

Aviox Clearcoat UVR Technical Data Sheet

Product Group

Polyurethane Topcoats

Characteristics



Product
Information

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.

- 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 (Large surface area (WB aircraft), ambient to high T and RH) Activator 99321 (Normal surface area (SA aircraft), ambient T and RH) Activator 99330 (Small surface areas for deco markings and repairs)

Specifications



Qualified Product
List

Airbus	AIMS 04.04.023, AIMS 04.04.025 AIMS 04.04.033, AIMS 04.04.037 IPS 04-04-033-04, IPS 04-04-037-04
BAE Systems	AVN 7-004, AVP 3-001, AVP 3-006 AVP 3-011
British Aerospace Airbus	ABP 4-2128, ABP 9-4325
Diamond Aircraft	DM-S-03-0006
Dassault	DGQT 1.7.0.0138
Goodrich	RPS 13.99
Ilyushin	ТИ 756.03.583
SAE	AMS3095A
Sukhoi	RRJ0000-RE-314-331



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

Surface Conditions



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 non-woven abrasive material type fine or very fine.
- Remove dust with e.g. tack rags just prior to application of Aviox Clearcoat UVR.

Instruction for Use



Mixing Ratio

Aviox Clearcoat UVR	2 parts
Hardener 90150	1 part
Activator 99341, 99321, 99330	1 part

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

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.

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Pot life
(23°C/73°F)

Activator 99341
Activator 99321
Activator 99330

2 hours
2 hours
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.



Equipment
recommendation

Conventional/HVLP	Nozzle / tip size	1.2 – 1.5 mm
	Atomizing air pressure (at the gun)	2-2.5 bar 29-36 psi
Low pressure (electrostatic)	Nozzle / Tip Size	1.2 – 1.5 mm
	Flow rate	230 – 300 mL/min
High pressure (electrostatic)	Atomizing air pressure (at the gun)	4 – 4.5 bar 58 – 65 psi
	Nozzle / Tip Size	60° angle
	0.009 inch	70 bar (1015 psi)
	0.013 inch	30 bar (435 psi)
	Air pressure (at the gun)	4 – 4.5 bar 58-65 psi

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Number of Coats

Apply a homogeneous wet coat. If applicable apply after 60 minutes flash off time a second wet coat.

When applied over a special effect coating it is advised to apply 2 coats of Aviox Clearcoat UVR in order to achieve the best possible result. If a very course special effect pigment is used it can be considered so sand the clearcoat using grade P400 soft pads sanding paper.



Cleaning of equipment

Use Solvent Cleaning C28/15 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)

Dry to dust	
Activator 99341	3 – 4 hours
Activator 99321	3 – 4 hours
Activator 99330	1 – 2 hours
Dry to tape:	
Activator 99341	15 – 19 hours
Activator 99321	12 – 16 hours
Activator 99330	5 – 7 hours
	(for more details see Activator Guideline in Appendix)

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 using grade P400 sanding paper or aluminum oxide non-woven abrasive, type fine or very fine.

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Theoretical Coverage

15 m² per liter ready to apply Aviox Clearcoat UVR at 30 µm dry film thickness
 612 ft² per US gallon ready to apply Aviox Clearcoat UVR at 1.2 mil dry film thickness



Dry film weight

1.1 g/m²/µm
 0.0060 lbs/ft²/mil



Volatile Organic Compounds

Maximum 490 g/l
 Maximum 4.1 lb/gal



Color

Clear



Gloss (60°)

Minimal 90 GU



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



Storage

Store the product dry and at a temperature between 5 and 35°C / 41 and 95°F. Store in the original unopened containers. Refer to container label for specific storage life information.

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

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Appendix: 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:

Activator Selection depending on conditions

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

The table below indicates the dry to tape times to be expected depending on the conditions:

Dry to tape time

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

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.

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