AkzoNobel
Aerospace Coatings

683-3-2, 683-3-20
Clear Polyurethane Topcoat

AkzoNobel
Tomorrow's Answers Today

Product Group

Polyurethane topcoat

Characteristics

Product Information

- Chemically cured two-component clear polyurethane topcoat with two dry options designed to provide maximum protection of various substrates from various chemicals, hydraulic fluids, aviation fuels and phosphate ester fluids.

Components

Curing Solution, Thinner/Reducer

Curing Solution X-310A
Thinner TL-59

Specifications

Qualified Product List

683-3-2

Air France	SMI 70 093-1
Boeing	BAC 5710, Ty 41
Boeing Long Beach	DPM 5557
Embraer	MEP 10-058
Goodrich	RPS 13.99

683-3-20

Boeing	BAC 5710, Ty 41
Rolls Royce (Omat)	7/187

The complete AkzoNobel Aerospace Coatings qualified product list (QPL) can be found at: **www.akzonobel.com/aerospace**

Surface Conditions

Cleaning

Surface pretreatment is an essential part of the painting process.

Instruction for Use

Mixing Ratio (volume)

2 parts	Base 683-3-2 or 683-3-20
1 part	Curing Solution X-310A
0-0.3 parts for spray application	Thinner TL-59

Do not add thinner for brush application

- Stir or Shake until all pigment is uniformly dispersed before adding curing solution.
- Stir the catalyzed mixture thoroughly.

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Internet: www.akzonobel.com/aerospace

Induction Time	Not required
Initial Spraying Viscosity (25ºC/77ºF)	20 – 27 seconds Zahn-Cup #2
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.
Pot Life (25ºC/77ºF)	683-3-2 4 hours 683-3-20 30 minutes
Dry Film Thickness (DFT)	25 – 51 micron (µm) 1 – 2 mils

Application Recommendations

Conditions	Temperature: 15 – 35°C 59 – 95°F Relative Humidity: 35 – 75%
Note	The quality of the application of all coatings will be influenced by the spray equipment chosen and the temperature, humidity, and air flow of the paint application area. When applying the product for the first time, it is recommended that test panels be prepared in order to identify the best equipment settings to be used in optimizing the performance and appearance of the coating.
Equipment	Air: Fluid tip 1.4 mm (0.055”); Atomizing air pressure 45-65 psi; Fluid pressure 6-8 psi Airless: Nozzle orifice 0.279 mm (0.011”) 60° angle; 0.330 mm (0.013”) 80° angle
Number of coats	Spray or brush apply one full wet coat.

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Cleaning of Equipment	MEK

Physical Properties

Drying Times (25 +/- 2ºC / 77 +/- 2ºF, 55 +/- 5% RH)	Dry to touch 683-3-2	4 hours
	Dry to touch 683-3-20	30 minutes
	Full cure	7 days

Theoretical Coverage	4 – 9 m^2 per liter ready to apply at 25 μm dry film thickness 180 – 370 ft^2 per US gallon ready to apply at 1 mil dry film thickness based on 50% transfer efficiency
Dry Film Weight	30 g/m^2/micron .006 lbs/ft^2/mil
Volatile Organic Compounds	Max 518 g/l admixed Max 4.3 lb/gal admixed Max 550 g/l admixed with reducer Max 4.5 lb/gal admixed with reducer
Gloss (60º)	90 minimum GU
Color	Clear

Flash-point	683-3-2	<33.9ºC / 93ºF
	683-3-20	>38.9ºC / 102ºF
	X-310A	<32.8ºC / 91ºF
	TL-59	<-4.1ºC / 25ºF

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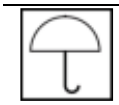

Storage

Store the product dry and at a temperature between 5 and 38ºC / 40 and 100ºF per AkzoNobel Aerospace Coatings specification. Store in the original unopened containers. Storage temperature may vary per OEM specification requirements. Refer to container label for specific storage life information.

Shelf life
5 - 38°C
(40 - 100°F)

12 months per AkzoNobel Aerospace Coatings commercial specification for 683-3 base and X-310A curing solution, 24 for TL-59. Shelf life may vary due to OEM specification requirements. Refer to container label for specific shelf life information.

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 MSDSs are available on request.

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