer SRA B92 Reducer LV SRA	Item #483670 (250 mL) Item #398679 (Pint) Item #398767 (Quart) Item #483673 (Gallon) Item #510324 (Quart) Item #509407 (Quart)

Basic Raw Materials


- U500 Single Stage – Polyol resins
- U500 Hardener – Polyisocyanate resins
- U99 Reducer – solvent blend
- Additives- Refer to the individual TDS for information.

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Product Characteristics

- Weight per gallon (Ready mix color): 8.0-9.2 lbs/gal
- Volume Solids (Ready to mix color): 40% +/- 2%
- Gloss – High
- Color – Solid, metallic and pearl

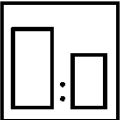
Product Agitation

	<p>Stirring</p> <ul style="list-style-type: none"> • Because U-TECH U500 is a high solids product it needs to be thoroughly agitated before use. • Stir the several times per day.
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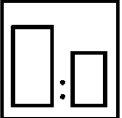
Mixing Colors


	<p>Formulas</p> <ul style="list-style-type: none"> • A wide range of formulas are available to match the most popular colors. These are available in MixitPro. <p>Hand Mixing Colors</p> <ul style="list-style-type: none"> • Colors can be custom mixed.
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Mixing – High Gloss

 <p>#106 Stick</p>	<p>3 1</p>	<p>Parts by volume U500 Single Stage RM Parts by volume U500 Hardener</p> <p>Add up to 1 ounce of 998 Accelerator per RTS gallon to speed up cure.</p>
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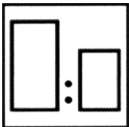
Mixing – Low Gloss

 <p>#107 Stick</p>	<p>5 1</p>	<p>Mix 100 parts by weight of ready mix color (including the U99 Reducer) with F100 Flattening Agent according to the table below.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Gloss Range</th> <th>Amount of RM Color by weight</th> <th>Amount of F100 by weight</th> </tr> </thead> <tbody> <tr> <td>Antique (70 – 80)</td> <td>100</td> <td>10 – 30</td> </tr> <tr> <td>Eggshell (50 – 60)</td> <td>100</td> <td>40 – 60</td> </tr> <tr> <td>Semi-gloss (40 – 50)</td> <td>100</td> <td>60 – 80</td> </tr> <tr> <td>Matte (20 – 30)</td> <td>100</td> <td>110 – 150</td> </tr> <tr> <td>Flat (10 - 20)</td> <td>100</td> <td>150 - 220</td> </tr> </tbody> </table> <p>High amounts of F100 Flattening Agent may cause a drop in coverage. Amount of F100 may vary from color to color.</p> <p>Parts by volume U500 Single Stage RM with F100 Flattening Agent Parts by volume U500 Hardener</p>	Gloss Range	Amount of RM Color by weight	Amount of F100 by weight	Antique (70 – 80)	100	10 – 30	Eggshell (50 – 60)	100	40 – 60	Semi-gloss (40 – 50)	100	60 – 80	Matte (20 – 30)	100	110 – 150	Flat (10 - 20)	100	150 - 220
Gloss Range	Amount of RM Color by weight	Amount of F100 by weight																		
Antique (70 – 80)	100	10 – 30																		
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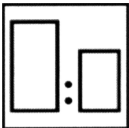
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Mixing – Flexible Parts

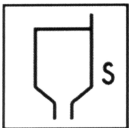
If the part to be painted can be deformed by hand, increase the flexibility of U500 Single Stage as follows.

	100 15	When spraying U500 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 U500 Single Stage RM Parts by volume LV Flex Additive
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Stir the paint with LV Flex together THEN –

 #106 Stick	3 1	Parts by volume U500 Single Stage RM Flexed Parts by volume U500 Hardener
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Viscosity When Mixed


 EZ Zahn #2	25-35 seconds	Measured with a EZ Zahn #2 viscosity cup at 70°F (21°C).
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Pot-Life When Mixed


Product Mix	70°F (21°C)
U500 Single Stage RM ready to spray	4 hours
U500 Single Stage RM ready to spray with 998 Accelerator	1 hour
U500 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)	

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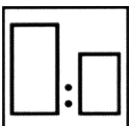

