Alumigrip 4250

Technical Data Sheet

Product Group

Polyurethane Top Coat

Characteristics

Product Information

Alumigrip 4250 is a 3-component isocyanate cured basecoat for accent colors and special markings for General Aviation aircraft. In order to achieve a high gloss, durability and system performance it is mandatory to use Alumigrip 4250 in combination with Alumigrip 4450 Clear Coat.

Alumigrip 4250 provides:
- Wide range of solid and special effect colors
- Fast process times
- Optimal opacity; one layer application at a low layer thickness
- Excellent special effect control
- Buffable system with Alumigrip 4450 Clear Coat applied

Components

Base	Alumigrip 4250
Curing Solution	Curing Solution Alumigrip PC-242
Thinner	Alumigrip TR-4972 (stripes)
Thinner	Alumigrip TR-4970 (standard)
Thinner	Thinner C 25/90 S

Specifications

Qualified Product List

AkzoNobel	ANAC Spec
Embraer	MEP 10-080 Revision K
Pilatus	VV0605-33

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

A clean surface free of contamination and dust is required before application. Please refer to the applicable product TDS on how to best prepare the product prior to Alumigrip 4250 application. Alumigrip 4250 is compatible with the most commonly used primers.

Alumigrip 4250 may be cleaned with a mild cleaning solvent such as isopropyl alcohol or AkzoNobel Ultra Prep Surface Cleaner, to remove handprints, grease, pencil marks, and other surface contaminations prior to clear coat application.

Remove dust with clean tack rags prior to the application of Alumigrip 4250.

Alumigrip 4250 is compatible with the most commonly used aerospace conventional and high-solid topcoats. We recommend usage with the following topcoats: Alumigrip 4200 and the Alumigrip 4400 Base Coat / Alumigrip 4450 Clear Coat system.

Observe the recoat times of the selected coating system components that will accompany the Alumigrip 4250. If recoat times are exceeded, refer to the product TDS on how to best reactivate the surface prior to application.

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Alumigrip 4250

Instruction for Use

Spray Application (Mix Ratio)

	Volume
Alumigrip 4250	10 parts
Curing Solution Alumigrip PC-242	1 part
Thinner*	5 parts

* Thinner options: Alumigrip TR-4972 (stripes), Alumigrip TR-4970 (standard), Thinner C 25/90 S

- Allow products to acclimatize to room temperature before use.
- Stir or shake Alumigrip 4250 thoroughly until all pigment is uniformly dispersed before adding the curing solution.
- Add the Alumigrip PC-242 and stir the catalyzed mixture thoroughly.
- Add the Alumigrip TR-4970 or TR-4972 thinner and stir the catalyzed mixture again thoroughly.
- Thinner C25/90S is a thinner with an alternative solvent blend for Leonardo Helicopters and Piaggio Aerospace.

Induction Time

Not Applicable.

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

34 – 49 seconds ISO Cup #4
17 – 23 seconds Zahn Cup #2 Signature series

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 hours

Dry Film Thickness (DFT)

Alumigrip 4250 solid colors:	Alumigrip 4250 special effect:
10 – 15 µm per coat	8 – 12 µm per coat
0.4 – 0.6 mil per coat	0.3 – 0.5 mil per coat

Application Recommendations

Conditions

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

Note

Alumigrip 4250 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 *
HVLP / Next Generation	N/A	N/A	1.2 to 1.4 mm / 0.047 – 0.055 inch	N/A	2 – 2.5 bar / 29 – 36 psi**

*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 single coat, followed after 10 – 20 minutes of ambient flash-off time by another coat. Repeat this until opacity has been reached. Alumigrip 4250 usually covers in 1 or 2 coats.
After 30 – 45 minutes of the final coat drying time, Alumigrip 4450 Clear Coat can be applied. Dry times may be extended if the Alumigrip TR-4970 is used.

Note

Alumigrip TR-4972 is the primary thinner for stripes and smaller accent application. Alumigrip TR-4970 thinner should be used when applications exceed normal stripe sizes where longer wet edge times are desired such as upper, lower base and/or overall base applications.

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 in order 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	25°C/77°F, 55% RH	25°C/77°F, 55% RH
Dry to Touch	Alumigrip TR-4972: 5-10 mins	Thinner C25/90S: 5-10 mins	Alumigrip TR-4970: 30-45 mins
Dry to Tape	Alumigrip TR-4972: 1 hr	Thinner C25/90S: 1 hr	Alumigrip TR-4970: 2-3 hrs
Full Cure	Alumigrip TR-4972: 7 days	Thinner C25/90S: 7 days	Alumigrip TR-4970: 7 days
Dry to Overcoat	Alumigrip TR-4972: 30-45 mins	Thinner C25/90S: 30-45 mins	Alumigrip TR-4970: 1-1.5 hrs

Note

Recoat maximum is 48 hours. If a drying time of 48 hours is exceeded, recondition with grade P320 sanding paper or an aluminum oxide nonwoven abrasive pad.

Force Cure Times (120ºF / 49°C):

After a 20-minute flash at 77ºF (25°C) / 50% RH then increase to 120F° (49°C) for 1 - 2 hours. Mixes with Alumigrip TR-4972 or Thinner C25/90S do not require baking. If a bake cycle is used, the exposed basecoat should be clear-coated no longer than 24 hours after the initial bake.

Taping directly to Alumigrip 4250 should be avoided as there is the potential for tape mark ghosting after the clearcoat application.

Alumigrip 4250 is designed for accent colors on aircraft. In certain situations, when using the appropriate blend, Alumigrip 4250 can be used for larger applications on corporate aircraft. However, the Alumigrip 4400 Base Coat system is designed for overall jet aircraft.

Theoretical Coverage

50 m² per liter base material at 10 µm dry film thickness.
2005 ft² per US gallon base material at 0.4 mil dry film thickness.

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Dry Film Weight	Depending on color: 1.4 g/m²/µm 0.0073 lbs./ft²/mil
Volatile Organic Compounds	Max 746 g/l
Gloss	Not applicable
Color	As required.

Flash Point

Alumigrip 4250	12ºC / 54ºF
Curing Solution Alumigrip PC-242	35ºC / 95ºF
Alumigrip TR-4972 (stripes)	16°C / 60°F
Alumigrip TR-4970 (standard)	56°C / 133°F
Thinner C 25/90 S	-4°C / 25°F

Storage

Store the product dry and at a temperature between 5 and 38ºC / 41 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 (41 - 100°F)

Alumigrip 4250	12 months
Curing Solution Alumigrip PC-242	12 months
Alumigrip TR-4972 (stripes)	12 months
Alumigrip TR-4970 (standard)	12 months
Thinner C 25/90 S	12 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.

Revision date: April 2025 (supersedes January 2025) - FOR PROFESSIONAL USE ONLY

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