

Alumigrip 4450 Clear Coat Technical Data Sheet

Product Group

High Solids Acrylic Urethane Topcoat

Characteristics



Product
Information

- Alumigrip 4450 Clear Coat is a 3-component, high solids, durable, Acrylic Urethane clear coat that provides exceptional gloss and 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 Base Coat as part of a base coat / clear coat system. It may also be used with Alumigrip 4200 and Alumigrip 4200 SHR.
- Designed to meet the rigorous requirements of the MIL-PRF-85285 specification.
- Passes High Pressure Water Jet simulated erosion test.
- Base coat / clear coat system helps reduce cycle time.
- Low VOC; high solids technology.
- Buffable
- Extended durability / UV resistance
- Resistant to military and commercial aircraft fluids

Components



Base material
Curing Solution
Activator

Alumigrip 4450 Clear Coat: 4450G00003
CS4906
A4961: High Temperature High Humidity
A4962: Cool Weather
A4968: Standard
A4969: Fast Stripe - Spot Repair

Specifications



Qualified Product
List

ANAC
Cessna
Embraer
Gulfstream
Hawker Beechcraft

Certification
CMFS038
MEP-10-125 TY I
GMS 5008 (reference ECM 20001)
BS22455

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.

Alumigrip 4450 Clear Coat

Acrylic Urethane Topcoat

Surface Conditions



Cleaning

- Alumigrip 4450 clearcoat is compatible with Alumigrip 4200, Alumigrip 4250 and Alumigrip 4400.
- Please refer to the proper product TDS for overcoat windows, and how best to prepare the product prior to Alumigrip 4450 clearcoat application.
- Ultra-Prep surface cleaner or IPA may be used to remove surface contamination prior to Alumigrip 4450 clearcoat.

Instruction for Use



Mixing Ratio
(volume)

Alumigrip 4450 Clear Coat: 4450G00003	4 parts
CS4906	4 parts
A4961, A4962, A496 & A4969	1 part

- Allow products to acclimatize to room temperature before use.
- Stir Alumigrip 4450 Clear Coat 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

Minimum 20 minutes.



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

16-20 seconds Signature Zahn-Cup 2
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.

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Pot life
(25°C/77°F)

2-2.5 hours



Dry Film
Thickness
(DFT)

50-62.5 µm
2-2.5 mils

Application Recommendations



Conditions

A4961: High Temperature High Humidity Activator
A4962: Cool Weather Activator
A4968: Standard Activator
A4969: Fast Stripe - Spot Repair Activator

Activator Options:

Activator:	<u>A4961</u>	<u>A4962</u>	<u>A4968</u>	<u>A4969</u>
Temperature:	27 - 35°C 80 - 95°F	21 - 27°C 70 - 80°F	24 - 32°C 75 - 90°F	21 - 27°C 70 - 80°F
Relative Humidity:	65 - 80%	25 - 85%	25 - 85%	15 - 65%



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.



Equipment

Spray gun type	Nozzle orifice	Product flow	Dynamic air pressure at gun-inlet*
Conventional	1.2-1.4 mm	N/A	N/A
HVLP/ next generation	1.2-1.4 mm	6-8 oz/min	25-35 psi

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Air atomizing - electrostatic	009 – .013 inch	N/A	N/A
Pressure atomizing (electrostatic)	1.2-1.5 mm	6-8 oz/min	30-35psi



Number of Coats

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



Note

Clearcoat will feel tacky with little transfer 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

Activator

A4961: High Temperature High Humidity Activator

Options:

A4962: Cool Weather Activator

A4968: Standard Activator

A4969: Fast Stripe - Spot Repair Activator

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Drying Times
(25 +/- 2°C / 77
+/- 2°F, 55 +/- 5%
RH)

Activator:	<u>A4961</u>	<u>A4962</u>	<u>A4968</u>	<u>A4969</u>
Dust Free	8 hours	6 hours	4 hours	0.5 hour
Dry to Tape	24-36 hrs	10 hrs	12 hours	1-1.5 hrs
Full cure	7 days	7 days	7 days	7 days



Force Cure
Drying Times
120°F

Flash for 60 minutes prior to bake.

(Force cure is not recommended for A4969 repair activator).

Activator:	<u>A4961</u>	<u>A4962</u>	<u>A4968</u>	<u>A4969</u>
Tack Free	3 hours	2 hours	2 hours	N/A
Dry to Tape	12 hours	4 hours	4 hours	N/A
Full cure	7 days	7 days	7 days	N/A



Note

Dry times will vary depending combinations of temperature, humidity and airflow. For additional information regarding conditions outside of the above perimeters, please contact your local technical service representatives.



Theoretical
Coverage

19.29 m² 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°)

> 90 GU



Color

Clear

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Flash-point

Alumigrip 4450 Clear Coat 4450G00003	25°C/77°F
Curing Solution CS4906	7°C/44°F
Activator A4961	7°C/44°F
Activator A4962	7°C/44°F
Activator A4968	7°C/44°F
Activator A4969	7°C/44°F



Storage

Store the product dry and at a temperature between 5 and 38°C / 41 and 100°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 container label for specific storage life information.

Shelf life

5 - 38°C
(41 - 100°F)

24 months per AkzoNobel Aerospace Coatings commercial specification. 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 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.