Aerodur 3001E Base Coat Special Effects
Technical Data Sheet

Product Group
Polyurethane Topcoats

Characteristics

Aerodur 3001E Special Effects topcoat is part of the high solid 3 components polyurethane Aerodur 3001G Solid Colors – Aerodur 3001E Special Effects – Aerodur 3002 Clear Coat system for exterior usage.

This system provides uniform coverage and appearance in one cross coat application for most of the colors and effects. When used with the specified polyurethane clear top coat (Aerodur 3002) this system provides a durable long lasting, protective and decorative finish that exceeds typical OEM requirements for exterior aircraft performance.

Aerodur 3001G Base Coat Solid Colors – Aerodur 3001E Base Coat Special Effect Colors – Aerodur 3002 Clear Coat (3002G00002 or 3002G00005) provides:

- Unique appearance on aircraft livery
- Uniform sparkling effect appearance
- Repairability
- Excellent gloss / color retention
- Opacity at low film thickness
- Short tape time
- Superior chemical and stain resistance
- Low dirt adhesion
- Sustainable and cost efficient

Components

<table>
<thead>
<tr>
<th>Base</th>
<th>Curing Solution</th>
<th>Activator</th>
</tr>
</thead>
<tbody>
<tr>
<td>3001EXXXXX</td>
<td>CS6031</td>
<td>A9005</td>
</tr>
</tbody>
</table>

Note

All components of Aerodur 3001E Base Coat Special Effects are marked with orange bands on the labels of the cans.
Aerodur 3001E Base Coat
Special Effects

Specifications

AkzoNobel Aerospace Coatings
Embraer
Certification
MEP-10-125 TY II

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

Surface Conditions

- Recondition aged primers with e.g. Scotch-Brite® Type A very fine prior to application of Aerodur 3001G Base Coat Solid Colors.
- Aerodur 3001E Base Coat Special Effects is compatible and applied on top of Aerodur 3001G Base Coat Solid Colors.
- Observe the recoatability times of the previous layer of Aerodur 3001.
- Apply Aerodur 3001E Base Coat Special Effects on clean Aerodur 3001G Base Coat Solid Color layer.
- Remove oil, grease and other contamination prior to application.
- Remove dust with e.g. tack rags just prior to application of Aerodur 3001E Base Coat Special Effects.

Instruction for Use

Mixing Ratio (volume)

3 parts 3001EXXX*
1 part CS6031*
1 part A9005*

*All Aerodur 3001E Base Coat Special Effect components labels contain an orange band

- Allow products to acclimatize to room temperature before use.
- Stir or shake Aerodur 3001E Special Effects thoroughly till all pigments are uniformly dispersed before adding the Curing Solution.
- Add Curing Solution CS6031 and stir the catalyzed mixture thoroughly.
- Add Activator A9005 and stir the catalyzed mixture again thoroughly.

Induction Time

15 minutes
Aerodur 3001E Base Coat
Special Effects

Initial Spraying
Viscosity
(25℃/77°F)

18 – 24 seconds Ford Cup #4
35 – 48 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.

Pot life
(25℃/77°F)

2 hours

Aerodur 3001G Base Coat Solid Colors only (3001GXXXX)
25 – 45 microns (µm) or to complete coverage
1.0 – 1.8 mils or to complete coverage

Aerodur 3001E Base Coat Special Effects only (3001EXXXX)
20 – 30 microns (µm)
0.8 – 1.2 mils

Application
Recommendations

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

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.
Aerodur 3001E Base Coat
Special Effects

**Equipment**

<table>
<thead>
<tr>
<th>Method</th>
<th>Nozzle Orifice</th>
<th>Fluid Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>0.55 – 0.72 mm</td>
<td>280 – 320 cc/min optimal;</td>
</tr>
<tr>
<td>HVLP</td>
<td>1.4 – 1.8 mm</td>
<td>340 cc/min Max</td>
</tr>
<tr>
<td>Air spray Electrostatic</td>
<td>1.4 – 1.8 mm</td>
<td></td>
</tr>
<tr>
<td>Airless Electrostatic</td>
<td>Not recommended</td>
<td></td>
</tr>
</tbody>
</table>

**Note**

- All filters in the application equipment should be removed to avoid clogging.
- Do not use airless application equipment.
- Extra attention should be paid when cleaning the equipment.

