# 10P20-44

## Technical Data Sheet

### Product Group

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 | 10P20-44 |
| Curing Solution | Curing Solution EC-265 |
| Curing Solution | Curing Solution EC-273 |
| Thinner | Thinner TR-114 |
| Thinner | Thinner TR-102 |

### Specifications

Qualified Product List

| | |
|---|---|
| Avic Aviation | AMMS2502 |
| Avic Aviation | AMMS2516 |
| Boeing Long Beach | DMS 2104, TY I, COMP B |
| Boeing | BMS 10-144, TY I, GR B, COMP C |
| Boeing | BMS 10-79, TYII&III CLB GRD |
| Bombardier | BAMS 565-008, Type I & II, Cl A, Gr B |
| Comac | CMS-CT-201, CL B, GR B |
| EADSCASA | Z-12.138 |
| Embraer | MEP 10-068, TY I, CL A&B |
| FederalExpress | 99-015 |
| Goodrich Corporation | LGQP 6000 |
| Goodrich Corporation | LGQP 6001 |
| Mitsubishi | MM1275, TY I & II |
| Saab | TEK 00-0161MT |
| Xian Aircraft Corp | XMS1623 |
| deHavilland | DHMS C4.18, TYIII CLB GRB D |

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.

### Surface Conditions

Surface Preparation/ Cleaning

-10P20-44 is typically applied on metallic substrates with various surface treatments
-Pre-treat the surface according to the specified 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 clean tack rag or equivalent.

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# 10P20-44

## Instruction for Use

Spray Application (Mix Ratio)

| | Volume |
|---|---|
| 10P20-44 | 3 parts |
| Curing Solution EC-265 | 1 part |
| Curing Solution EC-273 | 1 part |
| Thinner* | 1 part |

* Thinner options: Thinner TR-114, Thinner TR-102

Curing solution EC-265 is qualified to BMS 10-79, CMS565-08 and DMS 2104. Curing solution EC-273 is formulated for application by maintenance market and select OEMs; qualified to DHMS C4.18.

Use of thinner is 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.

-Allow products to acclimate to room temperature before use.
-Stir or shake the base component thoroughly until all pigment is uniformly dispersed before adding the curing solution.
-Add the curing solution EC-265 or EC-273 and stir the catalyzed mixture thoroughly.
-Add the thinner TR-114 or TR-102 and stir the catalyzed mixture again thoroughly.

Induction Time

Not Applicable.

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

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

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 (25ºC/77ºF)

4 hours.

Dry Film Thickness (DFT)

15 – 23 µm
0.6 – 0.9 mil

## Application Recommendations

Conditions

| | |
|---|---|
| Temperature: | 15 – 35 °C<br>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 Recommendation

| Spray gun type | Product supply | Fluid Pressure | Nozzle orifice | Product flow | Dynamic air pressure at gun-inlet * |
|---|---|---|---|---|---|
| Conventional | N/A | N/A | 1.2-1.4 mm | N/A | 3-5 bar / 43-73 psi |
| HVLP / Next Generation | N/A | N/A | 1.2-1.4 mm | N/A | 2-2.5 bar / 29-36 psi** |
| Air Atomizing (electrostatic) | N/A | N/A | 1.2-1.5 mm | 230-350 mL/min | 4-5 bar / 58-73 psi |
| 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° | 260-300 mL/min | 4-4.5 bar / 58-65 psi |

*Measured with an open trigger.
**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.

## Physical Properties

Drying Times

| | 25°C/77°F, 55% RH |
|---|---|
| Dry to Topcoat | 2.25 hours |
| Dry to Tape | 2.25 hours |
| Dry to Sand | 2.25 hours |
| Recoatable Maximum | 48 hours at standard conditions |

If a drying time of 48 hours is exceeded, recondition the primer to a uniform matt surface with grade P320 sandpaper or an aluminum oxide non-woven abrasive pad. Check the relevant specification to determine if reapplication of 10P20-44 is necessary after reactivation.

Note

Dry times and recoat times will vary depending on combinations of temperature, humidity and airflow.


Theoretical Coverage

With Curing Solution EC-265 (undiluted):
37.5 m2 per liter ready to apply at 15 µm dry film thickness.
1506 ft2 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 m2 per liter ready to apply at 15 µm dry film thickness.
1205 ft2 per US gallon ready to apply at 0.6 mil dry film thickness.

With Curing Solution EC-273 (undiluted):

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36.7 m2 per liter ready to apply at 15 µm dry film thickness.
1472 ft2 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 m2 per liter ready to apply at 15 µm dry film thickness.
1178 ft2 per US gallon ready to apply at 0.6 mil dry film thickness.

Dry Film Weight

Activated with EC-265:
1.69 g/m²/µm
0.0088 lbs/ft²/mil

Activated with EC-273:
1.71 g/m²/µm
0.0089 lbs/ft²/mil

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 (60°)

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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