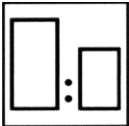
Application


	<p>Solids Apply two (2) to three (3) single flowing coats. Follow recommended flash time between coats.</p>
	<p>Metallics Apply two single flowing coats. Follow the recommended flash time between coats. Each coat of U500 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.</p> <p>Note: U500 Single Stage will continue to flow and level during flash and bake.</p>



Clearcoat Options

	<p>Integrated Clearcoat (solid colors only) Apply two (2) to three (3) coats of U500 Single Stage for coverage. Allow single stage to flash 10 – 15 minutes. Activate MS Clearcoat (see MS Clearcoat TDS). Then integrate RTS MS Clearcoat with U500 Single Stage RM color 1:1 by volume. Apply final wet coat.</p>
	<p>Clearcoat For added durability one (1) wet coat of MS Clear may be applied over U500 Single Stage. Allow single stage to flash for at least one hour prior to clear coating. Recommend using 998 accelerator in U500 Single Stage when clear coating.</p>

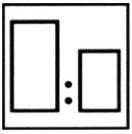

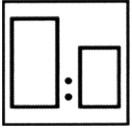

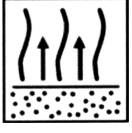
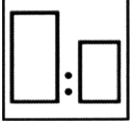


Solid Color Spot Repairs using B91 SRA Reducer or B92 LV SRA Reducer


	<p>Mixing Single Stage: 3 parts by volume U500 Single Stage 1 parts by volume U500 Hardener (1 oz 998 Accelerator recommended)</p>
	<p>Spray single coats in sanded area until coverage is achieved. Extend each coat beyond the previous one.</p>
	<p>Blend Mixture: 100 parts by volume U500 Ready to spray color 200 parts by volume B91 or B92 SRA Reducer</p>

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	Apply one coat of U500 over reduced color to repaired area and fade. Allow a 10-15 second flash time.
	Apply pure B91 Reducer SRA to over spray edge. Allow a 10-15 second flash. If necessary, apply an additional thin coat of B91 Reducer SRA.

Metallic Color Spot Repairs using B91 SRA Reducer or B92 LV SRA Reducer

	For optimal invisible repairs begin with the following blending foundation mixture: 100 parts by volume U-TECH 4.0 or MS Clearcoat ready to spray 50 parts by volume B91 or B92 SRA Reducer (1 oz 998 Accelerator recommended)
	Spray blending foundation mixture onto repair area into blend panel ensuring foundation extends further than color blend.
	Mixing Single Stage: 3 parts by volume U500 Single Stage color 1 part by volume U500 Hardener (1 oz 998 Accelerator recommended)
	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.
	Prepare the uniform finish mixture: 100 parts by volume U-TECH 4.0 or MS Clearcoat ready to spray 50 parts by volume B91 or B92 SRA Reducer (1 oz 998 Accelerator recommended)
	Optional: 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.
	Melt the edge with pure B91 Reducer SRA.

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Notes:	<ol style="list-style-type: none"> 1. The use of 998 Accelerator will help speed up the spot repair cure time. 2. Timing is important <ol style="list-style-type: none"> 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 process when sanded single stage color shows on sandpaper.
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Film Thickness – Using Suitable Application

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

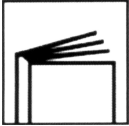
Drying / Curing Time

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


		U500 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)
	Dust Free	35 minutes	NA	20 minutes	NA	45 minutes	NA
	Dry to Handle	12 hours	45 minutes	80 minutes	35 minutes	12 hours	55 minutes


Note: 998 will decrease Potlife. Extreme temperatures may require higher amounts of 997.

Recoating


	U500 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.
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Polishability

	<p>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.</p> <ul style="list-style-type: none"> • 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) MS Clear. • Do not use abrasive polishing compounds. • The area may be waxed with a silicone free wax.
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Cleaning of Equipment

	Clean equipment with extra strong cleaning solvents.
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Theoretical Coverage

	<p>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.</p> <ul style="list-style-type: none"> • 626 Sq ft / gallon (15.4 M² / liter)
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VOC / Regulatory Information

	U500 Single Stage RM ready to spray at 3:1 mix ratio – <5.0 lbs/gal (<600 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
	U500 Binder	1 year
	U500 Hardener	6 months
	998 Accelerator	1 year
	997 Enhancer	1 year
	LV Flex Additive	1 year
	F100 Flattening Agent	2 years
	B91 SRA Reducer	2 years
	B92 LV SRA Reducer	2 years

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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 Material 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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