

Aviox Advanced Mica Series Technical Data Sheet

Product Group Polyurethane Topcoats

Characteristics



Product
Information

Aviox Advanced Mica Series is part of the coatings system consisting of Aviox Finish 77702 - Aviox Advanced Mica Series - Aviox Clearcoat UVR system for exterior use. The main benefits are:

- Creates unique appearance on aircraft livery
- Uniform sparkling special effect appearance
- Repairable
- Permanent wet look
- High solids
- Resistance to hydraulic fluids and chemicals

Micas and special effect coatings are fast becoming a favorite in creating a unique appearance on aircraft liveries. This repairable high solid formulation is world leader in the aerospace mica technology. Its flexible and adjustable dry-to-tape properties provide optimal processing behavior in various environmental conditions.

Components



Base material	Aviox Advanced Mica
Curing	Hardener 90150
Solution	Activator 99341 (Whole fuselage application)
Activator	Activator 99321 (Decoration markings, small surface area)

Specifications



Qualified
Product List

Airbus AIMS 04-04-025

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.

Aviox Advanced Mica Series

Surface Conditions



Cleaning

- Aviox Advanced Mica Series is compatible with and applied on top of Aviox Finish 77702.
- Observe the recoat times of the previous layer of Aviox Finish 77702.
- Apply Aviox Finish 77702 base color 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 material, type very fine, to a uniform matt surface.
- Remove dust with e.g. tack rags just prior to application of Aviox Advanced Mica Series.

Instruction for Use



Mixing Ratio

	Volume
Aviox Advanced Mica Series	2 parts
Hardener 90150	1 part
Activator 99341 or 99321	1 part

- Allow products to acclimatize to room temperature before use.
- Stir or shake Aviox Advanced Mica Series thoroughly until all pigments are uniformly dispersed before adding the Hardener 90150.
- Add Activator 99321 or 99341 and stir the catalyzed mixture thoroughly.



Induction time

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



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

23 – 40 seconds ISO-Cup #4
12 – 19 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)

2 hours

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Dry Film
Thickness
(DFT)

Depending on the effect / color to apply
40 – 60 μm
1.6 – 2.4 mil



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 Advanced Mica Series 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

Spray Gun Type	Nozzle Orifice	Product Flow ¹	Dynamic Air Pressure at gun-inlet ²
Conventional	1.2 – 1.5mm	340 – 360 mL/min	4 – 4.5 bar/58 – 65 psi
HVLP / next generation	1.2 – 1.5mm	340 – 360 mL/min	2 – 2.5 bar/29 – 36 psi ³
Air atomizing (electrostatic)	1.2 – 1.5 mm	340 – 360 mL/min	4 – 4.5 bar/58 – 65 psi

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.

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Note

All filters in the application equipment should be removed to avoid clogging. Depending on the type of special effect pigment used, the use of pressure atomizing spray equipment (airless or air assisted) is not advised. Please consult your AkzoNobel representative if you are not sure. Extra attention should be paid when cleaning the equipment.



Application
scheme

Step 1: Aviox Finish 77702

- Observe the recoat limits of the relevant primer.
- Use the correct Aviox Finish 77702 base coat color in line with the selected Aviox Advanced Mica color. AkzoNobel Aerospace Coatings can advise what color to use.
- Apply an even wet coat of Aviox Finish 77702 to create the base coat color. For more details check the technical data sheet of Aviox Finish 77702.

Step 2: Aviox Advanced Mica

- The flash-off time between Aviox Finish 77702 and Aviox Advanced Mica should be minimum 3 hours and maximum 48 hours, depending on the overcoat times as mentioned in the Aviox Finish 77702 technical data sheet.
- Apply Aviox Advanced Mica Series in a light closed coat, followed within 60 to 75 minutes by a an even wet coat.

Step 3: Aviox Clearcoat UVR

- The flash-off time between Aviox Advanced Mica and Aviox Clearcoat UVR should be minimum 4 hours and maximum 48 hours.

To obtain a smooth surface, apply Aviox Clearcoat UVR in one or two coats with 60 minutes solvent flash-off time in between, depending on the surface appearance (roughness) of the Aviox Advanced Mica layer. For more details check the technical data sheet of Aviox Clearcoat UVR.



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.

Aviox Advanced Mica Series

Physical Properties



Drying Times

	23°C/73°F – 55%RH
Dry to surface	1.5 – 2 hours
Dry to tape	2 – 15 hours depending on color, activator choice and environmental conditions
Recoat maximum	48 hours

Taping directly on a mica coating may result in rough edges after tape removal. To obtain the best results when taping, it is advised to apply one layer of Aviox Clearcoat UVR after min 4 hours drying time. In this case the dry to tape times of the Aviox Clearcoat UVR will be applicable.

Aviox Advanced Mica Series as such cannot be abraded if the overcoat window has exceeded or for repairs without compromising the appearance. If the overcoat window is exceeded activate the surface with aluminum oxide non-woven abrasive material, type very fine, or grade P320 sanding paper before re-applying the Aviox Advanced Mica System.

If it can be foreseen the overcoat window of Aviox Advanced Mica will be exceeded, we advise to apply locally one layer of Aviox Clearcoat UVR within the overcoat window (2 – 48 hours). The Aviox Clearcoat UVR coat can be activated after it exceeds the recoat window without compromising the appearance of the special effect.



Theoretical Coverage

13 m ² per liter ready to apply material at 40 µm dry film thickness
521 ft ² per US gallon ready to apply material at 1.6 mil dry film thickness



Dry film weight

Depending on the color
1.18 – 1.35 g/m ² /µm
0.0061 – 0.0070 lbs/ft ² /mil



Volatile Organic Compounds

Maximum 435g/l
Maximum 3.6 lb/gal



Color

Any special effect color for any aircraft livery

Aviox Advanced Mica Series



Gloss (60°)

Not applicable



Flash-point

Aviox Advanced Mica Series	>21°C / 70°F
Hardener 90150	>21°C / 70°F
Activator 99321, 99341	<21°C / 70°F



Storage

Store the product dry and at a temperature between 5 – 35°C / 41 – 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 Advanced Mica Series	18 months
Hardener 90150	24 months
Activator 99321, 99341	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.

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