

SURFACER FR1-55

FIRE RETARDANT FINISHES FOR CABIN INTERIORS

AkzoNobel

Product information



Three-component water-based polyurethane surfacer for aircraft interiors.
FR1-55 is intended to correct surface defects such as pin holes on composite and thermoplastic substrates.

Components



Base FR1-55
Hardener / Catalyst FR1-55
Thinner Water

Specifications



Qualified in accordance with:

Airbus : AIMS 04-08-001/CML/16-046B/ABS5650A, CML-04-BAM6
FACC FMS 5520 class 2

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

6 m²/kg (360 ft/gal) for 50 µm (2 mils) dry (base and hardener undiluted)

DRY FILM WEIGHT

2

VOC

25 g/L or 0.21 lbs/gal (ISO 11890-1) and 50 g/L or 0.42 lbs/gal (ASTM D3960)

COLOR

Sandy beige, stone grey, white

SHELF LIFE / STORAGE

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

GLOSS LEVEL

Matt (10GU at 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 theoretical consumption value doesn't take into account the transfer efficiency for spray application.

Surface preparation



The substrate should be sanded with appropriate sandpaper grade:

- P240 to P400 for thermoplastics
 - P100 to P180 for phenolic composites
- It must then be cleaned with a lint free cloth and an alcohol based cleaner such Isopropanol.

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	15 V
Hardener / Catalyst	5	1 V
Water	5 to 15	1.1 V to 3.5 V

MIXING PROCEDURE

Ideally, unmixed products will be stored between 18°C (64°F) and 25°C (77°F) for 24 hours. The base must be blended again under low-speed agitation (200 RPM). The mixture by weight is recommended. Mix the base and hardener until the mixture is homogeneous. Then add water and mix.

Note : it is recommended to sieve the diluted mixture using a 120-150µm (4.7-6 mils) filter.

INDUCTION TIME

None

Spraying viscosity at 20°C / 68°F

Dilution rate by weight	ISO 6
5-10%	20s ± 5s

POT LIFE

3 hours for a 10% dilution

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.

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	15 V
Hardener / Catalyst	5	1 V
Water	0 to 5	0 to 1.1 V

MIXING PROCEDURE

Ideally, unmixed products will be stored at between 18°C (64°F) and 25°C (77°F) for 24 hours. The base should be blended again under low-speed agitation (200 RPM). Mixing by weight is recommended.

Mix the base and hardener until the mixture is homogeneous. Then add up to 5% water.

Note : it is recommended to sieve the diluted mixture using a 120-150µm (4.7-6 mils) filter.

INDUCTION TIME

None

POT LIFE

45 minutes at 23°C (73°F) for an undiluted mixture

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Application recommendations



CONDITIONS

Temperature 15 to 35°C (59°F to 95°F)

Relative humidity 20 to 70%

EQUIPMENT

Gravity compressed air gun Nozzle 1.8 mm to 2.2 mm

Brush

DRY / WET FILM THICKNESS

20 to 100 µm (0.8 to 4 mils) dry and 50 to 230 µm (2 to 9 mils) wet (gun) 100-200 µm (4-8 mils) dry and 230 to 460 µm (9.1 to 18.1 mils) wet (brush)

NUMBER OF COATS

Spray gun:

Follow requirements 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 80 µm or 3 mils dry) to achieve the required thickness (>80 µm or 3 mils dry), let the first coat dry before applying the second one (to obtain a matt appearance).

With a brush (fine hairs) :

1 coat.

EQUIPMENT CLEANING

Clean equipment with water, then with a suitable cleaning thinner.

NOTE

Spray with dry, oil-free air.

Drying times



Dust free

Dry to sand

Recoatable

Fully Cured

23°C (73°F)

40 minutes

4 hours

2 hours to 24 hours

7 days

40°C (104°F)

NA*

2 hours

1 hour to 8 hours

NA*

60°C (140°F)

NA*

1 hour

45 minutes to 4 hours

12 hours

80°C (176°F)

NA*

30 minutes

30 minutes to 2 hours

8 hours

NOTE

Drying times have been determined using tests pieces of a thickness < 2mm for 60µm (2.4 mils).

* NA: Not applicable

Defects & corrections



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

In case of defect, the FR1-55 primer can be slightly sanded with paper grade 240 to 400, before reapplying the same product or a water-based top coat. The sanded top coat must be blown dried and cleaned with a lint free cloth wet with isopropyl alcohol.

Health & Safety



See the product Safety Data Sheets.

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

Packing



The base FR1-55 is available in 1 kg and 5 kg.

The hardener FR1-55 is available in 1 kg and 5 kg.

These products are not subject to IATA regulations for air transport.

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.