Aerowave 3003

Technical Data Sheet

Product Group

Epoxy Top Coat

Characteristics

Product Information

Aerowave 3003 is a low VOC, water-based, 2-component amine cured epoxy structural finish.
- Water-based technology
- Compatible with all products out of the Aerowave Series
- Designed for optimal mixing properties for both manual and plural mixing application
- Low VOC emission
- Low dry-film-weight (DFW)
- Resistance to aircraft hydraulic fluids and chemicals

Aerowave 3003 is a product part of the Aerowave Series which utilizes the latest water-based technology and sets the standard for minimum process times, reduced process cycle costs and environmental care.

Components

Base	Aerowave 3003
Curing Agent	Curing Solution 6007

Specifications

Qualified Product List

Airbus	AIMS 04-04-003
Airbus	AIMS 04-04-040
Airbus	AIMS 04-04-045

Product specifications change constantly, 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

- Observe the recoat limitations of the relevant primer.
- Remove oil, grease and other contaminations carefully prior to application of the finish.
- Clean aged primer and finish and recondition by sanding using grade P320 sandpaper or an aluminum oxide non-woven abrasive pad to a uniform matt surface.
- Remove dust with e.g. tack rags just prior to application of the finish.

Instruction for Use

Spray Application (Mix Ratio)

	Volume	Weight
Aerowave 3003	1 part	100 parts
Curing Solution 6007	1 part	73 parts

When mixing <1L dose by weight.
- Allow products to acclimatize to room temperature before use.
- Homogenize Aerowave 3003 till all pigment is uniformly dispersed before adding the hardener.
- Add Curing Solution 6007 and stir the catalyzed mixture thoroughly for at least 60 seconds.
- Automated dispensing units in combination with plural mixing devises can be applied for Aerowave 3003.

Induction Time

Not applicable. The product can be used directly after mixing.

Initial Spraying Viscosity (23°C/73°F)

35 – 65 seconds ISO Cup #4
17 – 30 seconds Gardner Signature Zahn Cup #2

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Note

Stir or shake the mixed components thoroughly shortly before measuring the viscosity. 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. Flow-cup viscosity measurement for Aerowave 3003 will not be reliable due to air introduction during the shaking process. Only measure the flow-cup viscosity when mixed with a toothless mechanical stirrer and air introduction during the mixing process is avoided as much as possible. Entrapped air in the wet paint mixture will not negatively affect final appearance when spray applied.

Pot life (23ºC/73ºF)

4 hours at 23ºC / 73ºF
3 hours at 30ºC / 86ºF

Note

The end of pot life is not visible by means of viscosity increase. Please respect described pot life, and mind that pot life depends on the temperature.

Dry Film Thickness (DFT)

20 – 30 µm
0.8 – 1.2 mils

Application Recommendations

Conditions

Temperature:	15 – 35 °C 59 – 95 °F
Relative Humidity:	25 – 80 %

Note

Aerowave 3003 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	NA	NA	1.2 – 1.5mm	350 mL/min[1]	4 – 4.5 bar / 58 – 65 psi[2]
HVLP / Next Generation	NA	NA	1.2 – 1.5mm	350 mL/min[1]	2 – 2.5 bar / 29 – 36 psi[3]
Air Atomizing (electrostatic)	NA	NA	1.2 – 1.5mm	350 mL/min[4]	4 – 4.5 bar / 58 – 73 psi[2]
Pressure Atomizing (electrostatic)	NA	NA	0.009 inch/60° 0.013 inch/60°	65 – 75 bar/1.02 kpsi 25 – 35 bar/0.43 kpsi	4 – 4.5 bar / 58 – 65 psi[2]

[1] Product Flow not applicable when using gravity/suction feed guns.
[2] Dynamic Air Pressure at gun-inlet measured with an open trigger.
[3] General advice to meet the HVLP / next generation spray gun requirements, please validate with your local authorities.
[4] When using water-based products ensure you select suitable electrostatic equipment

Note

To avoid contamination of water-based / solvent-based coating products, dedicated water- / solvent-based spray equipment is advised. To apply water-based products, use non-corrosive spray equipment (e.g., stainless steel).

Number of Coats

Spray-apply a homogeneous, wet and closed coat in order to achieve a dry film thickness of 20 – 30µm / 0.8 – 1.2 mil.

Cleaning of Equipment

Selecting the correct cleaning solvent for cleaning the spray equipment (gun, hoses, pumps) will prevent coagulation or clogging of the paint material inside the equipment due to incompatibility. Clean and rinse the equipment with water directly after use. If necessary semi-cured material can be cleaned with organic solvents like

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cleaning solvent C 28/15, 98068 or Thinner C 25/90 S. In case of the switch from water-based to solvent-based always first clean and rinse with water, followed by two times rinsing with fresh Thinner C 25/90 S. Due to its chemical composition, this material is compatible with water.

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

	23°C/73°F, 55% RH	60°C/140°F	80°C/176°F
Surface Dry	30 minutes	15 minutes	10 minutes
Dry to Handle	2 hours	N/A	N/A
Chemical Resistant	48 hours	45 minutes	30 minutes

*Substrate surface temperature
When forced cured, allow the paint 5-minute ambient flash-off time with enough air movement before entering the component into the oven in order to obtain the best results.

Recoat minimum* When surface dry
Recoat maximum* 168 hours. If a drying time of 168 hours is exceeded recondition the surface with grade P320 sandpaper or an aluminum oxide non-woven abrasive pad to a uniform matt surface.

*In combination with Aerowave Series products. In combination with solvent-based products the minimum recoat time is 8 hours and the maximal recoat time is 48 hours without reconditioning.

Note

Curing of waterborne products depends on temperature, relative humidity, and airflow. Increased temperatures, low RH and efficient airflow can decrease the drying times significantly.

Theoretical Coverage

17 m² per liter ready to apply at 20 µm dry film thickness.
712 ft² per US gallon ready to apply at 0.8 mil dry film thickness.

Dry Film Weight

1.6 g/m²/µm
0.0085 lbs/ft²/mil

Volatile Organic Compounds

< 120 g/L (1.0 lbs/gal) product ready to apply
< 250 g/L (2.1 lbs/gal) exempt water according to ASTM D-3960

Gloss (60°)

Minimum 75 GU

Color

M9001 Grey
FSB16622 Grey

Flash Point

Aerowave 3003	>21ºC / 70ºF
Curing Solution 6007	>21ºC / 70ºF

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Shelf life 5 - 35°C (41 - 95°F)	Aerowave 3003	12 months
	Curing Solution 6007	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.

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