

Aerobase

Technical Data Sheet

Product Group

Characteristics



Product Information

Polyurethane Top Coat

Aerobase is a low VOC isocyanate cured polyurethane 3-component basecoat for use in the basecoat / clearcoat decoration system for commercial aircraft application. Aerobase provides a uniform coverage and appearance in one coat application for most colors. When used in combination with an approved primer and Aviox Clearcoat UVR, this system provides a durable long lasting, protective and decorative finish that meets and exceeds typical OEM requirements for exterior aircraft performance.

Aerobase in combination with Aviox Clearcoat UVR provides:

- Excellent gloss- and color- retention
- Extended durability and weathering
- Opacity at low film thickness
- Short tape time
- Reduction of process times
- Superior chemical and stain resistance
- Low dirt adhesion
- Excellent cleanliness

Components



Base	Aerobase
Hardener	Aerobase Hardener
Activator	Aerobase Standard Activator
Activator	Aerobase Upgraded Activator

Specifications



Qualified Product List

Airbus	AIMS 04-04-025
Airbus	AIMS 04-04-033
Airbus	AIMS 04-04-037
SAE International	AMS3095

Product specifications change constantly, to ensure the most accurate information regarding specifications, please check our online qualified product list (QPL) at aerospace.akzonobel.com/products.

Surface Conditions



Surface Preparation/
Cleaning

Aerobase is compatible with most commonly used primers, it has an OEM / AMS approval with the following primers:

- Aerodur HS 2121 CF Primer
- Aerodur LV 2114
- Aerodur HS 2118
- Aerobase is compatible with intermediate coat Aerodur Sealer 42240.
- Observe the recoat times of the previous layer of paint.
- Apply Aerobase on clean primer, sealer or Aerobase layer. Remove oil, grease and other contamination prior to application.
- Recondition aged primers or topcoats with grade P320 sanding paper or aluminum oxide non-woven abrasive pad to a uniform and matt surface.
- Remove dust with clean tack rags just prior to application of Aerobase.

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Instruction for Use

	Spray Application (Mix Ratio)	<table><tr><th></th><th>Volume</th></tr><tr><td>Aerobase</td><td>5 parts</td></tr><tr><td>Aerobase Hardener</td><td>1 part</td></tr><tr><td>Activator*</td><td>1 part</td></tr></table>		Volume	Aerobase	5 parts	Aerobase Hardener	1 part	Activator*	1 part
	Volume									
Aerobase	5 parts									
Aerobase Hardener	1 part									
Activator*	1 part									
		* Activator options: Aerobase Standard Activator, Aerobase Upgraded Activator - Aerobase Standard Activator: for all specs - Aerobase Upgraded Activator: for AMS 3095 only (with UPD base) Allow products to acclimatize to room temperature before use. - Stir or shake Aerobase thoroughly till all pigment is uniformly dispersed before adding the Aerobase Curing Solution. - Add Aerobase Curing Solution and homogenize the catalyzed mixture thoroughly. - Add Aerobase Standard Activator and homogenize the catalyzed mixture again thoroughly.								
	Induction Time	Not applicable. The product is ready for use immediately after mixing.								
	Initial Spraying Viscosity (23°C/73°F)	30 – 45 seconds ISO Cup #4 for all colors 15 – 22 seconds Gardner Signature Zahn Cup #2 for all colors								
	Note	Viscosity measurements are provided as guidelines only and are not to be used as quality control parameters. Certified information is provided by certification documentation available on request.								
	Pot life (23°C/73°F)	2 Hours								
	Dry Film Thickness (DFT)	Depending on the color to apply: 30 – 90 µm 1.2 – 3.5 mils								
	Note	The application and mixing characteristics of High Solid products differ from conventional products. Mix base and hardener for at least 2 minutes thoroughly. The high solid content causes a rapid film build-up.								

Application Recommendations

	Conditions	<table><tr><td>Temperature:</td><td>15 – 35 °C 59 – 95 °F</td></tr><tr><td>Relative Humidity:</td><td>35 – 75 %</td></tr></table>	Temperature:	15 – 35 °C 59 – 95 °F	Relative Humidity:	35 – 75 %
Temperature:	15 – 35 °C 59 – 95 °F					
Relative Humidity:	35 – 75 %					
	Note	Aerobase may be applied in conditions outside of the the limits shown above. Care must be exercised to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the proper application techniques when environmental conditions fall outside of the recommended range.				

