

FRS40 Special Varnish

Technical Data Sheet

Product Group

Characteristics



Product Information

Components



Primer Surfacer

FRS40 Special Varnish is a solvent-based polyurethane varnish three-component for aircraft interiors. It is applied on FRS40 finish to give a pearl effect. It can be covered with 1500-FR or 1500-HD varnish. For specific application, please refer to the corresponding application process.

Base	FRS40 Special Varnish Base
Hardener	FRS Hardener
Thinner	FRSL Thinner

Specifications



Qualified Product List

Product specifications are constantly changing, to ensure the most accurate information regarding specifications, please check our online qualified product list (QPL) at aerospace.akzonobel.com/products.

Surface Conditions



Surface Preparation/
Cleaning

FRS40 Special Varnish is applied on FRS40 finish after 1 hour to 24 hours flash off at 23°C (73°F). FRS40 Special Varnish can be recovered with 1500-FR or 1500-HD varnish after 1 hour to 24 hours flash off at 23°C (73°F).
For specific application, please refer to the corresponding application process.
All recommendations mentioned above are given for information.

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

Instruction for Use



Spray Application (Mix Ratio)

	Weight
FRS40 Special Varnish Base	100 parts
FRS Hardener	10 parts
FRSL Thinner	10 - 20 parts

Ideally, the unmixed products should be stored between 18°C and 25°C (64°F and 77°F) for 24 hours before use.
- It is recommended to stir the base with a gyroscopic or oscillating mixer before use.
- It is recommended to mix by weight
- Mix the base and the hardener until the material is homogeneous. Then add thinner and mix
- The mixture must be made at a temperature between 15°C and 35°C (60-95°F)

Note : It is recommended to sieve the material using a 125-190 µm (5-7.5 mils) filter, depending on pearl particle size.



Induction Time

Not Applicable.



Initial Spraying Viscosity
(20°C/68°F)

Spraying viscosity at 20°C / 68°F		
Dilution rate by weight	AFNOR 4	FORD 4
10-20%	22s ± 5s	20s ± 5s

Note

Viscosity measurements are provided as guidelines only and are not to be used as quality control parameters. Certified information is provided by certification documentation available on request.

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	Pot life (20°C/68°F)	6 hours
	Note	Viscosities mentioned above correspond 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.
	Dry Film Thickness (DFT)	10 – 30 µm 0.4 – 1.2 mils The dry film thickness depends on the effect.

Application Recommendations

	Conditions	Temperature: 15 – 35 °C 60 – 95 °F Relative Humidity: 20 – 80 %
	Conditions	VARNISH FRS40 SPECIAL may be applied in conditions outside of the limits shown above. Application must be done carefully to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the appropriate application techniques when environmental conditions are outside of the recommended range.
	Equipment Recommendation	Gravity pneumatic spray gun Nozzle 1.2 to 1.6 mm.
	Number of Coats	1 to 3 cross coats with 5 to 10 minutes flash off in between. Refer to the application process and/or master card to adjust the number of coats.
	Cleaning of Equipment	Clean the equipment with a suitable cleaning solvent such as FRSL.
	Note	Spray with dry and oil-free air. The use of split nozzle is not recommended, except in case of specific recommendation.

Physical Properties

	Drying Times	23°C/73°F	40°C/104°F	60°C/140°F
	Dust Free	10-15 minutes	N.A.	N.A.
	Dry to Handle	8 hrs	4 hrs	1 hr
	Recoatable	1-24 hrs	0-8 hrs	0-6 hrs
	Full Cure	7 days	3 days	12 days

Note Drying times have been determined using tests pieces of a thickness < 2mm for 20µm (0.8mils) of dry film.
* N.A. : Not applicable

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	Before forced-curing, it is recommended to let the FRS40 Special Varnish to dry 45 minutes to 1 hour at 23°C (73°F) for solvent evaporation.		
	Theoretical Coverage	10-15m²/kg (49-74 ft²/lbs.) for 20µm (0.8mil) dry. The theoretical consumption value doesn't take into account the transfer efficiency for spray application.	
	Dry Film Weight	1.2 g/m²/µm	
	Volatile Organic Compounds	550-650 g/L or 4.6-5.4 lbs./gal.	
	Gloss	Depends on the effect.	
	Color	Pearl effect	
	Flash Point	FRS40 Special Varnish Base	Between 23 °C (73 °F) and 60 °C (140 °F)
		FRS Hardener	Between 23 °C (73 °F) and 60 °C (140 °F)
		FRSL Thinner	Between 23 °C (73 °F) and 60 °C (140 °F)
	Storage	Store the product dry and at a temperature between 5 and 35°C / 41 and 95°F per AkzoNobel Aerospace Coatings specification. Store in the original unopened containers. Storage temperature and shelf life may vary per OEM specification requirements. Refer to the container label for specific storage life information.	
Shelf life 5 - 35°C (41 - 95°F)		FRS40 Special Varnish Base	36 months
		FRS Hardener	24 months
		FRSL Thinner	48 months

Safety Precautions Comply with all local safety, disposal and transportation regulations. Check the Material Safety Data Sheet (MSDS) and label of the individual products carefully before using the products. The MSDS's are available on request.

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IMPORTANT NOTE
The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given is subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product. Brand names mentioned in this data sheet are trademarks of or are licensed to AkzoNobel