

# PRIMER SP350

## COATINGS FOR AIRCRAFT STRUCTURE PROTECTION

**AkzoNobel**

### Product information



Chromate free high solid epoxy primer three component used for corrosion protection, SP350 is used to protect aircraft metallic parts. This product has good adhesion and chemical resistance properties, especially on aluminium alloys. SP350 can be used with Mapaero high solid polyurethane topcoat XS420.

### Components



**Base SP350**  
**Hardener / Catalyst SP350**  
**Thinner SP350 PLUS**

### Specifications



**Qualified in accordance with:**  
Safran Landing Systems: IFC30-125-06  
Safran Nacelles : HMRC0149A  
Safran Aircraft Engines : DMR74-130

Product information mentioned in the technical datasheet is given for information purposes and can differ from requirements of specifications above. In that case, customer requirements are valid for your application.

### Physical properties



**THEORETICAL COVERAGE**  
25 m<sup>2</sup>/L (1019 sq.ft/gal) for 25 µm (1 mils) dry undiluted

**DRY FILM WEIGHT**  
1.4

**VOC**  
285 g/L (2.4 lbs/gal) (ISO11890-1 and ASTM D3960) Base and Hardener undiluted

**COLOR**  
Beige

**SHELF LIFE / STORAGE**  
12 months for the base and hardener and 48 months for the thinner, stored between 5°C and 35°C (41°F and 95°F) in full and sealed original packaging.

**GLOSS LEVEL**  
20-80 GU below 60°

**NOTES**  
Gloss levels have been determined using glossmeter with an angle of incidence of 60°C. The theoretical consumption value doesn't take into account the transfer efficiency for spray application

### Surface preparation



SP350 primer should be applied on aluminium alloys on which surface treatment should be:

- Alodine 1200 : Cr<sup>6</sup> conversion
  - OAC: Chromic Acid Anodizing sealed or unsealed
  - OAS: Sulfuric Acid Anodizing sealed or unsealed
  - TSA: Tartric Sulphuric Anodizing sealed or unsealed
- Contact us for information on uses on other substrate or surface treatments.

Depending on surface treatment, please follow the application advised by the supplier to apply paint. In case of excess, for aluminium alloy components, refer to instructions. For steel components with cadmium or phosphate, reactivate with solvent cleaning.

Every opened can has a limited life. Packaging must be well closed and stored in suitable conditions.

All recommendations are mentioned above are given for information.

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Instructions for use



## SPRAY APPLICATION

### MIXING RATIO

	Mixing ratio by weight	Mixing ratio by volume
Base	100	8 V
Hardener / Catalyst	11	1 V
Thinner	0 to 10	0 to 1 V

### MIXING PROCEDURE

Ideally, the unmixed products should be stored between 18°C (64°F) and 25°C (77°F) for 24 hours before use.

The SP350 base should be mixed for 5 minutes in a pneumatic or oscillating mixer before use.

Mix the base and hardener until the mixture is completely homogeneous.

Then add the thinner SP350 Plus to the desired dilution.

The mixture must be made at a temperature between 15°C (59°F) and 35°C (95°F).

Sieve the paint through a 120-150 µm (4.7-6 mils) filter.

We recommend use of ratio by weight for mixing.

### INDUCTION TIME

None

### Spraying viscosity at 20°C / 68°F

With Dilution  
Ratio 8V/1V/1V  
23 ± 3°C (73 ± 40F)

CA 4	ISO 4
15 ± 3s	20 ± 4s

Without Dilution  
Ratio 8V/1V  
23 ± 3°C (73 ± 40F)

CA 4	ISO 4
16 ± 3s	25 ± 4s

### POT LIFE

3 hours between 15°C (59°F) and 30°C (86°F)

1 hour between 30°C (86°F) and 35°C (95°F)

### NOTE

To prevent drying on the surface of the mixed pot, cover it for the duration of the pot life.

Viscosities mentioned above are corresponding to the recommended range of viscosity to ensure compliant application. The range of dilution must be used to adjust viscosity to reach the recommended one

ISO 4 cup is the reference cup. The others are given for information purposes.

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### BRUSH APPLICATION

	Mixing ratio by weight	Mixing ratio by volume
Base	100	8 V
Hardener / Catalyst	11	1 V

### MIXING PROCEDURE

Remove the safety ring and press down on the cap to release the SP350 hardener. Shake the container for approximately 1 min. Remove the cap to be able to apply the SP350 primer with a suitable brush. If the material after shaking 1 min is not homogenous please use a stick for further mixing (around 1 min) until the material is homogen.



