TOPCOAT FR2-55 MATT

FIRE RETARDANT FINISHES FOR CABIN INTERIORS

AkzoNobel

Product information

Three-component water-based matt polyurethane topcoat for commercial aircraft passenger cabins.
FR2-55 can be applied with cabin interior primers FR1-55, FR4-45, FRS30 or FR-P1K.

Components

Base FR2-55 4-8 GU
Hardener / Catalyst FR2-55
Thinner Water

Specifications

Qualified in accordance with:
Airbus : AIMS 04-08-002, ABS5650B et CML 16-047B
Airbus Helicopters : ECS 2066
FACC FMS 5550 class 2
C&D ZODIAC : CDM240-00, CDM240-01
Bombardier : DHMS C4.22 Type VII
Embraer : MEP 10-073

Meets the following requirements:
JAR/FAR Part 25 §25.853 (a), (c/d)/Change 14/Amdt. 25-83.

Product information mentioned in the technical datasheet is given for information purposes and can differ from requirements of specifications above. In that case, customer requirements are valid for your application.

Physical properties

THEORETICAL COVERAGE
9 m²/kg (510 ft²/gal) for 40 µm (1.6 mils) dry (base and hardener undiluted)

DRY FILM WEIGHT
1,5. May vary according to colors

VOC
50 g/L or 0.42 lb/gal (ISO 11890-1) and 140 g/L or 1.17 lb/gal (ASTM D3960)

SHELF LIFE / STORAGE
12 months for base and hardener stored between 5°C and 35°C (41°F and 95°F) in full and sealed original packaging.

GLOSS LEVEL
4 to 8 GU below 60°

NOTES
Flash point: > 100° C (212°F) base and > 60°C (140°F) hardener/catalyst

Gloss levels have been determined using glossmeter with an angle of incidence of 60°.

The theorical consumption value doesn't take into account the transfer efficiency for spray application

Surface preparation

Can be applied on phenolic and plastic composites and on aluminium. For surfaces that require surface preparation, the use of FR1-55, FR4-45, FRS30 or FR-P1K surfacer is recommended.
Application on a composite substrate (new or reworked):
FR1-55 (FR4-45, FR-P1K or FRS30) is used as filler/surfacer (see technical data sheet for surface preparation). FR1-55 (FR4-45, FR-P1K or FRS30) 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, FR2-55 can be applied directly onto plastics. The substrate should be sanded with P240 to P400 grade paper. Then it should be blowndried and cleaned with isopropyl alcohol.
Application on aluminium:
FR2/55 should be applied on a system composed of:
- Surface treatment (anodizing, conversion);
- Epoxy corrosion resistant primer (F69 type from AkzoNobel)
Dry 1 hour at 60°C (140°F) before applying the top coat.

All recommendations mentioned above are given for information.

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Instructions for use

SPRAY APPLICATION

MIXING RATIO

	Mixing ratio by weight	Mixing ratio by volume
Base	100	4 V
Hardener / Catalyst	20	1 V
Water	15 to 30	0.8 V to 1.7 V

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.
FR2-55 MATT base should be mixed for 10 minutes in a pneumatic or oscillating blender before use.

Mixing ratio in weight are highly recommended for an optimal accuracy. Uncertainties linked to mixing in volume can lead to variation of the aspect (while keeping all physical and chemical properties). This phenomenom is enphasized with mixing of small quantities.

Mix the base and the hardener until the mixture is homogeneous. Then add water and mix.
Note : it is recommended to sieve the diluted mixture using a 120-150µm (4.8-5.9mils)

INDUCTION TIME
None

Spraying viscosity at 20°C / 68°F

Dilution rate by weight	ISO 6	AFNOR 4
15-30%	22 ± 5 s	40 ± 6 s

POT LIFE
2 hours at 23°C

NOTE
Viscosities mentioned above are corresponding 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

ISO 6 cup is the reference cup. The others are given for informations purposes.

Water based paints show a thixotropic behaviour. 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.

Instructions for use

BRUSH APPLICATION

	Mixing ratio by weight	Mixing ratio by volume
Base	100	4 V
Hardener / Catalyst	20	1 V
Water	5 to 15	0.3 V to 0.8 V

MIXING PROCEDURE
Remove the safety ring and press down on the cap to release the FR2-55 hardener. Shake the container for approximately 1minute remove the cap to be able to apply the FR2-55 with a suitable brush. If after shaking 1 minute the material is not homogeneous please use stick for further mixing (around 1min) until the material is homogen.

Don't hermetically close TUKs after mixing base and hardener.

INDUCTION TIME
None

POT LIFE
1 hour for a 5% dilution

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Application recommendations

CONDITIONS
Temperature 15 °C (59°F) to 35 °C (95°F)
Relative humidity 20 % to 70 %

EQUIPMENT
Gravity compressed air gun Nozzle 1,4 mm to 2,0 mm

DRY / WET FILM THICKNESS
30 µm to 90 µm (1.2 to 3.5 mils) dry/80 µm to 240 µm (3.2 to 9.4 mils) wet.

NUMBER OF COATS
Follow recommendations above and apply the product in crossed coats, pressure 3 bars (44 psi) +/- 0.5 (7 psi) dynamic to achieve the desired thickness (approximately 2 crossed coats for 60 µm dry or 2.4 mil).
For smooth surface: Apply 1 or 2 crossed coats.
For textured surface: Dilute the first coat at 20 %, wait 1 hour until the film becomes semi-glossy.
- Fine texture: decrease the air pressure of 1.5 to 2 bars (0.7 to 0.9 bar dynamic) or 22 to 29 psi and apply at 50 cm from the surface.
- Coarse texture: decrease the air pressure from 1.0 to 1.5 bar (0.4 to 0.7 bar dynamic) or 15 to 22 psi and apply at 20 cm from the surface.

EQUIPMENT CLEANING
Clean equipment with water, then with a suitable cleaning thinner

NOTE
Spray with dry and oil-free air.
Pressures indicated in order to get textures are provided as guidelines only and will need to be adjusted according to the conditions of application (e.g.: type of gun).

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 in order to identify the best equipment settigs to be used in optimizing the performance and appearancde of the coating.

Drying times

	23°C (73°F)	40°C (104°F)	60°C (140°F)
Dust free	45 minutes to 1 hour	NA	NA
Dry to handle	5 hours	3 hours	1 hour
Recoatable	8 hours to 12 hours	4 hours to 12 hours	1 hour to 4 hours
Fully Cured	7 days	3 days	12 hours

NOTE
Before forced cure in oven allow the paint dry for 1 hour at 23°C (73F)
At 23°C, we asume a hygrometry of 50% and a sufficient air flow.
Drying times have determined using pieces of a thickness < 2mm for 45µm (1.8mils) of dry film

Flash off : 1 hour at 23°C

*N.A. : Not applicable

Defects & corrections

In the event of a defect, contact your Quality Department.

Health & Safety

See product Safety Data Sheet

Packing

FR2-55 base is available in 1 kg and 5 kg.
FR2-55 hardener is available in 1 kg and 5 kg.
FR2-55 Matt kit is available in 6kg (5kg of base and 1kg of hardener)

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