**Number of Coats**

**Step 1: Aerodur 3001G Base Coat Solid Colors (3001GXXXX)**

- Observe the recoatability limits of the relevant primer.
- Apply a homogeneous, wet cross coat to achieve a dry film thickness of 30 to 50 µm / 1.2 – 2.0 mils depending on the color and effect. For more details check the technical data sheet of Aerodur 3001 Base Coat Solid Colors.

**Step 2: Aerodur 3001E Base Coat Special Effects (3001EXXXX)**

- Apply a homogeneous, wet coat to achieve a dry film thickness of 20 to 30 µm / 0.8 – 1.2 mils. When required dry film is not achieved after one cross coat, an extra layer can be applied after 5 to 90 minutes flash off time to achieve required dry film.

**Step 3: Aerodur 3002 Clear Coat (3002G00002 or 3002G00005)**

- To obtain a smooth surface, apply Aerodur 3002 in 1 or 2 coats with 30–60 minutes solvent flash-off time in between, depending on the surface appearance (roughness) of the special effect layer.
- Aerodur 3002 Clear Coat should be applied between 2–60 hours of the Aerodur 3001 Base Coat Special Effects.
- For more details check the technical data sheet of Aerodur 3002 Clear Coat.

**Cleaning of Equipment**

Use Solvent Cleaning C28/15 or Solvent cleaning 98068 or TR-15 (electrostatic equipment) Solvent Cleaning C28/15 or TR-19 for other spray equipment.
## Aerodur 3001E Base Coat
### Special Effects

### Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Aerodur 3001E</th>
<th>Aerodur 3001E Special Effects over Aerodur 3001G Solid Color</th>
<th>Aerodur 3002 Clear Coat over Aerodur 3001E Special Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dry to dust</strong></td>
<td>30 minutes</td>
<td>Recatable minimum</td>
<td>Recatable minimum</td>
</tr>
<tr>
<td><strong>Dry to tape</strong></td>
<td>2 hours</td>
<td>Recatable maximum</td>
<td>Recatable maximum</td>
</tr>
<tr>
<td><strong>Theoretical Coverage</strong></td>
<td>20 – 22 m² per liter</td>
<td>25-27 g/m²/25 micron</td>
<td>20 – 22 m² per liter ready to apply at 25 µm dry film thickness</td>
</tr>
<tr>
<td><strong>Dry Film Weight</strong></td>
<td>810 – 820 ft² per US gallon</td>
<td>0.006-0.007 lbs/ft²/1 mil</td>
<td>810 – 820 ft² per US gallon ready to apply at 1 mil dry film thickness</td>
</tr>
<tr>
<td><strong>Volatile Organic Compounds</strong></td>
<td>Max 420 g/l</td>
<td>Max 3.5 lb/gal</td>
<td>Max 420 g/l</td>
</tr>
<tr>
<td><strong>Gloss (60°)</strong></td>
<td>Not applicable</td>
<td>Max 3.5 lb/gal</td>
<td>Max 3.5 lb/gal</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>As required</td>
<td>Max 3.5 lb/gal</td>
<td>Max 3.5 lb/gal</td>
</tr>
</tbody>
</table>

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Internet: www.akzonobel.com/aerospace
Aerodur 3001E Base Coat
Special Effects

Flash-point

<table>
<thead>
<tr>
<th>Product</th>
<th>Flash-point</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>3001EXXX (base component)</td>
<td>12°C / 54°F</td>
<td>166°C / 330°F</td>
</tr>
<tr>
<td>CS6031</td>
<td>16°C / 60°F</td>
<td>34°C / 93°F</td>
</tr>
<tr>
<td>A9005</td>
<td>34°C / 93°F</td>
<td></td>
</tr>
</tbody>
</table>

Storage

Store the product dry and at a temperature between 5 and 38°C / 40 and 100°F 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 information.

Shelf life

12 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 Safety Data Sheet (SDS) and label of the individual products carefully before using the products. The SDS’s are available on request.

Issue date: January 2018 (supersedes February 2015) - FOR PROFESSIONAL USE ONLY

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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