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 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°C.

The theorical 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 (4.7-6mils) 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

	23°C (73°F)	40°C (104°F)	60°C (140°F)	80°C (176°F)
Dust free	40 minutes	NA*	NA*	NA*
Dry to sand	4 hours	2 hours	1hour	30minutes
Recoatable	2 hours to 24 hours	1 hour to 8hours	45 minutes to 4 hours	30 minutes to 2 hours
Fully Cured	7 days	NA*	12 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.

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