

TOPCOAT FRS40 METALLIC

FIRE RETARDANT FINISHES FOR CABIN INTERIORS

AkzoNobel

Product information



Three-component metallic effect solvent-borne polyurethane topcoat for aircraft interiors. FRS40 metallic is recommended for use with FRS30 or FR4-45 surfacer. FRS40 metallic can be recoated with 1500-FR or 1500HD varnish.

For specific colors and application, please refer to the corresponding application process.

Components



Base FRS40 Metallic Topcoat
Hardener / Catalyst FRS
Thinner FRSL or P2

Specifications



Qualified in accordance with:
C&D ZODIAC : CDM240-00, CDM240-01

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

Depends on the color

DRY FILM WEIGHT

1.5 - 2

VOC

450-650 g/L (3.76-5.42 lbs/gal)

SHELF LIFE / STORAGE

36 months for the base, 24 months for the hardener and 48 months for the thinner stored between 5°C and 35°C (41°F and 95°F) in full and sealed original packaging.

GLOSS LEVEL

Matt or semi-gloss

NOTES

Flash point: > 24°C (75°F)

For big surface the use of P2 thinner is recommended instead the FRSL thinner.

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



Can be applied on phenolic and plastic composites and on aluminium. For surfaces that require surface preparation, the use of FRS30 or FR4-45 filler is recommended.

Application on a composite substrate (new or reworked):

FRS30 or FR4-45 is used as a primer/surfacer (see product data sheet for surface preparation).

FRS30 or FR4-45 should be sanded with a P240 to P400 grade abrasive paper (dry or wet) and cleaned with isopropyl alcohol or Essence F.

Application on a plastic substrate (new or reworked):

Except where there are surface defects, FRS40 can be applied directly onto plastics, except polycarbonates. The substrate should be sanded with P240 to P400 grade paper.

Then it should be blown dried and cleaned with isopropyl alcohol or Essence F.

Application on aluminium:

FRS40 metallic should be applied on a system composed of:

- Surface treatment (OAC type)
- Epoxy corrosion resistant primer (F69 type)

The primer should be dried for minimum 1 hour at 60°C (140°F) before applying the FRS40.

Recoating:

Before applying varnish, let FRS40 metallic dry 1 hour at room temperature.

All recommendations mentioned above are given for information.

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Instructions for use



SPRAY APPLICATION

MIXING RATIO

	Mixing ratio by weight
Base	100
Hardener / Catalyst	10
Thinner	10 to 20

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.

Before using, it is recommended to mix the FRS-40 metallic base with an appropriate device as following:

- Homogenization with a gyroscopic device 10min
- Verification / detachment of potential settling at the bottom of the pot with a spatula.
- If settling is observed: homogenization once again with mechanical device 10min.
- Verification of sedimentation at the bottom of the pot with a spatula.

It is recommended to wait at least 30minutes after base homogenization before using to ensure viscosity stabilization

Mixing by weight is recommended. Mix the base and hardener until the mixture is homogeneous. Then add thinner and mix

Note: it is recommended to sieve the diluted mixture using a 150-190 µm (6-8 mils) filter.

INDUCTION TIME

None

Spraying viscosity at 20°C / 68°F

Dilution rate by weight	AFNOR 4	FORD 4
15%	25s ± 5s	23s ± 5s

Viscosity may differ according to the effect.

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.

AFNOR 4 cup is the reference cup. The others are given for information purposes.

POT LIFE

6 hours

NOTE

Specific fine metallic effect:

4 metallic colors have been formulated to ensure fine metallic effect. Specific parameters are given in the table below.

Part Number	Thinner ratio recommended	AFNOR 4 Cup viscosity	Pot Life
40927222B	0	13s ± 3s	2h
40929311B	15	13s ± 3s	1h
40927369B	15	13s ± 3s	1h
40980927B	15	13s ± 3s	2h

N.B.: Dry Film thickness from 10 - 20 µm to 0.4 - 0.8 mils

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Application recommendations



CONDITIONS

Temperature 15°C to 35°C (59°F to 95°F)

Relative humidity 20% to 80%

EQUIPMENT

Gravity compressed air gun Nozzle 1.2 mm to 1.6 mm

DRY / WET FILM THICKNESS

15 µm to 50 µm (0.6 to 2 mils) dry depending on the color

NUMBER OF COATS

Apply 1 crossed coat. Let dry 5 to 10 minutes at room temperature. Apply a 2nd crossed coat. Repeat the process to achieve the required effect and thickness.

EQUIPMENT CLEANING

Clean the equipment with a suitable solvent, such as FRSL or D770-B from Mapaero

NOTE

Spray with dry, oil-free air.

The use of split nozzle is not recommended, except in case of specific recommendation.

Drying times



Dust free

23°C (73°F)

15 minutes

Dry to handle

8 hours

Recoatable

1 hour to 24 hours

Fully Cured

7 days

40°C (104°F)

NA *

4 hours

30 minutes to 8 hours

3 days

60°C (140°F)

NA *

1 hour

15 minutes to 8 hours

12 hours

NOTE

Drying times have been determined using tests pieces of a thickness < 2mm for 35µm (1.4mils) of dry film.

*N.A. : Not applicable

Before forced-cure, it is recommended to let dry the FRs40 Metallic Topcoat 45 minutes to 1 hour at 23°C (73°F for solvent evaporation).

Defects & corrections



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

Health & Safety



See the product Safety Data Sheets.

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

Packing



The FRS40 Metallic base is available in 1 kg and 5 kg.

The FRS hardener is available in 0.5kg, 1 kg and 5 kg.

P2 ans FRSL thinners are available in 1L and 5 L.

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.