

Aerodur 5500 Flat

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Aerodur 5500 Flat is a two-component high solids polyurethane finish formulated for application to military aircraft and is designed to provide superior chemical, heat, and stain resistance, and flexibility.



Components

Base	Aerodur 5500-F
Curing Solution	Curing Solution PC-233



Specifications

US Military	MIL-PRF-85285, Type IV, Class H, Form M, Grade P
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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 cleaning or pretreatment is an essential part of the painting process.

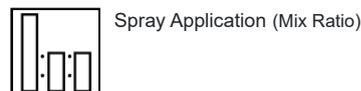
- Observe the recoat time parameters of the relevant primer and applicable specifications.
- Apply Aerodur 5500 Flat over fresh primer or properly reactivated surfaces.
- Clean aged primer or epoxy/polyurethane finishes and sand/abrade to a uniform matt finish using grade P320 sandpaper or an aluminum oxide non-woven abrasive pad.
- Remove oil, grease, and other contaminants with an approved cleaning solvent prior to application of the finish.
- Remove dust and debris with a clean tack or equivalent.



Aerodur 5500 Flat is compatible with a variety of primers:

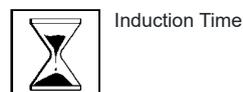
- 10P20-13, MIL-PRF-23377 Type I Class C2
- 10P8-11, MIL-PRF-23377 Type I Class C2
- 10P20-14, MIL-PRF-23377 Type II Class C2
- Aerodur HS2118 CF, MIL-PRF-32239

Instruction for Use



	Volume
Aerodur 5500-F	4 parts
Curing Solution PC-233	1 part

- Allow products to acclimate to room temperature before use.
- Stir or shake the base component thoroughly until all pigment is uniformly dispersed before adding the curing solution.
- Add the curing solution PC-233 and stir the catalyzed mixture thoroughly.



30 minutes, in accordance with MIL-PRF-85285.



16 – 30 seconds Ford Cup #4



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 (25°C/77°F)	4 hours
	Note	Pot life may be impacted by temperature and environmental conditions.
	Dry Film Thickness (DFT)	43 – 58 µm 1.7 – 2.3 mils Some colors may require increased film thickness to achieve acceptable hide.

Application Recommendations

	Conditions	Temperature: 15 – 35 °C 59 – 95 °F
		Relative Humidity: 35 – 75 %
	Note	Aerodur 5500 Flat topcoat may be applied in conditions outside the limits shown above. Care must be exercised to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the appropriate application techniques when environmental conditions fall outside of the recommended range.

	Equipment Recommendation
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Spray gun type	Product supply	Fluid Pressure	Nozzle orifice	Product flow	Dynamic air pressure at gun-inlet *
Conventional	N/A	N/A	1.2-1.4 mm	N/A	3-5 bar / 43-73 psi
HVLP / Next Generation	N/A	N/A	1.2-1.4 mm	N/A	2-2.5 bar / 29-36 psi**
Air Atomizing (electrostatic)	N/A	N/A	1.2-1.5 mm	230-350 mL/min	4-5 bar / 58-73 psi
Pressure Atomizing (electrostatic)	N/A	65-75 bar / 1.02 kpsi, 25-35 bar / 0.43 kpsi	0.009 inch/60°, 0.013 inch/60°	260-300 mL/min	4-4.5 bar / 58-65 psi

*Measured with an open trigger.

**General advice to meet the HVLP / next-generation spray gun requirements. Please validate with your local authorities.

	Number of Coats	Apply Aerodur 5500 Flat topcoat in two full wet coat applications to a recommended dry film thickness of 43-58 µm (1.7-2.3 mils). Apply a single wet coat. Allow 30-45 minutes flash-off time between coats at ambient conditions. Apply a second wet coat. Repeat this if additional coats are needed.
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Some colors may require a higher film thickness to achieve opacity (e.g., certain reds, yellows, and oranges). A foundation color may need to be applied first before application of the final color. This is to reduce the number of coats necessary for industrial hiding.

	Cleaning of Equipment	Solvent Cleaning C28/15 or TR-15 (electrostatic equipment) Solvent Cleaning C28/15 or TR-19 for other spray equipment.
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	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.
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Physical Properties

Aerodur 5500 Flat



Drying Times

25°C/77°F, 50% RH

Dry to Touch	3-4 hours
Dry to Tape	6-8 hours

Aerodur 5500 Flat topcoat may be recoated within 24 hours with no reactivation. If a drying time of 24 hours is exceeded, reactivate with P320 grade sandpaper or an aluminum oxide non-woven abrasive pad.



Note

When sanding of Aerodur 5500 Flat topcoat is required, it is recommended that a fresh coat of primer is applied over the sanded area to prevent the chances of a mottled appearance and to improve the adhesion of the upper layer of the topcoat. Clean sanded areas with AkzoNobel Ultra Prep Surface Cleaner or isopropyl alcohol prior to reapplying the topcoat.

When doing rework, it is recommended to spray entire panels using the same application method as the original application.

Flash-off times, dry times, and recoat times will vary depending on combinations of temperature, humidity, and airflow. Temperature, wet film thickness, and flash-off time can affect gloss readings, so it is recommended to adhere to the application guidelines above.



Theoretical Coverage

22m² per liter ready to apply at 25 µm dry film thickness.
900ft² per US gallon ready to apply at 1 mil dry film thickness.



Dry Film Weight

1.57 g/m²/µm
0.0082 lbs./ft²/mil



Note

For white and off-white color scheme. Other colors available upon request.



Volatile Organic Compounds

Maximum 420 g/l
Maximum 3.5 lbs./gal



Gloss (60°)

0 – 5 GU



Gloss (85°)

0 – 10 GU



Color

As required.



Flash Point

Aerodur 5500-F	25°C / 77°F
Curing Solution PC-233	166°C / 330.8°F



Storage

Store the product dry and at a temperature between 5 and 38°C / 41 and 100°F per AkzoNobel Aerospace Coatings specification. Store in the original unopened containers. Storage temperature and shelf life may vary per OEM specification requirements. Refer to the container label for specific storage life information.

Shelf life 5 - 38°C (41 - 100°F)

Aerodur 5500-F	24 months
Curing Solution PC-233	24 months

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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.

Revision date: October 2024 (supersedes none) - 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