Aerodur HS 2118 CF Primer

Technical Data Sheet

Product Group

Epoxy Primer

Characteristics

Product Information

Aerodur HS 2118 CF Primer is a 3-component, chromate-free corrosion inhibiting, low VOC (High solids) amine-cured epoxy primer for exterior use. This polyurethane-compatible primer provides excellent chemical and corrosion resistance, and optimal adhesion.

- AMS 3095 approved with many of AkzoNobel topcoats / basecoat-clearcoats for application over old paint layers.
- Can be applied on a Boeing aircraft fuselage when used in combination with a BMS 10-128 approved sol-gel type of pre-treatment.
- Qualified with US MIL-approved polyurethane camouflage topcoat Aerodur 5000.

Components

Base	Aerodur HS 2118 CF Primer
Curing Solution	Curing Solution CS6035
Activator	Activator A9190
Thinner	Thinner C 25/90 S
Thinner	Thinner TR-114

Specifications

Qualified Product List

Boeing	BMS 10-144 (Type II, Grade B, Composition NC)
SAE International	AMS3095B
US Military	MIL-PRF-32239B

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 Preparation/ Cleaning

Option 1: Reactivated aged coating systems (Airbus)
Clean aged primer or epoxy/polyurethane finishes and sand with grade P320 sanding paper or aluminum oxide non-woven abrasive pad to a uniform and matt surface.
Remove dust and debris with clean tack rags.
Ensure a minimum dry film thickness of >8 micrometer; if a DFT of < 8 micrometer is achieved follow the Airbus SRM guidance for a structural repair on these areas.

Option 2: In combination with an OEM-approved pretreatment (Boeing)
Clean aged primer or epoxy/polyurethane finishes and sand with grade P320 sanding paper or aluminum oxide non-woven abrasive pad to a uniform and matt surface.
Remove dust and debris with clean tack rags.
If the aircraft is chemically stripped, ensure the uncoated substrate is de-oxidized and prepared prior to application of the BMS 10-128 pre-treatment according to the Boeing AMM instructions.

Option 3: AMS 3095 system direct to the uncoated substrate.
It is advised to apply upon obtaining an NTO (No Technical Objection) from the fleet owner or delegate.
Clean aged primer or epoxy/polyurethane finishes and sand with grade P320 sanding paper or aluminum oxide non-woven abrasive pad to a uniform and matt surface.
Remove dust and debris with clean tack rags.
If the aircraft is chemically stripped, ensure the uncoated substrate is de-oxidized and prepared according to the OEM SRM/AMM prior to the application of Aerodur HS 2118 or pre-treatment.

Aerodur HS 2118 is qualified for the SAE AMS 3095 exterior specification as a direct-to-metal primer and in combination with Metaflex SP 1050 and the BMS 10-128 approved pretreatment. Please follow the instructions for the individual pre-treatments for application.

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Aerodur HS 2118 CF Primer

Instruction for Use

Spray Application (Mix Ratio)

	Volume	Weight
Aerodur HS 2118 CF Primer	4 parts	100 parts
Curing Solution CS6035	1 part	17 parts
Activator*	1 part	15 parts
Thinner*	1 part	16 parts

* Activator options: Activator A9190

* Thinner options: Thinner C 25/90 S, Thinner TR-114

When the optional thinner is used, the material is not VOC compliant according to EU legislation. Thinner TR-114(VOC-exempt solvent per US guidelines) is an exempt solvent and HAPS-free thinner and can be used in the US without impact on VOC. BMS10-144 certification requires the use of TR-114.
- Standard Spec: 4:1:1 - Optional (TR-114 or C25/90S - 1 Part)
- BMS 10-144 Spec: 4:1:1:1 - Mandatory (TR-114 - 1 Part)

- Allow products to acclimatize to room temperature before use.
- Stir or shake the base until all pigment is uniformly dispersed before adding the curing solution and activator.
- Add curing solution to base component and stir thoroughly for at least 1 minute.
- Add the activator and stir the catalyzed mixture thoroughly.
- If the optional thinner is used, add it together with the activator and follow the mixing instructions.