Do not hermetically close TUKS after mixing base and hardener

### INDUCTION TIME

None

### POT LIFE

3 hours between 15°C (59°F) and 30°C (86°F)  
1 hour between 30°C (86°F) and 35° (95°F)

## Application recommendations



### CONDITIONS

**Temperature** 15 °C (59°F) to 35 °C (95°F)  
**Relative humidity** 30 % to 85 %

### EQUIPMENT

**Gravity compressed air gun** Nozzle 0.8 mm to 1.8 mm

### DRY / WET FILM THICKNESS

For 15 µm to 35 µm (0.6 to 1.4 mils) dry /20 µm to 50 µm (0.8 to 2 mils) wet.

### NUMBER OF COATS

With air spray gun, apply several coats to achieve 15 µm to 35 µm (0.6 to 1.4 mils) dry thickness. The number of coats depends on the size and the shape of the part on which it is being applied.  
The recommended dynamic air pressure is 1.5 bar to 4 bar (22 to 58 psi).

### EQUIPMENT CLEANING

Clean equipment with a suitable solvent such as Mapaero D713 or D760. Dispose of waste in accordance with regulations.

### NOTE

Spray with dry and oil-free air.

It is recommended to use thinner SP350 Plus when application temperature is >28°C (82.4°F).

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### Drying times



	23°C (73°F) ± 2°C/35°F**	40°C (104°F)	60°C (140°F)	80°C (176°F)	InfraRed
<b>Dry to handle</b>	6 hours	2 hours	1 hour to 3 hours	30 to 45 minutes	25±5 minutes
<b>Dry to tape</b>	6 to 7 hours	2 hours to 3 hours	1 hour 30 to 2 hours	45 minutes to 1 hour	30±10 minutes
<b>Recoatable</b>	Not Applicable**	1 hour 30 to 8 hours	30 minutes to 2 hours 30	15 to 75 minutes	10 to 35 minutes
<b>Fully Cured</b>	7 days	4 days	3 hours	1 hour 30	40±10 minutes

#### NOTE

\*\*SP350 primer must be cured at minimum 40°C (104°F) before applying XS420 Topcoat

Drying times have been determined using test plates of a thickness < 2 mm and for 20 µm (0.8 mils) of dry film.

Before accelerated drying 70°C (158°F), leave to flash off for at least 15 minutes at room temperature.

The "recoatable" time is determined with XS420 top coat.

To recoat SP350 with other waterborne or solvent-based paints, contact us.

The qualification test was performed at 23°C (73°F) ± 2°C/35°F for fully cured in 7 days.

\*N.A. : Not applicable

InfraRed : Wavelength from 1 to 2 µm - Substrate Temperature : 80 +/- 5°C

### Defects & corrections



In the event of a defect, contact your Quality Department. **In case of low thickness:**

Apply a thin coat to obtain the desired thickness while respecting the recoating time. If the recoating time is exceeded, reactivate with a Scotch-Brite type A.

**In case of thick coats:**

See your quality department

**For micro-bubbles, running or rejects** (depending on instructions given and type of part):

Reactivate the surface using an abrasive paper grade 220 to 320, remove the dust and clean the surface using an approved cleaning solvent, apply a thin coat.

**In case of big default, non-conformity:**

Strip the part with an approved paint stripper (only on simple part) or strip by sand blasting (in this case, the surface treatment must be repeated).

### Health & Safety



See the product Safety Data Sheet.

The MSDS are available through our website [www.mapaero.com](http://www.mapaero.com).

### Packing



The base is available in 4 L.

The hardener is available in 0.5 L and 5 L.

The thinner is available in 1 L and 5L.

SP350 kits are also available in 45 mL Touch-Up Kits (TUK) (40 mL SP350 Base + 5 mL SP350 Hardener).

WARRANTY : We guarantee our products against hidden defaults over material and preparation. Our Responsibility is limited to the obligation of freely replacing the defective material without there being a claim for any compensation. The advice we give is based on our experience but it might not be absolutely right. Consequently this does not imply our responsibility in case of inefficiency. Furthermore our company cannot be responsible for any material or corporal damages caused due to a misuse or mishandling of our products. Any concession to these clauses, to be valid, must be an official document issued by our offices and signed by our direction.