

VARNISH FR5-55

FIRE RETARDANT FINISHES FOR CABIN INTERIORS

AkzoNobel

Product information



Three-component water-based polyurethane clear coat for aircraft interiors. FR5-55 can be applied onto cabin finishes or directly on plastics.

Components



Base FR5-55
Hardener / Catalyst FR5-55
Thinner Water

Specifications



Qualified in accordance with:

Pilatus : PMS0600-52-02

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 for 50 µm (2 mils) dry

DRY FILM WEIGHT

1.2

VOC

ISO 11890-1: 150 g/L or 1.25 lbs/gal - ASTM D3960: 300 g/L or 2.50 lbs/gal

COLOR

Whitish/milky

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

Gloss, Semi-Gloss or matt

NOTES

Flash point: > 85 °C (185 °F) for the base and > 60°C (140 °F) for the hardener

Compatible with polyurethane water-borne top coats.

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



FR5-55 can be applied on waterborne cabin interior finishes like FR2-55 or FR6-55 or directly onto plastic substrates.

Application on a plastic substrate

Clean the surface with adequate solvent (e.g. isopropyl alcohol).

Application on FR2-55 or FR6-55

For application on composite or to correct surface defects, it is recommended to use FR1-55 or FR4-45 as surfacer before applying finish. Refer to corresponding technical data sheet for the application process.

FR5-55 varnish can be applied after 6 to 24 hours of finish drying at room temperature, or 2 to 4 hours of finish drying at 60°C (140°F)

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	5 V
Hardener / Catalyst	40	2 V
Water	25 to 35	1.25 V to 1.75 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.

Mixing by weight is recommended.

Mix the base and water until the material is homogeneous. Then add the hardener and stir again until having a homogeneous mixture.

The mixture must be made at 15°C to 35°C (60-95°F)

Remark : It is recommended to sieve the mixture with 125 or 190µm (4.9 or 7.5 mils) filter before application.

INDUCTION TIME

None

Spraying viscosity at 20°C / 68°F

Gloss Level	Dilution Rate by weight	ISO 6 Cup
FR5-55 High Gloss	30 %	18s ± 5 s
FR5-55 Semi-Gloss and Matt	30 %	22s ± 5 s

POT LIFE

3 hours

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

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Application recommendations



CONDITIONS

Temperature 15 °C (59°F) to 35 °C (95°F)
Relative humidity 30 % to 75 %

EQUIPMENT

Gravity spraygun Nozzle 1.1 mm to 1.5 mm

DRY / WET FILM THICKNESS

15 to 60 µm (0.6 to 2.5 mils) dry /30 to 120 µm (1.2 to 5 mils) wet

NUMBER OF COATS

Apply one crossed coat and let dry 45 minutes to 1 hour for water evaporation before applying a second crossed coat.

EQUIPMENT CLEANING

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

NOTE

Spray with dry and oil-free air.

Drying times



	23°C (73°F)	40°C (104°F)*	60°C (140°F)
Dust free	1h	N.A.	N.A.
Dry to handle	8h	4h	2h
Dry to tape	10h	5h	2h
Fully Cured	7 days	3 days	12h

NOTE

	23°C (73°F)	40°C (104°F)	60°C (140°F)
Polishable	12hours	6hours	2hours

FR5-55 high Gloss is the only gloss level polishable. FR5-55 Semi-Gloss and Matt can not be polished

Drying times have been determined using tests pieces of a thickness < 2mm for 50µm (2mils) of dry film.

* before forced cure, it is necessary to let the coat dry for at least one hour at room temperature in order to avoid the formation of bubbles in the oven.

*N.A. : Not applicable

Defects & corrections



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

Health & Safety



See the product Safety Data Sheet.

Packing



The FR5-55 base is available in 1 kg and 5 kg.
The FR5-55 hardener is available in 0.4 kg and 2 kg.

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.