

Aviox Clearcoat UVR

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Aviox Clearcoat UVR is a 3-component, low VOC (High Solids), isocyanate cured polyurethane durable high gloss clear-coat for application on exterior decoration schemes.



Product Information

- Extended durability / UV resistance
- Long lasting "wet look" appearance
- Less dirt retention
- Easy to clean
- Resistance to aircraft hydraulic fluids and chemicals
- Wide application window due to various activators
- Easy to repair by using Spot Repair Activator SRA9009

Components



Base	Aviox Clearcoat UVR
Curing Solution	Hardener 90150
Activator	Activator 99341
Activator	Activator 99321
Activator	Activator 99330

Specifications



Qualified Product List

Airbus	AIMS 04-04-023
Airbus	AIMS 04-04-025
Airbus	AIMS 04-04-033
Airbus	AIMS 04-04-037
SAE International	AMS3095B

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

- Surface cleaning or pre-treatment is an essential part of the painting process.
- Observe the minimal and maximal recoat time of the relevant basecoat or topcoat.
 - Apply Aviox Clearcoat UVR only on a clean finish. Remove oil, grease and other contamination before application.
 - Recondition aged topcoats with grade P320 sanding paper or aluminum oxide nonwoven abrasive material type fine or very fine.
 - Remove dust with e.g. tack rags just prior to application of Aviox Clearcoat UVR.

Aviox Clearcoat UVR

Instruction for Use



Spray Application (Mix Ratio)

	Volume	Weight
Aviox Clearcoat UVR	2 parts	100 parts
Hardener 90150	1 part	56 parts
Activator*	1 part	45 parts

* Activator options: Activator 99341, Activator 99321, Activator 99330

- Allow products to acclimatize to room temperature before use.
- Stir or shake Aviox Clearcoat UVR thoroughly to obtain a homogeneous product before adding the hardener.
- Add Hardener 90150 and stir the catalyzed mixture thoroughly.
- Add the Activator and stir the catalyzed mixture again thoroughly.

Activator Selection:

Activator 99341 (Large surface area i.e. for widebody aircraft. Ambient to high temperature and relative humidity),
Activator 99321 (Normal surface area i.e. for single-aisle aircraft. Ambient temperature and relative humidity),
Activator 99330 (Small surface areas for deco markings and repairs).



Induction Time

Not applicable. The product is ready for use immediately after mixing.



Initial Spraying Viscosity
(23°C/73°F)

21 – 27 seconds ISO Cup #4
11 – 14 seconds Gardner Signature Zahn Cup #2



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)

Activator 99341 2 hours
Activator 99321 2 hours
Activator 99330 1 hour



Dry Film Thickness (DFT)

30 – 130 μm
1.2 – 5.2 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

Temperature: 15 – 35 °C
59 – 95 °F

Relative Humidity: 35 – 75 %



Note

Aviox Clearcoat UVR 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.

Aviox Clearcoat UVR



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	230 – 300 mL/min ¹	4 – 4.5 bar / 58 – 65 psi ²
HVLP / Next Generation	N/A	N/A	1.2 – 1.5mm	230 – 300 mL/min	2 – 2.5 bar / 29 – 36 psi ³
Air Atomizing (electrostatic)	N/A	N/A	1.2 – 1.5 mm	230 – 300 mL/min ¹	4 – 4.5 bar / 58 – 65 psi ²
Pressure Atomizing (electrostatic)	N/A	N/A	0.009 inch/60° 0.013 inch/60°	65 – 75 bar/1.02 kpsi 25 – 35 bar/0.43 kpsi	4 – 4.5 bar / 58 – 65 psi ²

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

Spray-apply a homogeneous, wet and closed coat in order to achieve a dry film thickness of 30 – 130 µm / 1.2 – 5.2 mils. If required apply a second coat after 60 minutes flash-off time. When applied over a special effect coating it is advised to apply two coats of Aviox Clearcoat UVR in order to achieve the best possible result. If a very coarse special effect pigment is used, it can be considered to sand the clearcoat using grade P400 soft pads sanding paper.



Cleaning of Equipment

Solvent Cleaning C 28/15 or Solvent Cleaning 98068.



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, Activator 99341	23°C/73°F, 55% RH, Activator 99321	23°C/73°F, 55% RH, Activator 99330
Dry to Dust	3 – 4 hours	3 – 4 hours	1 – 2 hours
Dry to Tape	15 – 19 hours	12 – 16 hours	5 – 7 hours (For more details see the note on Activator Guideline).

Recoatable Maximum
Aviox Clearcoat UVR is recoatable within 48 hrs. If a drying time of 48 hrs is exceeded, recondition to a uniform matt surface with grade P400 sanding paper or aluminum oxide non-woven abrasive, type fine or very fine.



Note

Activator Guideline:

The temperature and relative humidity during application and drying of Aviox Clearcoat UVR significantly influence the final appearance of the coating. Aviox Clearcoat UVR has been developed to be easy applicable and to obtain the highest appearance standards. The conditions in the maintenance sector changes with the season and therefore several activators are available. Choose the right activator from the table below depending on the temperature and humidity and aircraft type in your situation to obtain the best results:

Aviox Clearcoat UVR

Activator Selection depending on conditions.

Condition	Repair	Single aisle	Wide body
23°C/73°F - 30%RH	99330	99321	99341
23°C/73°F - 50%RH	99330	99321	99341
23°C/73°F - 80%RH	99330	99321 or 99341	99341
30°C/86°F - 30%RH	99330	99321 or 99341	99341
30°C/86°F - 80%RH	99321 or 99330	99341	99341

Dry to tape times depending on conditions.

Condition	99330	99321	99341
23°C/73°F - 30%RH	6 - 8 hours	19 - 23 hours	28 - 34 hours
23°C/73°F - 50%RH	5 - 7 hours	12 - 16 hours	16 - 19 hours
23°C/73°F - 80%RH	4 - 6 hours	9 - 12 hours	13 - 17 hours
30°C/86°F - 30%RH	1 - 3 hours	7 - 10 hours	9 - 13 hours
30°C/86°F - 80%RH	1 - 2 hours	5 - 8 hours	6 - 9 hours



Theoretical Coverage

15 m² per liter ready to apply at 30 µm dry film thickness.
612 ft² per US gallon ready to apply at 1.2 mils dry film thickness.



Dry Film Weight

1.1 g/m²/µm
0.006 lbs/ft²/mil



Volatile Organic Compounds

Maximum 490 g/l
Maximum 4.1 lbs/gal



Gloss (60°)

Minimum 90 GU



Color

Clear



Flash Point

Aviox Clearcoat UVR	>21°C /70°F
Hardener 90150	>21°C /70°F
Activator 99341	<21°C /70°F
Activator 99321	<21°C /70°F
Activator 99330	<21°C /70°F

Aviox Clearcoat UVR

Shelf life 5 - 35°C (41 - 95°F)	Aviox Clearcoat UVR	24 months
	Hardener 90150	24 months
	Activator 99341	36 months
	Activator 99321	36 months
	Activator 99330	36 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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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