Induction Time

Not applicable. The product can be used directly after mixing.

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

24 – 36 seconds ISO Cup #4 Without the optional thinner
15 – 25 seconds ISO Cup #4 With the optional thinner
17 – 21 seconds Signature Zahn Cup #2 Without the optional thinner
13 – 17 seconds Signature Zahn Cup #2 With the optional thinner

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 (23ºC/73ºF)

2 hours (without the optional Thinner C 25/90 S or TR-114).
3 hours (with the optional Thinner C 25/90 S or TR-114).

Dry Film Thickness (DFT)

15 – 35 µm
0.6 – 1.4 mils

Application Recommendations

Conditions

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

Note

Aerodur HS 2118 CF Primer 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 – 1.5 mm	280 – 300 mL/min[1]	4 – 4.5 bar / 58 – 65 psi[2]
HVLP / Next Generation	N/A	N/A	1.2 – 1.5 mm	280 – 300 mL/min[1]	2 – 2.5 bar / 29 – 36 psi[3]
Air Atomizing (electrostatic)	N/A	N/A	1.2 – 1.5 mm	250 – 300 mL/min	4 – 4.5 bar / 58 – 65 psi[2]
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°	280 - 350 mL/min	4 – 4.5 bar / 58 – 65 psi[2]

[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.

Number of Coats

Spray-apply a homogeneous, wet and closed coat in order to achieve a dry film thickness of 15 – 35 µm / 0.6 – 1.4 mils.

Cleaning of Equipment

Solvent Cleaning C 28/15, Solvent Cleaning 98068, MEK (Methyl Ethyl Ketone) or Acetone.

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

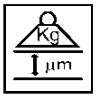
Drying Times

	23°C/73°F, 55% RH
Dry to Topcoat	2 hours
Dry to Sand	4 hours
Dry to Tape	3 – 4 hours
Recoatable Maximum	96 hours

If the overcoating time of 96 hours is exceeded, recondition the aged primer with aluminum oxide non-woven abrasive, type very fine or P320 grade sanding paper before applying the subsequent coating.

Theoretical Coverage

29 m² per liter mixed Aerodur HS 2118 CF Primer at 20 µm dry film thickness
1196 ft² per US gallon mixed Aerodur HS 2118 CF Primer at 0.8 mil dry film thickness



Dry Film Weight

1.8 g/m²/µm
0.0092 lbs/ft²/mil

Volatile Organic Compounds

European guidelines
350 g/L / 2.91 lbs/gal (without optional thinner)
421 g/L / 3.51 lbs/gal (with optional thinner)

US guidelines
325 g/L / 2.71 lbs/gal (without optional thinner)

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403 g/L / 3.36 lbs/gal (with optional thinner C 25/90 S)
325 g/L / 2.71 lbs/gal (with optional thinner TR-114)

Color

Beige

Flash Point

Aerodur HS 2118 CF Primer	>21°C / >70°F
Curing Solution CS6035	>21°C / >70°F
Activator A9190	<21°C / <70°F
Thinner C 25/90 S	<21°C / <70°F
Thinner TR-114	<21°C / <70°F

Shelf life

Due to the concentrated nature of the corrosion inhibitors and pigments in the high-solids epoxy Aerodur HS 2118 CF Primer base paint, the product tends to slowly thicken over time. This is more pronounced when the product is stored in warm conditions. The base paint may be used outside of the 12-month shelf life (up to a maximum of 24 months). When used in combination with the optional Thinner TR-114 or Thinner C25/90S, the base paint may be used with a shelf life up to a maximum of 24 months.

Shelf life 5 - 35°C (41 - 95°F)

Aerodur HS 2118 CF Primer	12 / 24 months
Curing Solution CS6035	24 months
Activator A9190	24 months
Thinner C 25/90 S	36 months
Thinner TR-114	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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