TOPCOAT FR6-55

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Product Information

Three-component water-based semi gloss polyurethane topcoat used for the commercial interiors of aircraft passenger cabins. Can be applied with cabin interior primers FR1-55 and FR4-45.

Components

Base	FR6-55 Base
Hardener	FR6-55 Hardener
Thinner	Water

Specifications

Qualified Product List

Airbus	AIMS 04-08-002 et ABS 5650B
Airbus	CML 16-047
Airbus	CML-04-JMD9
FACC	FMS5550 Class 2

Meets the following requirements:
JAR/FAR Section 25 Paragraph 25.853

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

Can be applied on phenolic and plastic composites and to aluminium.
For surfaces that require surface preparation, the use of FR1-55 or FR4-45 filler is recommended.

Application on a composite substrate (new or reworked):
FR4-45 (or FR1-55) is used as a filler/surfacer (see product Technical Data Sheet for surface preparation).
FR4-45 (or FR1-55) should be sanded with a P240 to P400 grade abrasive paper and cleaned with isopropyl alcohol.

Application on a plastic substrate (new or reworked):
Except where there are surface defects, FR6-55 can be applied directly onto thermoplastics.
The substrate should be sanded with P240 to P400 grade paper. It should then be blow dried and cleaned with isopropyl alcohol.

Application on aluminium:
FR6-55 should be applied on:
- Surface treatment (OAC, Alodine1200, etc.) primed with epoxy corrosion resistant primer (F69)
- The primer should be dried for a minimum of 1 hour at 60°C before applying the top coat.

All recommendations mentioned above are given for information.
In the event of a defect, contact your Quality Department.

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TOPCOAT FR6-55

Instruction for Use

Spray Application (Mix Ratio)

	Weight
FR6-55 Base	100 parts
FR6-55 Hardener	20 parts
Water	15 - 25 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.
- Mixing by weight is recommended.
- Mix the base and hardener until the mixture is homogeneous. Then add the water and mix.
- The mixture must be made at a temperature between 15°C and 35°C (60-95°F).

Note : it is recommended to sieve the diluted mixture using a 90-150µm (3.5-6 mils) filter.
Mixing by weight is highly recommended due to variation in colors density. In case volume ratio is needed, please contact your local Akzonobel representative with the color code of your product to obtain the correct volume mixing ratio.

Induction Time

Not Applicable.

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

Spraying viscosity at 20°C / 68°F
Dilution rate by weight ISO 6
20-25 % 22s ± 5s

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)

3 hours at 23°C for a 25% dilution.

Note

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.

Dry Film Thickness (DFT)

30 – 60 µm
1.2 – 2.4 mils

Wet Film Thickness (WFT)

90 – 170 µm
3.5 – 6.7 mils
For a dilution of 15%

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Brush Application (Mix Ratio)

	Weight
FR6-55 Base	100 parts
FR6-55 Hardener	20 parts
Water	5 - 15 parts

*Thinner : Water

MIXING PROCEDURE
Ideally, the unmixed products should be stored at between 18°C and 25°C (64°F and 77°F) for 24 hours before use.
Mixing by weight is recommended.
Mix the base and hardener until the mixture is consistent.
Then add the water and mix.
The mixture must be made at a temperature between 15°C and 35°C (60-95°F).

Do not hermetically close TUK after mixing base and hardener.

Note

Not Applicable.

Pot life (23ºC/73ºF)

1 hour at 23°C (73°F) for a 5% dilution.

Dry Film Thickness (DFT)

30 – 60 µm
1.2 – 2.4 mils

Wet Film Thickness (WFT)

90 – 170 µm
3.5 – 6.7 mils
For a dilution of 15%

Application Recommendations

Conditions

Temperature:	15 – 35 °C 59 – 95 °F
Relative Humidity:	20 – 70 %

Conditions

TOPCOAT FR6-55 may be applied in conditions outside 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 appropriate application techniques when environmental conditions are outside of the recommended range.

Equipment Recommendation

Gravity spraygun Nozzle 1.5 to 2 mm.

Number of Coats

Follow the recommendations above and apply the product in crossed coats at a pressure of 3 bar (44 psi) +/- 0.5 (7 psi) dynamic, to achieve the required thickness (approximately 2 crossed coats for 60 µm or 2.4 mils dry).

For a smooth appearance:
Apply 1 to 2 crossed coats.

For a textured appearance:
Dilute the first coat to approximately 20%, wait 30 to 45 minutes for the film to achieve a semi gloss appearance
- Fine texture : Reduce the air pressure to 1.5 to 2 bar (22 to 29 psi) (0.7 to 0.9 dynamic bar) and apply at 50 cm from the substrate
- Coarse texture: Reduce the air pressure to 1.0 to 1.5 bar (15 to 22 psi) (0.4 to 0.7 dynamic bar) and apply at 20 cm from the substrate

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Cleaning of Equipment	Clean the equipment with tap water then with a suitable cleaning thinner.
Note	Spray with dry, oil-free air. Indicated pressures for textures are indicative and have to be adjusted according to application conditions (type of spray gun).

Physical Properties

Drying Times

	23°C/73°F	40°C/104°F	60°C/140°F	80°C/176°F
Dust Free	30 minutes	N.A*	N.A*	N.A*
Dry to Handle	4 to 5 hours	2 hours	1 hour	N.A*
Full Cure	7 days	3 days	12 hours	8 hours

Note	Spray with dry, oil-free air. Indicated pressures for textures are indicative and have to be adjusted according to application conditions (type of spray gun).
Theoretical Coverage	9 m²/kg for 40 µm (1.6 mils) dry (base and hardener undiluted). The theorical consumption value doesn't take into account the transfer efficiency for spray application.
Dry Film Weight	1.8
Volatile Organic Compounds	60 g/l or 0.5 lbs./gal (ISO11890-1) and 150 g/l or 1.2 lbs./gal (ASTM D3960).
Gloss	12-18 GU (smooth) at 60°, 7-11 GU (textured) at 60°.

Flash Point

FR6-55 Base	>100°C (212°F)
FR6-55 Hardener	>60°C (140°F)
Water	N.A.

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 5 - 35°C (41 - 95°F)

FR6-55 Base	12 Months
FR6-55 Hardener	12 months
Water	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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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

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