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Equipment Recommendation

Spray gun type	Product supply	Fluid Pressure	Nozzle orifice	Product flow	Dynamic air pressure at gun-inlet *
Conventional	N/A	N/A	1.2 – 1.5mm	280 – 320 mL/min ¹	4 – 4.5 bar/58 – 65 psi ²
HVLP / Next Generation	N/A	N/A	1.2 – 1.5mm	280 – 320 mL/min ¹	2 – 2.5 bar/29 – 36 psi ³
Air Atomizing (electrostatic)	N/A	N/A	1.2 – 1.5 mm	340 – 360 mL/min	4 – 4.5 bar/58 – 65 psi ²
Pressure Atomizing (electrostatic)	N/A	25-35bar / 0.43 kpsi	0.013 inch / 60°	N/A	4 – 4.5 bar/58 – 65 psi ²



Note

- ¹ Product Flow not applicable when using gravity / suction feed guns.
² Dynamic Air Pressure at gun-inlet measured with an open trigger.
³ General advice to meet the HVLP / next generation spray gun requirements. Please validate with your local authorities.



Number of Coats

Apply a homogeneous wet coat to achieve a dry film thickness of 30 to 60 µm / 1.2 – 2.4 mils depending on the color.
When industrial hiding is not achieved after one layer, an extra wet coat can be applied within 15 – 45 minutes or after 90 minutes flash-off time.



Cleaning of Equipment

Solvent Cleaning C28/15 or Solvent Cleaning 98068.
Because Aerobase is a fast-drying base coat, it is important to clean the equipment as soon as possible after completion of the paint job.



Note

The quality of the application of all coatings will be influenced by the spray equipment chosen and the temperature, humidity, and air flow of the paint application area. When applying the product for the first time, it is recommended that test panels be prepared to identify the best equipment settings to be used in optimizing the performance and appearance of the coating.

Physical Properties



Drying Times

23°C/73°F, 55% RH	
Surface Dry	1.5 – 2 hours
Dry to Tape	2 – 3 hours
Dry to Sand	3 hours
Aerobase over different color Aerobase	
Recoat minimum	When dry to tape
Recoat maximum	168 hours
Aviox Clearcoat UVR over Aerobase	
Recoat minimum	When dry to tape
Recoat maximum	168 hours

If the overcoating time of 168 hours is exceeded, recondition the aged basecoat with grade P320 sanding paper or aluminum oxide non-woven abrasive pad before applying the subsequent Aerobase coating. If the overcoating time is exceeded for Aviox Clearcoat application, recondition the basecoat, re-apply the basecoat followed within 3 to 168 hours with Aviox Clearcoat UVR.

Application of Aviox Clearcoat UVR over sanded/activated Aerobase might result in sanding marks or color differences (except for white colors). If it is to be expected that the 168 hours overcoat window for Aerobase will be exceeded, it is advised to apply a layer of Aviox Clearcoat as soon as possible after 3 hours. The Aviox Clearcoat UVR can be activated by sanding prior to the final Aviox Clearcoat UVR application without leaving sanding marks or color differences.

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	Theoretical Coverage	20 m² per liter mixed Aerobase at 25 µm dry film thickness. 824 ft² per US gallon mixed Aerobase at 1.0 mil dry film thickness.	
	Dry Film Weight	Depending on the color 1.3 to 2 g/m²/µm 0.0073 to 0.0104 lbs/ft²/mil	
	Volatile Organic Compounds	420 g/l 3.5 lbs/gal	
	Gloss	Not applicable.	
	Color	Various solid colors. For effect colors please refer to the technical data sheet of Aerobase Special Effects.	
	Flash Point	Aerobase	>21°C /70°F
		Aerobase Hardener	>21°C /70°F
		Aerobase Standard Activator	>21°C /70°F
		Aerobase Upgraded Activator	>21°C /70°F
	Shelf life 5 - 35°C (41 - 95°F)	Aerobase	18 months
		Aerobase Hardener	24 months
		Aerobase Standard Activator	24 months
		Aerobase Upgraded Activator	24 months

Safety Precautions	Comply with all local safety, disposal and transportation regulations. Check the Material Safety Data Sheet (MSDS) and label of the individual products carefully before using the products. The MSDS's are available on request.
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Revision date: July 2026 (supersedes July 2023) - 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 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 advice given is 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. Brand names mentioned in this data sheet are trademarks of or are licensed to AkzoNobel