10P20-44
Technical Data Sheet

Product Group

High solids epoxy primer

Characteristics

Product Information

10P20-44 is a VOC compliant (acc. to US legislation) high solids, corrosion inhibiting 3-component amine cured epoxy primer. This OEM qualified, phosphate ester hydraulic fluid resistant, urethane compatible primer is designed for application to aircraft exterior surfaces. When used in combination with the OEM qualified topcoat or basecoat – clearcoat system the product is designed to provide the most optimal chemical- and corrosion-resistance and durability.

Components

Base material	10P20-44
Curing Solution	EC-265 or EC-273
Thinner	Thinner TR-114 (VOC exempt solvent per US guidelines) or Thinner TR-102

Specifications

Qualified Product List

Avic Aviation	AMMS2502 / AMMS2516
Boeing	BMS 10-79, Type II & III, Cl B, Gr D & BMS 10-144, Type I, Grade B
Boeing Long Beach	DMS 2104, Type I COMP B
Bombardier	BAMS 565-008, Type I & II, Cl A, Gr B
COMAC	CMS-CT-201, Cl B, Gr B
De Havilland	DHMS C4.18, Type III, Cl B, Gr B
EADS (CASA)	Z-12.138
Embraer	MEP 10-068, Cl A & B
FedEx	99-015
Goodrich Corporation	LGQP 6000 / LGQP 6001
Ilyushin	TN 756.03.583
MHI	MM1275, Type I & II
Saab	TEK00-0161MT
Xian Aircraft Corp	XMS1623

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.

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Surface Conditions

Cleaning

- 10P20-44 is typically applied on metallic substrates with various surface treatments
- Pre-treat the surface according to the pre-scribed OEM process instructions
- 10P20-44 can be applied directly over reactivated aged primer or topcoat.
- Clean aged primer or epoxy/polyurethane finishes with an approved cleaning solvent, and sand/abrade to a uniform matt finish using grade P320 sandpaper or an aluminum oxide non-woven abrasive pad.
- Remove dust and debris with a tack rag or equivalent.

Instruction for Use

Mixing Ratio (volume)

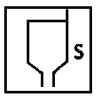
Base 10P20-44	3 parts
Curing Solution EC-265 or EC-273	1 part
Thinner TR-114 or TR-102	1 part

- EC-265 Qualified to BMS 10-79, CMS565-08 and DMS 2104.
- EC-273 Formulated for application by maintenance market and select OEMs. Qualified to DHMS C4.18.
- Use of thinner optional but recommended.
- TR-114 is a VOC-exempt (to US legislation) and HAPS-free thinner approved to BMS 10-79, BAMS 565-008, DMS 2104 and DHMS C4.18.
- TR-102 non-exempt thinner can be used if VOC compliance is not needed.

- Stir or Shake base component until all pigment is uniformly dispersed before adding curing solution.
- Add curing solution and thinner/reducer and stir the catalyzed mixture thoroughly.

Induction Time

N.A.



Initial Spraying Viscosity (25 ºC/77 ºF)

3:1 mix ratio:
16-23 seconds Gardner Signature Zahn-Cup 2
23-30 seconds ISO-Cup 4

3:1:1 mix ratio:
13-19 seconds Gardner Signature Zahn-Cup 2
15-21 seconds ISO-Cup 4

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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 ºC/77 ºF)	4 hours.
Dry Film Thickness (DFT)	15-23 µm 0.6-0.9 mil

Application Recommendations

Conditions	Temperature:	15-35 °C 59-95 °F
	Relative Humidity:	35-75%

Note	10P20-44 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.

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Equipment

Spray gun type	Nozzle orifice	Product flow	Dynamic air pressure at gun-inlet*
Conventional	1.2-1.4 mm	N/A	3-5 bar / 43-73 psi
HVLP / next generation	1.2-1.4 mm	N/A	0.7 bar /10 psi**
Air atomizing - electrostatic	1.2 - 1.5mm	230-350 ml/min	4-5 bar /58-73 psi
Pressure atomizing (electrostatic)	0.09-0.13 mm in / 60°	260-300 ml min or 75-90 bar / 1-1.3k psi	4-4.5 bar / 58-65 psi

*) measured with open trigger.
**) measured at the air-cap. General advice to meet the HVLP / next generation. spray gun requirements. Please validate with your local authorities.

