

# Aerodur 5000 Semi Gloss

## Technical Data Sheet

### Product Group

### Characteristics



Product Information

### Polyurethane Top Coat

Aerodur 5000 Semi Gloss (ECM-SG Series) is a 2-component isocyanate cured polyurethane military aircraft semi gloss finish for exterior use.

- Excellent durability and weathering
- Superior combination of fluid resistance and flexibility
- Excellent cleanability
- Unique curing mechanism which allows a 24 hrs fly-away time for the aircraft\*

\*When cured at 70°F (21°C) – 77°F (25°C) and defined as resistance to 25 double rubs MEK.

### Components



|                 |                            |
|-----------------|----------------------------|
| Base            | Aerodur 5000 (ECM-SG-XXXX) |
| Curing Solution | Curing Solution PC-404     |

### Specifications



Qualified Product List

|             |   |
|-------------|---|
| US Military | MIL-PRF 85285 Type IV, Class H, Form M, Grade N |
|-------------|---|

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](https://aerospace.akzonobel.com/products).

### Surface Conditions










Surface Preparation/  
Cleaning

- 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 5000 Semi 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.

Aerodur 5000 Semi Gloss is qualified in combination with the following primers:  
10P20-13, MIL-PRF-23377, TY I, Class C  
10P20-14, MIL-PRF-23377, TY II, Class C  
10P20-12, DMS 2104  
Aviox CF Primer 37124 (AIMS 04-04-036)  
MIL-PRF-32239 (Aerodur HS 2118 CF Primer)


# Aerodur 5000 Semi Gloss

## Instruction for Use

|    | Spray Application (Mix Ratio)             | <table><tr><th></th><th>Volume</th></tr><tr><td>Thinner TR-48</td><td>1 part</td></tr><tr><td>Aerodur 5000 (ECM-SG-XXXX)</td><td>3 parts</td></tr><tr><td>Curing Solution PC-404</td><td>1 part</td></tr></table>  |  | Volume | Thinner TR-48 | 1 part | Aerodur 5000 (ECM-SG-XXXX) | 3 parts | Curing Solution PC-404 | 1 part |
|--|---|--|--|--------|---------------|--------|----------------------------|---------|------------------------|--------|
|  | Volume                                    |  |  |        |               |        |                            |         |                        |        |
| Thinner TR-48  | 1 part                                    |  |  |        |               |        |                            |         |                        |        |
| Aerodur 5000 (ECM-SG-XXXX)   | 3 parts                                   |  |  |        |               |        |                            |         |                        |        |
| Curing Solution PC-404   | 1 part                                    |  |  |        |               |        |                            |         |                        |        |
|  |   | <ul style="list-style-type: none"><li>- Allow products to acclimate to room temperature before use.</li><li>- Stir or shake Aerodur 5000 Base until all pigment is uniformly dispersed before adding the curing solution.</li><li>- Add PC-404 Curing Solution and stir the catalyzed mixture thoroughly for at least 2 minutes.</li></ul> <p>At low temperatures, the cure rate may be accelerated by adding one fluid ounce (30 ml) of AC-5000 per one mixed gallon of Aerodur 5000 Semi Gloss. The use of AC-5000 is not recommended at temperatures of 70°F (21°C) and above. The use of AC-5000 accelerator is not recommended under normal painting conditions since the material as supplied represents the optimum balance of application, pot life, and curing characteristics at temperatures of 70°F (21°C) and above. The application and mixing characteristics of high-solid products differ from conventional products. In application, rapid film build may take place due to the high solid nature of the formulation.</p> <p>Thinner TR-48 can be used at 10% by weight as optional thinner to meet the viscosity for MS-475 specification. This is for Aerodur ECM-F-7038 (Flat Black).</p> |  |        |               |        |                            |         |                        |        |
|  | Induction Time                            | 30 minutes   |  |        |               |        |                            |         |                        |        |
|  | Initial Spraying Viscosity<br>(25°C/77°F) | 40 – 70 seconds ISO Cup #4<br>24 – 32 seconds Gardner Signature Zahn Cup #2<br>24 – 30 seconds Ford Cup #4   |  |        |               |        |                            |         |                        |        |
|  | Note                                      | The following parameters are related to the below-mentioned temperature:<br>(21°C/70°F)<br>40 – 80 seconds ISO-Cup 4<br>24 – 38 seconds Gardener Signature Zahn-Cup #2<br>22 – 32 seconds Ford Cup #4<br><br>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.   |  |        |               |        |                            |         |                        |        |
|  | Dry Film Thickness (DFT)                  | 43 – 58 μm or 1.7 – 2.3 mils for MIL-PRF-85285, TY IV, Class H.<br>60 – 75 μm or 2.4 – 3.0 mils for AIMS 04.04.036.  |  |        |               |        |                            |         |                        |        |
|  | Note                                      | Some colors may require increased film thickness (3 or more coats) to achieve acceptable hide.   |  |        |               |        |                            |         |                        |        |

