TOPCOAT F69

Technical Data Sheet

Product Group

Epoxy Top Coat

Characteristics

Product Information

Chromate-free, three-component epoxy topcoat, which is water reducible with direct adhesion on metal. The F69 topcoat offers good corrosion protection and excellent chemical resistance.
It is used to protect mountings and sealants, and as a corrosion resistant primer for certain structural parts.

Components

Base	F69 Base
Hardener	F69 Hardener
Thinner	Water (AIMS 09-00-003 Grade C)

Specifications

Qualified Product List

Airbus	80-T-35-5218
Airbus	A2MS 565-007 Ty E class2 Semi-Gloss (White FS 27875 and Dark grey FS 26473)
Airbus	ABP 4-2128
Airbus	AIMS 04-04-009
Airbus	AIMS 04-04-018
Airbus	AIMS 04-04-043
Airbus	AIMS 04-04-047
Airbus	CML 04QAB2
Airbus	CML 16-021
Airbus	PQ10050-053-03 (grey)
Airbus	PQ10050-055-04 (blue)
Aircelle	HMRC0131A
Bombardier	BAMS 565-007B Type EC2SG
Pilatus	PMS0600-52-02

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

The F69 direct adhesion top coat is used:
On various aircraft assemblies: Make sure that the surface is clean and free from contaminants. Reactivation using an abrasive pad may be necessary, followed by cleaning with an approved solvent. F69 can be applied on all types of assemblies (aluminium alloys, titanium, etc.). On sealants and on structural primers and finishes: contact us for compatible materials.
All recommendations mentioned above are given for information.

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

TOPCOAT F69

Instruction for Use

Spray Application (Mix Ratio)

	Volume	Weight
F69 Base	2 parts	100 parts
F69 Hardener	1 part	37 parts
Water (AIMS 09-00-003 Grade C)	2.7 to 3.3 parts	90 to 110 parts

MIXING PROCEDURE
Ideally, the unmixed products should be stored between 18°C and 25°C (64°F and 77°F) for 24 hours before use.

- The F69 base should be stirred for 10 minutes in a pneumatic or oscillating mixer before use.
- Mix the base and hardener until the mixture is homogenous before adding water in two stages.
- The mixture must be made at a temperature between 15°C and 35°C (59°F to 95°F).
- Sieve the paint through a 80-150 µm (3.1-5.9 mils) filter.
- Never add additional water once the paint mixture has been made.

Induction Time

Not Applicable.

Initial Spraying Viscosity (20°C/68°F)

Spraying viscosity at 20°C / 68°F

CA 4	ISO 4	Zahn 2
3,3 V	3,3 V	3,3 V
17 ± 3s	28 ± 6s	19 ± 3s

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 (20ºC/68ºF)

8 hours (3.3 V dilution).

Note

Pot life depends on the dilution ratio.
The paint viscosity may vary depending on the temperature and increases over the pot life. Depending on the flow cup used and the application temperature, the dilution may vary between 2.7 V and 3.3 V of water.

Viscosities mentioned above correspond to the recommended range of viscosity to ensure compliant application.
The range of dilution must be used to adjust viscosity to reach the recommended one.
Water based paints show a thixotropic behavior. This implies that efflux time can vary according different parameters such as: type of mixing, mixing quantity, dilution, temperature, time between mixing and viscosity measurement.

ISO 4 cup is the reference cup. The others are given for information purposes.

Dry Film Thickness (DFT)

20 – 30 µm
0.8 – 1.2 mils

Wet Film Thickness (WFT)

70 – 100 µm
2.8 – 3.9 mils

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Brush Application (Mix Ratio)

	Volume	Weight
F69 Base	2 parts	100 parts
F69 Hardener	1 part	37 parts
Water (AIMS 09-00-003 Grade C)	0 or 1 - 1.5 parts	0 or 35 - 50 parts

How to use a TUK:
Remove the safety ring and press down on the cap to release the F69 hardener. Shake the container for approximately 1 minute. Remove the cap to be able to apply the F69 topcoat with a suitable brush. If the material is not homogeneous after 1min. shaking please use a stick for further mixing (around 1 minute) until the material is homogeneous

Do not hermetically close TUKs after mixing base and hardener.

Note

When diluting, it is recommended to wait 3 minutes before adding demineralized water (not applicable for automatic mixing devices).

Pot life

2 hours undiluted.

Dry Film Thickness (DFT)

20 – 30 µm
0.8 – 1.2 mils

Wet Film Thickness (WFT)

70 – 100 µm
2.8 – 3.9 mils

Application Recommendations

Conditions

Temperature:	15 – 35 °C 59 – 95 °F
Relative Humidity:	20 – 85 %

Conditions

Topcoat F69 may be applied in conditions outside of the limits shown above. However, it is recommended to be careful to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the proper application techniques when environmental conditions are outside of the recommended range.

Equipment Recommendation

Gravity compressed air gun Nozzle 0.8 to 1.8 mm.

Number of Coats

Apply several coats to achieve 20 µm to 30 µm (0.8 to 1.2 mils) dry thickness. The number of coats depends on the size and the shape of the part to which it is being applied. The recommended dynamic air pressure is 1.5 bar to 4 bar (22 to 58 psi).

Note

In the event of a defect, contact your Quality Department.
In case of too low thickness:
Apply a thin coat of the F69 to achieve the required thickness. If the above recommended recoating time is exceeded, reactivate with an abrasive pad.

For too thick coats:
Contact your Quality Department.

If there are micro-bubbles, runs, fish-eyes or numerous inclusions:
Reactivate the surface using an abrasive paper (grade 220 to 320), remove the dust then clean the surface using an approved cleaning product. Apply a thin coat of F69 to achieve the required thickness.

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If there are significant defects:
Remove the F69 with an approved chemical paint stripper or remove using a plastic medium (in this case, the surface treatment has to be re-done).

Cleaning of Equipment

Clean the equipment with a suitable cleaning solvent such as Mapaero D760.

Note

Spray with dry, oil-free air.

Physical Properties

Drying Times

	23°C/73°F	60°C/140°F	80°C/176°F
Dust Free	15 minutes	N.A.*	N.A.*
Recoatable	25 minutes to 168 hours	5 minutes to 2 hours	5 minutes to 35 minutes
Full Cure	3 days	2 hours	35 minutes

Note

Drying times have been determined using test pieces of a thickness < 2 mm and for 20 µm (0.8 mils) of dry film. Before accelerated drying ≥ 70°C (158°F), leave to flash off for at least 15 minutes at room temperature. For the F69 infrared drying top coat, contact us.

*N.A. : Non applicable

Theoretical Coverage

29.5 m²/l for 20 µm (0.8 mils) dry (base and hardener undiluted).

Dry Film Weight

1,7

Volatile Organic Compounds

160 g/l (ISO11890-1) and 340 g/l (ASTM D3960)

Gloss

Below 80 GU at 60°

Color

Available in BAC 707 grey (M9001), FS26251 grey, FS36251 grey, RAL6021 green, blue, RAL3000 red, RAL9004 black, RAL9010 white, FS27875 white, FS26473 grey and BS627 grey

Flash Point

F69 Base	N.A.
F69 Hardener	N.A.
Water (AIMS 09-00-003 Grade C)	N.A.

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Storage

Store the product dry and at a temperature between 5 and 35ºC / 41 and 95ºF 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

12 months for Touch-Up Kits stored between 5°C and 35°C (41°F and 95°F) in full and sealed original packaging.

Shelf life 5 - 35°C (41 - 95°F)

F69 Base	18 months
F69 Hardener	18 months
Water (AIMS 09-00-003 Grade C)	N.A.

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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