Number of Coats

Spray a single uniform wet coat to a dry film thickness of 15-23 µm (0.6-0.9 mil).

Cleaning of Equipment

Use TR-36, Solvent Cleaning C28/15, Solvent Cleaning 98068 or MEK.

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.

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Physical Properties

Drying Times (25 ºC / 77 ºF, 55% RH)

Dry to topcoat	2.25 hours
Dry to tape	2.25 hours
Dry to sand	2.25 hours
Maximum recoat window at standard conditions with no reactivation required:	48 hours

If the overcoat time of 48 hours is exceeded, recondition the aged primer with aluminum oxide non-woven abrasive, type very fine or P320 grade sanding paper, clean and tack surface and reapply 10P20-44.

Theoretical Coverage

With Curing Solution EC-265 (undiluted):
37.5 m^2 per liter ready to apply at 15 µm dry film thickness.
1506 ft^2 per US gallon ready to apply at 0.6 mil dry film thickness.

With Curing Solution EC-265 and diluted with Thinner TR-114 or TR-102:
30.0 m^2 per liter ready to apply at 15 µm dry film thickness.
1205 ft^2 per US gallon ready to apply at 0.6 mil dry film thickness.

With Curing Solution EC-273 (undiluted):
36.7 m^2 per liter ready to apply at 15 µm dry film thickness.
1472 ft^2 per US gallon ready to apply at 0.6 mil dry film thickness.

With Curing Solution EC-273 and diluted with Thinner TR-114 or TR-102:
29.4 m^2 per liter ready to apply at 15 µm dry film thickness.
1178 ft^2 per US gallon ready to apply at 0.6 mil dry film thickness.

Dry Film Weight

Activated with EC-265:	Activated with EC-273:
1.69 g/m²/µm	1.71 g/m²/µm
0.0088/lbs/ft^2/mil	0.0089/lbs/ft^2/mil

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Volatile Organic Compounds	With Curing Solution EC-265 (undiluted): 350 g/L / 2.92 lbs/gal. With Curing Solution EC-265 and diluted with Thinner TR-114: 508 g/L / 4.24 lbs/gal. 350 g/L / 2.92 lbs/gal - excluding exempt solvents acc. to US EPA. With Curing Solution EC-265 and diluted with Thinner TR-102: 445 g/L / 3.71 lbs/gal. With Curing Solution EC-273 (undiluted): 380 g/L / 3.06 lbs/gal. With Curing Solution EC-273 and diluted with Thinner TR-114: 532 g/L / 4.36 lbs/gal. 380 g/L / 3.06 lbs/gal - excluding exempt solvents acc. to US EPA. With Curing Solution EC-273 and diluted with Thinner TR-102: 470 g/L / 4.36 lbs/gal.
Gloss (60º)	10 – 60 GU.
Color	Yellow.

Flash-point		
	10P20-44	7 °C / 45 °F
	Curing Solution EC-265	7 °C / 45 °F
	Curing Solution EC-273	7 °C / 45 °F
	Thinner TR-114	-17 °C / 1 °F
	Thinner TR-102	7 °C / 45 °F

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Storage

Store the product dry and at a temperature between 5 and 38 ºC / 41 and 100 ºF per AkzoNobel Aerospace Coatings specification. Store in the original unopened containers. Storage temperature and shelf life may vary per OEM specification requirements. Refer to container label for specific storage life information.

Shelf life 5 - 38 °C (41 - 100 °F)		
	10P20-44	12 months
	Curing Solution EC-265	12 months
	Curing Solution EC-273	12 months
	Thinner TR-114	12 months
	Thinner TR-102	12 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.

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