Alumigrip 4200

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Product Information

Alumigrip 4200 is a 3-component Low VOC (high solid) durable polyurethane topcoat that provides premium gloss and Distinctness of Image (DOI) designed to meet and exceed the expectations of the General Aviation (GA) industry.

- Optimal application properties in different environmental conditions
- Buffable
- Extended durability / UV resistance
- Resistant to aircraft hydraulic fluids and chemicals
- Compatible with Alumigrip 4450 Clearcoat

Components

Base	Alumigrip 4200
Curing Solution	Curing Solution Alumigrip PC-242
Activator	Activator A4950 (AC-139)
Activator	Activator A4951
Activator	Activator A4952
Activator	Activator A4953
Activator	Activator A4954

Specifications

Qualified Product List

Cessna	CMFS037 (G)
Cessna	CSFS084
Gulfstream Aerospace	GMS 5008
Pilatus	VV0605-28
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

- Surface pretreatment is an essential part of the painting process.
- Alumigrip 4200 is compatible with the most commonly used aerospace primers. However, we advise using the following primers/surfacers: Alumigrip 10P8-11 & Alumigrip 4001.
- Observe the recoatability times of the relevant primer. Apply Alumigrip 4200 on clean primer. Remove oil, grease and other contamination prior to application.
- Recondition aged primers or topcoats with grade P320 sanding paper or an aluminum oxide nonwoven abrasive pad to a uniform matt finish.
- Remove dust with clean tack rags just prior to application of Alumigrip 4200.

AkzoNobel Aerospace Coatings
1 East Water Street, Waukegan, IL 60085, USA - Phone (847) 623 4200,
Rijksstraatweg 31, 2171 AJ Sassenheim, The Netherlands - Phone (31) 71308 2905
Mail: aerospace@akzonobel.com / Online: aerospace.akzonobel.com

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Instruction for Use

Spray Application (Mix Ratio)

	Volume
Alumigrip 4200	1 part
Curing Solution Alumigrip PC-242	1 part
Activator*	0.125 part

* Activator options: Activator A4950 (AC-139), Activator A4951, Activator A4952, Activator A4953, Activator A4954

- Allow products to acclimatize to room temperature before use.
- Stir or shake Alumigrip 4200 thoroughly until all pigment is uniformly dispersed before adding the curing solution.
- Add the Alumigrip PC-242 curing solution and add the A4950 (AC- 139), A4951, A4952, A4953, or A4954 and stir the mixture thoroughly.
- If required, add TR-115 or TR-114 (up to 10% of the base component) for finer atomization and better flow and levelling, and stir the mixture thoroughly.
- A4950 and A4954 can be blended to further assist in desired leveling and dry time. The 0.125 part overall system mixing ratio must still be achieved regardless of the blend ratio.

Induction Time

15 minutes

Note

Exception: 4200G90006 (black) needs 30-45 minutes induction.

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

35 – 50 seconds ISO Cup #4
15 – 22 seconds Zahn Cup #2 Signature series
16 – 23 seconds Ford Cup #4

Note

The addition of TR-115, or TR-114 will reduce viscosity for smoother films, better flow and leveling.

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)

A4950 4 hours
A4951 3-4 hours
A4952 2-3 hours
A4953 1-2 hours
A4954 4 hours

Dry Film Thickness (DFT)

50 – 125 µm
2 – 5 mils

Note

Some colors may require increased film thickness to achieve acceptable hide.

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Application Recommendations

Conditions

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

Activator Guidelines:

A4950 Standard Activator (AC139)
70°F-80°F / 21°C-27°C, 30-65% RH

A4951 Cool Weather Activator
59°F - 69°F / 15°- 27°C, 70-80% RH

A4952 Striping Activator
59°F - 95°F / 15°- 35°C, 65-95% RH

A4953 Spot Repair Activator
59°F - 69°F / 15°C - 27°C, 60-90% RH

A4954 Warm, Humid Activator
80°F - 96°F / 27°C - 36°C, 45-90% RH

Note

Alumigrip 4200 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.

Equipment Recommendation

Spray gun type	Product supply	Fluid Pressure	Nozzle orifice	Product flow	Dynamic air pressure at gun-inlet *
Conventional	N/A	N/A	1.2-1.4mm	N/A	3-5 bar / 43-73 psi
HVLP / Next Generation	N/A	N/A	1.2-1.4mm	N/A	2-2.5 bar / 29-36 psi**
Air Atomizing (electrostatic)	N/A	N/A	1.2-1.5mm	240-360 ml/min	4-4.5 bar / 58-65 psi
Pressure Atomizing (electrostatic)	N/A	75-90 bar / 1.0-1.3 kpsi	0.009-0.013 inch / 60°	260-300 ml/min	4-4.5 bar / 58-65 psi

Note

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

Number of Coats

Apply a wet and closed film, followed after 30 minutes of flash-off time by another closed and homogeneous layer. Do not “paint to hide” in the first layer application.

Cleaning of Equipment

TR-15, Solvent Cleaning C28/15 or Solvent Cleaning 98068 for electrostatic equipment and TR-19, Solvent Cleaning C28/15 or Solvent Cleaning 98068 for conventional spray equipment.

Note

The quality of the application of all coatings will be influenced by the spray equipment chosen and the temperature, humidity, and airflow 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

Dry to tape:	12-16 hours	A4950 Standard Activator (AC-139)
	9-13 hours	A4951 Cool Weather Activator
	4-9 hours	A4952 Striping Activator

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2-4 hours	A4953 Spot Repair Activator
12-16 hours	A4954 Warm, Humid Activator

Dry to fly White: 24 hours
Dry to fly Colors: 48 hours
Full cure: 7 days

Min. recoat time: When dry to tape.

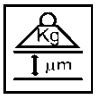
Note

Dry to fly at 70°F (21°C) to 77°F (25°C) and defined as resistance to 50 double rubs MEK.

Maximum recoat time is 48 hours. If a drying time of 48 hours is exceeded, sand/abrade to a uniform matt finish using grade P320 sanding paper or an aluminum oxide nonwoven abrasive pad. Alumigrip 4200 can be recoated within 7 days when reconditioned as described and properly cleaned and degreased.

Theoretical Coverage

10.4 m² per liter ready to apply at 50 µm dry film thickness.
425 ft² per US gallon ready to apply at 2 mils dry film thickness.



Dry Film Weight

For white:
1.50 g/m²/µm
0.00778 lbs/ft²/mil

Note

Dry film weight depends on the color.

Volatile Organic Compounds

Maximum 420 g/l
Maximum 3.51 lbs/gal

Note

TR-114 and TR-115 are thinners based on US EPA VOC-exempt solvents. When local VOC exemption does not apply, VOC will increase to max. 450 g/l / 3.76 lbs/gal when using these optional thinners (at 10% relative to base volume).

Gloss (60°)

Minimum 90 GU

Color

As required

Flash Point

Alumigrip 4200	12ºC / 54ºF
Curing Solution Alumigrip PC-242	35ºC / 95ºF
Activator A4950 (AC-139)	36ºC / 96ºF
Activator A4951	36ºC / 96ºF
Activator A4952	36ºC / 96ºF
Activator A4953	36ºC / 96ºF
Activator A4954	36ºC / 96ºF

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Shelf life 5 - 38°C (41 - 100°F)	Alumigrip 4200	24 months
	Curing Solution Alumigrip PC-242	24 months
	Activator A4950 (AC-139)	24 months
	Activator A4951	24 months
	Activator A4952	24 months
	Activator A4953	24 months
	Activator A4954	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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