

Aerowave 2003

Technical Data Sheet

Product Group

Epoxy Primer

Characteristics

Aerowave 2003 is a chrome free, water-based, 2-component, corrosion inhibiting amine cured epoxy primer.



Product Information

- Water based technology
- Chrome free
- Compatible with all products out of the Aerowave Series
- Designed for optimal mixing properties for both manual and plural mixing application.
- Corrosion inhibiting
- Low VOC emission
- Low dry-film-weight (DFW); reduce operational costs
- Resistance to aircraft hydraulic fluids and chemicals

Aerowave 2003 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 2003 |
| Curing Agent | Curing Solution 6005 |

Specifications



Qualified Product List

Leonardo Helicopters (Formerly Agusta Westland) AWMS 28-002 TY1 CL1

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

- Prime chemical conversion coatings and anodized parts in a fresh condition according to the OEM guideline.
- Clean aged primer or epoxy / polyurethane finishes and sand with grade P320 sanding paper or aluminum oxide non-woven abrasive material grade very fine to a uniform and matt surface.
- Remove dust and debris with clean tack rags or equivalent prior to application of the primer.

Instruction for Use



Spray Application (Mix Ratio)

| | Volume | Weight |
|----------------------|---------|-----------|
| Aerowave 2003 | 3 parts | 100 parts |
| Curing Solution 6005 | 1 part | 28 parts |

- When mixing <1L dose by weight.
- Allow products to acclimate to room temperature before use.
- Homogenize Aerowave 2003 until all pigment is uniformly dispersed before adding the hardener.
- Add Curing Solution 6005 and stir the catalyzed mixture thoroughly for at least 60 seconds.

Automated dispensing units in combination with plural mixing devices can be applied for Aerowave 2003.



Induction Time

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



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

35 – 90 seconds ISO Cup #4
17 – 41 seconds Gardner Signature Zahn Cup #2

Note

Note: Stir or shake the mixed components thoroughly shortly before measuring the viscosity.

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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 (23°C/73°F)

4 hours



Dry Film Thickness (DFT)

15 – 25 µm
0.6 – 1 mil



Note

The end of Pot Life is not visible by means of viscosity increase. Respect described Pot Life. Pot Life relates to temperature.

Application Recommendations



Conditions

Temperature: 15 – 35 °C
59 – 95 °F

Relative Humidity: 25 – 80 %



Note

Aerowave 2003 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 | 1.2-1.5 mm | N/A | 4 – 4.5 bar / 58 – 65 psi |
| HVLP / Next Generation | N/A | N/A | 1.2-1.6 mm | N/A | 2 – 2.5 bar / 29 – 36 psi** |
| Air Atomizing (electrostatic) | N/A | N/A | 1.2-1.6 mm | 350 mL/min | 4 – 4.5 bar / 58 – 73 psi |
| Pressure Atomizing (electrostatic) | N/A | 65 – 75 bar/1.02 kpsi ,25 – 35 bar/0.43 kpsi | 0.009-0.013 inch / 40° – 60° | 350 mL/min | 4 – 4.5 bar / 58 – 65 psi |

*Measured with an open trigger.

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



Note

When using water-based products ensure you select suitable electrostatic equipment.



Number of Coats

Spray-apply a homogeneous, wet and closed coat in order to achieve a dry film thickness of 15 – 25 µm / 0.6 – 1.0 mil.



Cleaning of Equipment

Clean the equipment with water directly after use. If necessary, semi cured material remaining on the equipment can be cleaned with Solvent Cleaning C28/15 or Solvent Cleaning 98068.



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

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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

| | 23°C/73°F, 55% RH | 60°C/140°F | 80°C/176°F |
|--------------------|-------------------|------------|------------|
| Surface Dry | 1 – 2 hours | 20 mins | 10 mins |
| Dry to Handle | 4 hours | N/A | N/A |
| Chemical Resistant | 72 hours | 45 mins | 30 mins |
| Recoatable Minimum | When surface dry. | | |
| Recoatable Maximum | 168 hours | | |

If a drying time of 168 hours is exceeded, recondition the surface with grade P320 sanding paper or an aluminum oxide non-woven abrasive material grade very fine to a uniform and matt surface.

When forced cured, allow the paint a 5 minute ambient flash-off time with sufficient air movement before entering the oven in order to obtain the best results.

When used in combination with solvent based products, the minimum recoat time of Aerowave 2003 is 8 hours and the maximum recoat time is 48 hours without reconditioning.

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



Note



Theoretical Coverage

30 m² per liter base material at 15 µm dry film thickness
1203 ft² per US gallon base material at 0.60 mil dry film thickness



Dry Film Weight

1.5 g/m²/µm
0.0078 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°)

Maximum 20 GU



Color

Beige Grey



Flash Point

| | |
|----------------------|--------------|
| Aerowave 2003 | >21°C / 70°F |
| Curing Solution 6005 | >21°C / 70°F |

Shelf life 5 - 35°C (41 - 95°F)

| | |
|----------------------|-----------|
| Aerowave 2003 | 12 months |
| Curing Solution 6005 | 12 months |

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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