Aerowave® 5001 ARC



Product Group

Polyurethane Topcoats

Characteristics



Product Information Aerowave[®] 5001 ARC is a water-based, 3-component, isocyanate cured polyurethane abrasion resistant coating.

- Water-based technology
- Compatible with all products out of the Aerowave[®] Series
- Low VOC emission
- Infrared reflecting (IRR)
- Resistance to aircraft hydraulic fluids and chemicals
- Minimal abrasion on areas highly exposed to wear and friction
- Minimal dirt pick-up
- Impact and stone chip resistant (rough field operations)
- Rapid film build-up with standard air spray techniques.

Aerowave[®] 5001 ARC 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



Hardener Thinner or Activator Curing Solution 6002 D.I. water or tap water*

*) Quality meets Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.

Specifications



Qualified Product List Eurofighter

SP-J-513-A-0014, Issue 4

For most recent up-date or missing specifications please check the qualified product list (QPL) on www.akzonobel.com/aerospace

Surface Conditions



Cleaning

- Observe the recoatability limits of the relevant primer.
- Aerowave[®] 5001 ARC is compatible with all products out of the Aerowave[®]
 Series and most commonly used conventional and high solid primers.
- Remove oil, grease and other contaminations carefully prior to application of the finish
- Recondition aged primers or topcoats with e.g. Scotch-Brite[®] type A very fine to a uniform matt surface.
- Remove dust with e.g. tack rags prior to application of the primer.

Instruction for Use



Mixing Ratio

Aerowave 5001 ARC Volume (v/v) Weight (w/w)
Curing Solution 6002 100 parts 100 parts
30 parts 25 parts

Reduce to spraying viscosity with maximum:

D.I. water or tap-water 20 parts 20 parts

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Induction Time

Not applicable. Product can be used directly after mixing.



Initial Spraying Viscosity (21°C/70°F) 20-28 seconds ISO-Cup 6



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.

Aerowave 5001 ARC is not optimal for flow-cup viscosity measurements due to tixotropic behavior of these coating types.



Pot Life (21°C/70°F – 55% RH) 2 hours



Dry Film Thickness (DFT)

175-225 μm 6.9-8.9 mil



Note

Respect described pot life. Pot life depends upon temperature!

Application Recommendations



Conditions

Temperature: $15 - 35^{\circ}$ C $59 - 95^{\circ}$ F Relative Humidity: $25 - 80^{\circ}$



Note

Aerowave® 5001 ARC may be applied in conditions outside of the the limits shown above. Care must be excercised to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the proper application techniques when environmental conditions fall outside of the recommended range.



Equipment

 $\begin{array}{lll} \mbox{Air} & 1.2-1.4 \mbox{ mm nozzle orifice} \\ \mbox{HVLP} & 1.2-1.4 \mbox{ mm nozzle orifice} \\ \mbox{Air Electrostatic*} & 1.2-1.5 \mbox{ mm nozzle orifice} \\ \mbox{Airless/Air Assist} & .009 - .013 \mbox{ inch, angle } 40^{\circ} - 60^{\circ} \end{array}$



Note

*) Use Electrostatic spray equipment designed for application of water based products

To avoid contamination of water based – solvent based coating products it is advised to use dedicated water- / solvent-based spray equipment. For application of water based products use non corrosive spray equipment (e.g. stainless steel).

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Number of Coats

Spray a homogeneous uniform wet coat, followed after 2 – 10 minutes flash-off time by another uniform wet coat. Continue this process until the required layer thickness is achieved.



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 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 21°C/70°F

Dry Through 16 hrs

When forced cured; allow the paint a 15 to 30 minutes ambient flash-off time with sufficient air movement before entering the oven in order to obtain the best results.

Recoatable minimum When surface dry

Recoatable maximum 48 hrs; if the ambient drying time of 48 hrs is

exceeded recondition the surface with e.g. Scotch-

Brite® type A very fine



Note

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.



Theoretical Coverage

3 m2 per liter base material at 200 µm dry film thickness 129 ft2 per US gallon base at 7.9 mil



Dry Film Weight

1.4 g/m2/µm 0.0071 lbs/ft2/mil



Volatile Organic Compounds

< 120 g/L (1.0 lb/gal), product ready to apply

< 250 g/L (2.1 lb/gal), exempt water according to ASTM D-3960



Gloss (60°)

< 10 g.u. at 60° angle



Color

Available colors on request



Flash-point

Aerowave® 5001 ARC Curing Solution 6002

>21°C / 70°F >21°C / 70°F

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Storage

Store the product dry and at a temperature between 5 and 25 C7 41 and 77% F. Today Stored in the original unopened containers.

Periodical short time exposure (max. 48 hrs at a time) to higher temperatures (max. 40°C / 104°F) will not negatively influence the shelf life of the products.

Shelf life (21°C/70°F and 55% RH) Aerowave[®] 5001 ARC 12 months Curing Solution 6002 18 months



Note

Do not seal the containers with the paint mixture. Danger of pressure buildup!

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.

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