

TOPCOAT FR2-55 EXTRA MATT 1-2GU

FIRE RETARDANT FINISHES FOR CABIN INTERIORS

AkzoNobel

Product information



Water based polyurethane topcoat with a extra matt finish, used for instruments panels for aircraft and helicopter.

Components



Base FR2-55 Extra Matt
Hardener / Catalyst FR2-55
Thinner Water

Specifications



Qualified in accordance with :
AIRBUS HELICOPTER ECS 2210

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

7 m²/kg for 40µm (1.6mils) of dry film (Base and Hardener not diluted)

DRY FILM WEIGHT

1.5

VOC

50g/L (ISO 11890-1) and 140g/L (ASTM D3960)

SHELF LIFE / STORAGE

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

GLOSS LEVEL

Lower than 2GU below 60°

NOTES

Gloss levels have been determined using glossmeter with an angle of incidence of 60°C. The theoretical consumption value doesn't take into account the transfer efficiency for spray application

Surface preparation



Can be applied on phenolic composites, polymers and aluminium alloys. For surfaces that require a preparation, it is recommended to use a surfacer such as FR1-55, FR4-45 or FRS30.

Application on a composite substrate (new or reworked) :

FR1-55, FR4-45 or FRS30 is used as a filler/surfacer (see surface treatment preparation datasheet). FR1-55, FR4-45 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 Extra matt can be applied directly onto plastics. The substrate should be sanded with P240 to P400 grade paper. Then it should be blown dried and cleaned with isopropyl alcohol.

Application on aluminium alloys :

FR2-55 Extra Matt should be applied on a system composed of :

Surface treatment (anodizing, conversion)

Epoxy corrosion resistant primer (F69 type from Mapaero)

Dry 1 hour at 60°C (140°F) before applying the topcoat

All recommendations mentioned above are given for information purposes.

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Instructions for use



SPRAY APPLICATION

MIXING RATIO

Base
Hardener / Catalyst
Water

Mixing ratio by weight

100
20
25 to 40

Mixing ratio by volume

4V
1V
1.2V to 2V

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 FR2-55 Extra Matt base must be mixed for 10 minutes in a pneumatic or oscillating mixer. The mixture by weight is recommended. Mix the base and the hardener until the material is homogeneous. Then add water and mix. The mixture must be made at a temperature between 15°C and 35°C (59-95°F). Remark : It is recommended to sieve the material using a 120-150µm (4.7-5.9mils) filter.

INDUCTION TIME

None

Spraying viscosity at 20°C / 68°F

Dilution rate by weight
25-40%

ISO 6
23s ± 5s

AFNOR 4
45s ± 6s

POT LIFE

3 hours at 23°C (73.4°F)

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 information 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

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Application
recommendations



CONDITIONS

Temperature 15°C to 35°C (59-95°F)

Relative humidity 20% to 70%

EQUIPMENT

Gravity compressed air gun Nozzle 1.4mm to 2.2mm

DRY / WET FILM THICKNESS

30 to 80µm (1.2-3.2 mils) dry

NUMBER OF COATS

Follow recommendations above and apply the product in crossed coats, pressure 2-3 bars (44 psi) +/- 0.5 (7 psi) dynamic to achieve the desired thickness (approximately 2 crossed coats for 80 µm dry or 3.2 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 down to 0.7 to 0.9 bar dynamic or 10 to 13 psi and apply at 50 cm from the surface

Coarse texture: decrease the air pressure down to 0.4 to 0.7 bar dynamic or 6 to 10 psi and apply at 20 cm from the surface.

EQUIPMENT CLEANING

Clean the equipment with water, then use a suitable thinner

NOTE

Spray with dry and oil-free air.

The pressures as indicated in order to achieve the textures are provided for guidance and will need to be adjusted according to the conditions of application (e.g.: type of gun).

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Drying times



	23°C	40°C	60°C
Dust free	30 min	N.A	N.A
Dry to handle	8 hours	4 hours	1hour
Dry to tape	8 hours	4 hours	1hours
Fully Cured	7 days	3 days	12 hours

NOTE

Drying times have determined using pieces of a thickness < 2mm and for 55µm (2.2mils) of dry film. Let it flash off for 1 hour at room temperature before an accelerated drying.

*N.A. : Not applicable

Defects & corrections



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

Health & Safety



See the product Safety Data Sheet.

The MSDS are available through our website www.mapaero.com

Packing



The FR2-55 Matt base is available in 1kg and 5kg.
The FR2-55 hardener is available in 1kg and 5kg.

WARRANTY : We guarantee our products against hidden defaults over material and preparation. Our Responsibility is limited to the obligation of freely replacing the defective material without there being a claim for any compensation. The advice we give is based on our experience but it might not be absolutely right. Consequently this does not imply our responsibility in case of inefficiency. Furthermore our company cannot be responsible for any material or corporal damages caused due to a misuse or mishandling of our products. Any concession to these clauses, to be valid, must be an official document issued by our offices and signed by our direction.