# Aerodur 5000 Semi Gloss


## Application Recommendations



Conditions


Temperature: 15 – 35 °C  
59 – 95 °F

Relative Humidity: 35 – 75 %



Note


Aerodur 5000 Semi Gloss may be applied in conditions outside of 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                     | Product supply | Fluid Pressure          | Nozzle orifice      | Product flow  | Dynamic air pressure at gun-inlet * |
|------------------------------------|----------------|-------------------------|---------------------|---------------|-------------------------------------|
| Conventional                       | N/A            | N/A                     | 1.4-1.8 mm          | N/A           | 3-5 bar / 43-73 psi                 |
| HVLP / Next Generation             | N/A            | N/A                     | 1.4-1.8 mm          | N/A           | 2-2.5 bar / 29-36psi**              |
| Air Atomizing (electrostatic)      | N/A            | N/A                     | 1.4-1.8 mm          | 230-350mL/min | 4-5 bar / 58-73 psi                 |
| Pressure Atomizing (electrostatic) | N/A            | 55-70 bar /0.8-1.0k psi | 0.013-0.015inch/60° | 260-300mL/min | 4-5 bar / 58-73 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

Aerodur 5000 Semi Gloss may be applied in one of two ways using the 50% overlap technique:


1. A first wet coat, followed after 30 minutes of flash-off time by a second wet coat.
2. With a single uniform medium wet cross coat to the required film thickness.

For colors requiring additional film thickness to achieve optimal hide - Option 1 should be used to apply the number of coats necessary.




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.



Cleaning of Equipment

TR-19, TR-36, C28/15, or 98068 cleaning solvent options.



Note

The quality of the application of all coatings will be influenced by the spray equipment chosen and the temperature, humidity, and airflow of the paint application area. When applying the product for the first time, it is recommended that test panels be prepared in order to identify the best equipment settings to be used in optimizing the performance and appearance of the coating.

## Physical Properties

| Drying Times       | 20°C/68°F, 55% RH               | 55% RH, 25°C/77°F |
|--------------------|---------------------------------|-------------------|
|                    |                                 |                   |
| Set to Touch       | 4 hours                         | 3-4 hours         |
| Dry to Tape        | 7 hours                         | 6 hours           |
| Fly away Time      | 24 hours                        | 24 hours          |
| Recoatable Minimum | 30 minutes                      |                   |
| Recoatable Maximum | 48 hours (with no reactivation) |                   |

# Aerodur 5000 Semi Gloss

Stencil Window: Maximum time (without reactivation) - 48 hours within the recommended application window.

Fly away time: When cured at 70°F (21°C) – 77°F (25°C) and defined as resistance to 25 double rubs MEK.

Aerodur 5000 Semi Gloss may be recoated with an additional application of Aerodur 5000 Semi Gloss within 48 hours with no reactivation. If a drying time of 48 hours is exceeded, reactivate with grade P320 sandpaper or an aluminum oxide nonwoven abrasive pad to a uniform matt surface and properly clean and degrease.

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.



Note



Theoretical Coverage

Ready to apply:  
19.9 m<sup>2</sup> per liter at 25 µm dry film thickness  
813 ft<sup>2</sup> per US gallon at 1.0 mil dry film thickness  
May vary by color.



Dry Film Weight

1.30 g/m<sup>2</sup>/µm  
0.0067 lbs/ft<sup>2</sup>/mil  
May vary by color.



Volatile Organic Compounds

Max 419 g/l  
Max 3.5 lbs./gal



Gloss

15-45 GU @ 60°



Color

As specified.



Flash Point

|                            |             |
|----------------------------|-------------|
| Thinner TR-48              | -4°C / 24°F |
| Aerodur 5000 (ECM-SG-XXXX) | 7°C / 46°F  |
| Curing Solution PC-404     | 7°C / 46°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)

|                            |           |
|----------------------------|-----------|
| Thinner TR-48              | 24 months |
| Aerodur 5000 (ECM-SG-XXXX) | 24 months |
| Curing Solution PC-404     | 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: July 2025 (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

---

# Aerodur 5000 Semi Gloss

---

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