Alumigrip 4450 Clearcoat

Technical Data Sheet

Product Group

High Solids Acrylic Urethane Topcoat

Characteristics

Product Information

Alumigrip 4450 Clearcoat is a 3-component, Low VOC (high solids), durable, Acrylic Urethane clear coat that provides exceptional gloss and Distinctness Of Image (DOI).
- Formulated to exceed the performance and appearance requirements of the General Aviation (GA) industry.
- The Alumigrip 4450 Clear Coat should be used with Alumigrip 4400 or Alumigrip 4250 Base Coat as part of a base coat/clearcoat system. It may also be used with Alumigrip 4200.
- Designed to meet the rigorous requirements of the MIL-PRF-85285 specification.
- Passes High-Pressure Water Jet simulated erosion test.
- Basecoat / clearcoat system helps reduce cycle time.
- Low VOC; high solids technology.
- Buffable.
- Extended durability / UV resistance.
- Resistant to military and commercial aircraft fluids.

Components

Base	Alumigrip 4450 Clearcoat
Curing Solution	Curing Solution CS4904
Activator	Activator A4962
Activator	Activator A4961
Activator	Activator A4968
Activator	Activator A4969

Specifications

Qualified Product List

AkzoNobel	Certification
Cessna	CMFS038
Embraer	MEP-10-125 TY I
Gulfstream Aerospace	GMS 5008
Piper Aircraft Inc	PMS-F1010

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

- Alumigrip 4450 Clearcoat is compatible with Alumigrip 4200, Alumigrip 4250, and Alumigrip 4400.
- Please refer to the proper product TDS for overcoat windows in preparing the product prior to Alumigrip 4450 Clearcoat application.
- A mild cleaning solvent like isopropyl alcohol may be used to remove surface contamination prior to Alumigrip 4450 Clearcoat application.
- Remove dust with clean tack rags just prior to application of Alumigrip 4450 Clearcoat.

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Alumigrip 4450 Clearcoat

Instruction for Use

Spray Application (Mix Ratio)

	Volume
Alumigrip 4450 Clearcoat	4 parts
Curing Solution CS4904	4 parts
Activator*	1 part

* Activator options: Activator A4962, Activator A4961, Activator A4968, Activator A4969

- Allow products to acclimatize to room temperature before use.
- Stir Alumigrip 4450 Clearcoat thoroughly until the product is uniformly homogenized before adding the curing solution.
- Add the Curing Solution and stir the catalyzed mixture thoroughly.
- Add the activator and stir the catalyzed activated mixture again thoroughly.
- Product SRA-9009 is available to facilitate coating repairs. For instructions using SRA-9009, please see the product TDS.

Induction Time

20 minutes

Initial Spraying Viscosity (25°C/77°F)

15 – 20 seconds Zahn Cup #2 Signature series
20 – 40 seconds ISO Cup #4

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)

2-2.5 hours

Dry Film Thickness (DFT)

50 – 62.5 µm
2 – 2.5 mils

Application Recommendations

Conditions

Temperature: 15-35°C / 59-95°F
Relative Humidity: 35 - 75%

Activator Guidelines:

A4961 Warm, Humid Activator
80°F-95°F / 27°C-35°C, 65-80% RH

A4962 Cool Weather Activator
70°F - 80°F / 21°- 27°C, 25-85% RH

A4968 Standard Activator
75°F - 90°F / 24°- 32°C, 25-85% RH

A4969 Fast Stripe - Spot Repair Activator
70°F - 80°F / 21°C - 27°C, 15-65% RH

Note

Alumigrip 4450 Clearcoat may be applied in conditions outside the limits shown above. Care must be exercised to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the appropriate application techniques when environmental conditions fall outside of the recommended range.

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Equipment Recommendation

Spray gun type	Product supply	Fluid Pressure	Nozzle orifice	Product flow	Dynamic air pressure at gun-inlet *
Conventional	N/A	N/A	1.2-1.4 mm	N/A	3-5 bar / 43-73 psi
HVLP / Next Generation	N/A	N/A	1.2-1.4 mm	N/A	2-2.5 bar / 29-36 psi**
Air Atomizing (electrostatic)	N/A	N/A	1.2-1.5 mm	230-280 ml/min	3-4 bar / 43-58 psi
Pressure Atomizing (electrostatic)	N/A	N/A	0.009-0.013 inch / 60°	N/A	N/A

*Measured with an open trigger.
**General advice to meet HVLP / next generation spray gun requirements. Please validate with your local authorities.

Number of Coats

Apply full wet coats (2-3 coats) until desired dry film thickness are achieved. Flash times between coats will vary with temperature and activator selection. Recommend 15- 20 minutes between coats.

Note

Clearcoat will feel tacky when its ready for the next coat.

Cleaning of Equipment

TR-19 or MEK

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 to identify the best equipment settings to be used in optimizing the performance and appearance of the coating.

Physical Properties

Drying Times

	25°C/77°F, 55% RH, Activator A4961	25°C/77°F, 55% RH, Activator A4962	25°C/77°F, 55% RH, Activator A4968	25°C/77°F, 55% RH, Activator A4969
Dust Free	8 hours	6 hours	4 hours	0.5 hour
	3 hours*	2 hours*	2 hours*	NA*
Dry to Tape	24-36 hours	10 hours	12 hours	1-1.5 hours
	6 hours*	4 hours*	4 hours*	NA*
Full Cure	7 days	7 days	7 days	7 days
	7 days*	7 days*	7 days*	NA*

*Force Cure Drying Times - 120°F (flash for 60 minutes prior to bake). Force cure is not recommended for A4969 repair activator.

Alumigrip 4450 Clearcoat is recoatable within 48 hrs. If a drying time of 48 hrs is exceeded, recondition to a uniform matt surface with grade P400 sanding paper or aluminum oxide non-woven abrasive, type fine or very fine.

Note

Dry times and recoat times will vary depending on combinations of temperature, humidity and airflow.

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Theoretical Coverage	19.29² per liter ready to apply at 25.4 µm dry film thickness. 786 ft² per US gallon ready to apply at 1.0 mil dry film thickness.
Dry Film Weight	29 g/m²/µm 0.0059 lbs/ft²/mil
Volatile Organic Compounds	Maximum 420 g/l Maximum 3.5 lbs/gal
Gloss (60°)	Minimum 90 GU
Color	Clear

Flash Point

Alumigrip 4450 Clearcoat	25°C/77°F
Curing Solution CS4904	7°C/44°F
Activator A4962	7°C/44°F
Activator A4961	7°C/44°F
Activator A4968	7°C/44°F
Activator A4969	7°C/44°F

Shelf life 5 - 38°C (41 - 100°F)

Alumigrip 4450 Clearcoat	24 months
Curing Solution CS4904	24 months
Activator A4962	24 months
Activator A4961	24 months
Activator A4968	24 months
Activator A4969	24 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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