

## Aerodur Barrier Primer 37045

### Technical Data Sheet

#### Product Group

#### Epoxy Primer

#### Characteristics

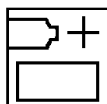


Product Information

Aerodur Barrier Primer 37045 is a chromate-free 3-component isocyanate-cured epoxy primer for composites and plastics.

- Compatible with a wide range of composites and plastics.
- Low water permeability due to the absence of leachable, hygroscopic pigments.
- Resistance to aircraft hydraulic fluids and chemicals.

#### Components



Base	Aerodur Barrier Primer 37045
Curing Solution	Hardener S 66/14 (faster cure)
Curing Solution	Hardener S 66/22 R
Thinner	Thinner C 25/90 S

#### Specifications



Qualified Product List

Airbus	AIMS 04-04-002
Airbus	AIMS 04-04-045
Airbus	AIMS 04-04-046
British Aerospace AVRO	AVN 7-005 Type 1
Fokker	TH 33.0140

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](http://aerospace.akzonobel.com/products).

#### Surface Conditions

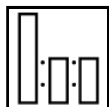


Cleaning

- Ensure that release agents are removed from the composite substrate prior to further surface pretreatments.
- Sand the composite substrate to a uniform matt surface and blow the panels dust-free using compressed air.
- Degrease the surface using the wipe on – wipe off method using a non-aggressive cleaner, e.g. water or isopropyl alcohol (IPA).
- When forced curing is applied to the composite substrate, it is strongly advised to degas the substrate in an oven prior to primer application.
- Remove dust with clean tack rags just prior to application of the primer.

# Aerodur Barrier Primer 37045

## Instruction for Use



Mixing Ratio

	Volume	Weight
Aerodur Barrier Primer 37045	100 parts	100 parts
Hardener S 66/14 (faster cure)	50 parts	38 parts
Hardener S 66/22 R	50 parts	38 parts
Thinner*	100 - 125 parts	65 - 81 parts

\* Thinner options: Thinner C 25/90 S

- Allow products to acclimatize to room temperature before use.
- Homogenize Aerodur Barrier Primer 37045 till all pigment is uniformly dispersed before adding the hardener.
- Add Hardener S 66/22 R OR S 66/14 and stir the catalyzed mixture thoroughly. Do NOT use both hardeners in the mixture.
- Add thinner and stir again till a homogeneous mixture.

Hardener S 66/14 is for a faster cure.

The above-mentioned weight per weight is in relation to the off-white shade.

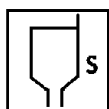
Aerodur Barrier Primer 37045 black; mixing ratio by weight:

	Weight (w/w)
Aerodur Barrier Primer 37045 black	100 parts
Hardener S 66/22 R or S 66/14	42 parts
Thinner C 25/90 S	71 – 89 parts



Induction Time

15 minutes after mixing.



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

33 – 43 seconds ISO Cup #3  
26 – 29 seconds Gardner Signature Zahn Cup #1



Note

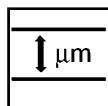
Viscosity measurements are provided as guidelines only and are not to be used as quality control parameters. Certified information is provided by certification documentation available on request.



Pot life (23°C/73°F)

8 hours for Hardener S 66/22 R  
6 hours for Hardener S 66/14

## Aerodur Barrier Primer 37045



Dry Film Thickness (DFT)

15 – 20 μm  
0.6 – 0.8 mil

### Application Recommendations



Conditions

Temperature: 15 – 35 °C  
59 – 95 °F

Relative Humidity: 35 – 75 %



Note

Aerodur Barrier Primer 37045 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	1.4 – 1.6 mm	400 mL/min <sup>1</sup>	4 – 4.5 bar / 58 – 65 psi <sup>2</sup>
HVLP / Next Generation	N/A	N/A	1.4 – 1.6 mm	400 mL/min <sup>1</sup>	2 – 2.5 bar / 29 – 36 psi <sup>3</sup>
Air Atomizing (electrostatic)	N/A	N/A	1.5 mm	400 mL/min	4 – 5 bar / 58 – 73 psi <sup>2</sup>
Pressure Atomizing (electrostatic)	N/A	65-75 bar / 1.02 kpsi, 25-35 bar / 0.43 kpsi	0.009 inch / 60°, 0.013 inch / 60°	N/A	4 – 4.5 bar / 58 – 65 psi <sup>2</sup>



Note

<sup>1</sup> Product Flow not applicable when using gravity / suction feed guns.  
<sup>2</sup> Dynamic Air Pressure at gun-inlet measured with an open trigger.  
<sup>3</sup> General advice to meet the HVLP / next generation spray gun requirements. Please validate with your local authorities,



Number of Coats

Spray-apply a homogeneous, wet and closed coat in order to achieve a dry film thickness of 15 – 20μm / 0.6 – 0.8 mil.



Cleaning of Equipment

Solvent Cleaning C 28/15 or Solvent Cleaning 98068.

## Aerodur Barrier Primer 37045



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
Dry to Tape	S 66/22 R - 4 hours	N/A	N/A
Dry to Tape	S 66/14 - 2 hours	N/A	N/A
Dry to Handle	N/A	2 hours	1 hour

Recoatable Minimum When surface dry.

Recoatable Maximum 72 hours. If a drying time of 72 hours is exceeded recondition the surface with grade P320 sandpaper or an aluminum oxide non-woven abrasive pad to a uniform matt surface before applying the subsequent layer.

Substrate surface temperature - 60°C/140°F & 80°C/176°F

When forced cured, allow the paint 15-minute ambient flash-off time with enough air movement before entering the component into the oven in order to obtain the best results.



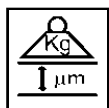
Note

Curing of solvent- and water-based products depends on temperature, relative humidity and airflow. Increased temperatures, low RH and efficient airflow can significantly decrease drying times.



Theoretical Coverage

13 m<sup>2</sup> per liter ready to apply at 15 µm dry film thickness.  
537 ft<sup>2</sup> per US gallon ready to apply at 0.6 mil dry film thickness.



Dry Film Weight

Off-white: 1.79 g/m<sup>2</sup>/µm or 0.00930 lbs/ft<sup>2</sup>/mil  
Black: 1.57 g/m<sup>2</sup>/µm or 0.00816 lbs/ft<sup>2</sup>/mil



Gloss (60°)

Maximum 25 GU



Color

Off white / Black

## Aerodur Barrier Primer 37045



### Flash Point

Aerodur Barrier Primer 37045	<21°C / 70°F
Hardener S 66/14 (faster cure)	>21°C / 70°F
Hardener S 66/22 R	>21°C / 70°F
Thinner C 25/90 S	<21°C / 70°F



### Storage

Store the product dry and at a temperature between 5 and 35°C / 41 and 95°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 the container label for specific storage life information.

Shelf life 5 - 35°C (41 - 95°F)

Aerodur Barrier Primer 37045	24 months
Hardener S 66/14 (faster cure)	24 months
Hardener S 66/22 R	24 months
Thinner C 25/90 S	36 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.

**Revision date: July 2023 (supersedes December 2021) - 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. Brand names mentioned in this data sheet are trademarks of or are licensed to AkzoNobel