

Aerodur 5500 Gloss

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Aerodur 5500 Gloss is a two-component high solids polyurethane finish formulated for application to military aircraft and is designed to provide premium gloss and distinctness of image (DOI). Aerodur 5500 Gloss provides superior chemical, heat, and stain resistance.



Product Information

Components

Base	Aerodur 5500-G
Curing Solution	Curing Solution PC-233
Thinner	Thinner TR-118



Specifications

US Military	MIL-PRF-85285, Type IV, Class H, Form M, Grade P
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Qualified Product List

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 Gloss 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.



Surface Preparation/
Cleaning

Aerodur 5500 Gloss 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
- 10P20-13, MIL-PRF-23377 Type II Class C2
- Aerodur HS2118 CF, MIL-PRF-32239

Instruction for Use

	Volume
Aerodur 5500-G	2 parts
Curing Solution PC-233	1 part
Thinner*	1 part



Spray Application (Mix Ratio)

* Thinner options: Thinner TR-118

- 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.
- Add the thinner TR-118 and stir the catalyzed mixture again thoroughly.



Induction Time

15 – 30 minutes

Initial Spraying Viscosity (25°C/77°F)

16 – 30 seconds Ford Cup #4

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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 (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 Gloss 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

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	75-90 bar / 1-1.3k psi, 25-35 bar / 0.4-0.5k psi	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 Gloss 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 45-60 minutes flash-off time between coats at ambient conditions. Apply a second wet coat. Repeat this if additional coats are needed.

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.



Note

Flash-off time refers to the elapsed time between the start of the first coat application and the start of the second coat application. Paint should have very little transfer when touched to indicate the paint is ready for application of the next coat.

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Cleaning of Equipment

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



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

25°C/77°F, 50% RH

Dry to Touch 3-4 hours

Dry to Tape 7-8 hours

At standard temperature and humidity conditions, TR-118 will provide the indicated dry times with a wet edge time of 30-60 minutes.

Aerodur 5500 Gloss 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

Flash-off times, dry times, and recoat times will vary depending on combinations of temperature, humidity, and airflow.



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°)

Minimum 90 GU



Color

As required.



Flash Point

Aerodur 5500-G	25°C / 77°F
Curing Solution PC-233	166°C / 330.8°F
Thinner TR-118	36°C / 96.8°F

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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-G	24 months
Curing Solution PC-233	24 months
Thinner TR-118	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.

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