Aerodur 3001 Basecoat

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Product Information

Aerodur 3001 Basecoat solid colors is a chemically cured, long-life base coat for use in a base coat / clear coat system formulated to provide uniform coverage and appearance in one or two closed wet coats.

Aerodur 3001 Basecoat, in combination with the specified Aerodur 3002 Clearcoat, provides reduced cycle time and superior chemical and stain resistance, flexibility, and weathering performance. This system provides a durable long-lasting, protective and decorative finish that exceeds typical OEM requirements for exterior aircraft performance.

Components

Base	Aerodur 3001G
Curing Solution	Curing Solution CS6000
Activator	Activator A9003
Activator	Activator A9002
Activator	Activator A9004

Specifications

Qualified Product List

Airbus Canada	A2MS 565-018
Boeing	BMS 10-125, TY IV, GR D
Boeing	BMS 10-125, TY VII, GR D
Boeing	BMS 10-72, TY X
Comac	CMS-CT-102
Embraer	MEP 10-125, TY II
SAE International	AMS3095

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

Surface Preparation/ Cleaning

Aerodur 3001 Basecoat Solid Colors is compatible with Aerodur 2111, Aerodur LV 2114, Aerodur HS 2118, 10P20-44, 10P20-44MNF and 10P20-12. The compatibility also extends to other primers.

Clean aged primer and recondition with grade P320 sanding paper or an aluminum oxide non-woven abrasive pad to achieve a uniform matt surface. Refer to primer technical data sheet for proper reactivation, as some specifications require reapplication of primer if it has been scuffed or sanded.

Apply Aerodur 3001 Basecoat on clean primer. Wipe the surface with isopropyl alcohol to remove oil, grease and other contamination prior to application. Remove dust and debris with clean tack rags.

AkzoNobel Aerospace Coatings
1 East Water Street, Waukegan, IL 60085, USA - Phone (847) 623 4200,
Rijksstraatweg 31, 2171 AJ Sassenheim, The Netherlands - Phone (31) 71308 2905
Mail: aerospace@akzonobel.com / Online: aerospace.akzonobel.com

Aerodur 3001 Basecoat

Instruction for Use

Spray Application

	Volume	Weight
Aerodur 3001G	6 parts	6 x WPG parts
Curing Solution CS6000	1 part	9.36 parts
Activator*	0.5 part	3.82 parts

* Activator options: Activator A9003, Activator A9002, Activator A9004

1 part by volume (9.5 parts by weight) of TR-114 may be used (below 15% in the mixed product) to enhance even further the appearance of the finish. Must adhere to film thickness requirements. VOC is affected by the use of TR-114.

- Allow products to acclimatize to room temperature before use.
- Stir or shake Aerodur 3001 basecoat thoroughly to obtain a homogeneous product before adding curing solution.
- Add curing solution CS6000 and stir the catalyzed mixture thoroughly.
- Add activator A900X and stir the catalyzed/activated mixture thoroughly.

Induction Time

15 minutes

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

20 – 70 seconds Gardner Ford - Cup #4
27 – 80 seconds ISO Cup #4

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 (25ºC/77ºF)

Activator 9002	1.5-2 hours
Activator 9003	2-3 hours
Activator 9004	1-1.5 hours

Dry Film Thickness (DFT)

Depending on the color being applied:
25-75 µm
1.0-3.0 mils

Application Recommendations

Conditions

Temperature: 15-35°C / 59-95°F
Relative Humidity: 35 - 75%

Activator Guidelines:

A9002 Standard Activator
70°F-80°F / 21°C-27°C, 30-65% RH

A9003 Warm, Humid Activator
80°F-95°F / 27°C-35°C, 65-95% RH
(full aircraft painting)

A9004 Cool Weather Activator
<70°F, 40-80% RH
(full aircraft painting and for touch up applications at standard conditions)

Note

Aerodur 3001 Basecoat 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.

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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	1.2-1.5 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 / 1.0-1.3 kpsi	0.009-0.013 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 closed wet coats until the full hide is achieved with a dry film thickness of 25-75 µm (1.0-3.0 mils).

Note

Must ensure film thickness when reducing with TR-114.

Cleaning of Equipment

Use TR-15, TR-19, C28/15 or cleaning solvent 98068 for cleaning of electrostatic equipment and/or other spray equipment. As Aerodur 3001 basecoat is a fast-drying basecoat, it is important to clean the equipment as soon as possible after the completion of the job.

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 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, 55% RH	25°C/77°F, 55% RH	25°C/77°F, 55% RH
Dry to Tape	A9002: 2-3 hrs	A9003: 6-7 hrs	A9004: 1-2 hrs
Dry to Touch	A9002: 2-3 hrs	A9003: 6-7 hrs	A9004: 1-2 hrs
Dry to Overcoat	A9002: 2 hrs	A9003: 6 hrs	A9004: 2 hrs

Note

Overcoat time applies to second color coat over first color coat and clear coat over color coat.

Dry times and recoat times will vary depending on combinations of temperature, humidity and airflow.

Max overcoat time is 72 hours. If the overcoat window is exceeded, scuff the Aerodur 3001 Basecoat with an aluminum oxide non-woven abrasive pad to a uniform matt finish, and clean the surface with a mild cleaning solvent.

Theoretical Coverage

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

Dry Film Weight

For white and off-white color schemes.
1.89 g/m²/µm
0.00985 lbs/ft²/mil

Note

Other colors are available upon request.

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Volatile Organic Compounds	Max. 420 g/l Max. 3.5 lbs/gal
Gloss (60°)	Minimum 90 GU
Note	Gloss is applicable with Aerodur 3002 Clearcoat.
Color	As required

Flash Point

Aerodur 3001G	24ºC / 76ºF
Curing Solution CS6000	58ºC / 136ºF
Activator A9003	36ºC / 93ºF
Activator A9002	36ºC / 93ºF
Activator A9004	36ºC / 93ºF

Storage

Store the product dry and at a temperature between 5 and 38ºC / 41 and 100ºF 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 3001G	24 months
Curing Solution CS6000	24 months
Activator A9003	24 months
Activator A9002	24 months
Activator A9004	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.

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IMPORTANT NOTE

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