

8B6A Laminar X-500

Conductive Coating

Technical Data Sheet

Product Group

Conductive Coating

Characteristics



Product
Information

- A black, two-component catalyzed polyurethane conductive coating.
- Pigments selected for electrical conductive capabilities and for maximum erosion, abrasion and impact resistance.
- Cured film resists chemicals such as lubricants, hydraulic fluids and aircraft fuels.
- Provides exceptional rain erosion resistance and conductivity for bleeding off surface static electricity.
- Recommended for application to deicing equipment, propeller blades and other critical airframe areas subject to damaging effects of high speed contact with rain, hail, dust and other corrosive elements.

Components



Curing Solution
Thinner

Curing Solution: 50C3A
Thinner: 66C20 or 66C28

Specifications



Qualified
Product List

Boeing Mesa	HMS 20-1642
Bombardier/deHavilland	DHMS C4.13
Dowty Aerospace Prop	PS 632
Hamilton Sunstrand	HS7136, Type 1, Class B
Kaman	HO282
Northrop Grumman	GMPS 4202A
Pratt & Whitney	PWA36013
Rolls Royce (Omat)	7/66

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

Surface Conditions



Cleaning

Surface pretreatment is an essential part of the painting process.

- Clean laminates thoroughly.
- Sand lightly and apply conductive coating.
- Note: If pinholes or surface irregularities are present in the laminate, fill with; static conditioner filler (28C1) after cleaning and sanding, and surfacer (8W5) as required, prior to application of 8B6A.

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Instruction for Use



Mixing Ratio
(volume)

4 parts
1 part
1 part

Base 8B6A
Curing Solution 50C3A
Thinner 66C20 or 66C28

- Add 1 part 66C20 fast evaporating, or 1 part 66C28 slow evaporating thinner.
- Stir or Shake until all pigment is uniformly dispersed before adding curing solution.
- Stir the catalyzed mixture thoroughly



Induction Time

15 – 20 minutes



Initial Spraying
Viscosity
(25°C/77°F)

25 – 35 seconds ISO-Cup #4
20 seconds Signature Zahn-Cup #2



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°C/77°F)

6 – 8 hours.



Dry Film
Thickness
(DFT)

Conductivity is achieved at a film thickness of 37-50 microns (1.5-2.0 mils). Rain erosion performance is optimized at a film thickness of 200-250 microns (8.0-10.0 mils).

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Application Recommendations



Conditions

Temperature: 15 – 35°C
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.



Equipment

Air 1.4 – 1.8 mm nozzle orifice
HVLP 1.2 – 1.4 mm nozzle orifice
Air Assisted Electrostatic .28 - .33 mm nozzle orifice



Number of Coats

Allow brush coat to stand 6 hours to overnight between coats. Spray coats may be applied consecutively, allowing 30 minutes between coats.



Cleaning of
Equipment

MEK, or C28/15

Physical Properties



Drying Times
(25 +/- 2°C / 77
+/- 2°F, 55 +/-
5% RH)

Tack Free 30 – 60 minutes
Dry through 6 – 8 hours
Full cure 7 days

Surface
Resistivity
Shore A
Hardness

25,000 Ohms / square, approximately

80 – 90 Durometer hardness of cured film

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Theoretical
Coverage

10.9 m² per liter ready to apply at 25 µm dry film thickness
445 ft² per US gallon ready to apply at 1 mil dry film thickness



Dry Film Weight

55.35 g/m² at 25.4 micron
.0113 lbs/ft² at 1 mil



Volatile Organic
Compounds

Max 650 g/l
Max 5.3 lb/gal per ASTM D3960



Gloss (60°)

10 maximum GU



Color

Flat Black



Flash-point

8B6A	-5°C / 23°F
50C3A	7°C / 45°F
66C20	-5°C / 23°F
66C28	15°C / 59°F



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 life information.

Shelf life
5 - 38°C
(40 - 100°F)

18 months per AkzoNobel Aerospace Coatings commercial specification for 8B6A and 50C3A. 24 months for 66C20 and 66C28. Shelf life may vary due to OEM specification requirements. Refer to container label for specific shelf life information.

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Physical Properties Continued

Rain Erosion

Rain erosion (weight loss factor) on properly cured film
Test: 8-10 mils (203-254 microns) dry film on whirling arm rain erosion tester.
Propeller tip speed 563 mph. Rainfall rate 1 inch/hour. 1mm size droplets at surface contact.

First 10 minute exposure – No weight loss.

Abrasion Resistance

After 10 minutes exposure – Weight loss averages 0.00125 grams per gram of total exposed film surface per minute.

Taber abrader CS 17 Wheel, 1000 gram weight – 1 mil film loss per 7000 revolutions.

Solvent Resistance

Excellent (aliphatic, aromatic & ketones).

Jet Fuel Resistance

Excellent

Skydrol® Resistance

Excellent (Skydrol® 500)

Chemical Resistance

Excellent

Weathering Resistance

Good (slight chalk)

Impact Resistance

50-60 inch pounds

Dry Film Appearance

Flat

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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