# TOPCOAT XS420

## COATINGS FOR AIRCRAFT STRUCTURE PROTECTION

AkzoNobel

### Product information

Three-component polyurethane topcoat with high solid content and high chemical resistance, used for structural and external applications.
It is recommended to use the XS420 topcoat in combination with Mapaero chromate-free corrosion resistant primer SP350.

### Components

**Base** XS420
**Hardener / Catalyst** XS420
**Thinner** 713, 713-2

### Specifications

**Qualified in accordance with:**
Messier-Bugatti-Dowty: IFC30-125-06
Aircelle : HMRC0150A

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**
13 m²/l or 529 ft²/gal for 40 µm (1.6 mils) (ready-to-use mixture)

**DRY FILM WEIGHT**
1.5

**VOC**
420 g/l or 3.5 lb/gal (ISO11890-1 and ASTM D 3960)

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

**GLOSS LEVEL**
> 85GU at 60° for tints of Black, Red and Yellow, and > 90GU at 60° for tints White and Grey

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

### Surface preparation

The XS420 top coat is intended for use on metallic substrates (steel, aluminium alloys) coated with a surface treatment (anodisation, conversion) and an epoxy primer for adhesion and corrosion protection (such as MAPAERO SP350).
Application of SP350 primer -->See SP350 Technical Data Sheet

All the recommandations mentioned above are given for information.



MAPAERO SAS - 10, avenue de la Rijole - CS30098 - 09103 PAMIERS CEDEX - Tel : 33(0)5 34 01 34 01 - Fax : 33(0)5 61 60 23 30
e-mail: aero.cs.pamiers@akzonobel.com

Instructions for use

## SPRAY APPLICATION

### MIXING RATIO

| | Mixing ratio by weight | Mixing ratio by volume |
|---|---|---|
| **Base** | 100 | 3 V |
| **Hardener / Catalyst** | 26 | 1 V |
| **Thinner** | 20 | 1 V |

### MIXING PROCEDURE
Ideally, the unmixed products should be stored between 18°C and 25°C (64°F and 77°F) for 24 hours before use.
The XS420 base should be mixed for 5 minutes in a pneumatic or oscillating mixer before use.
Mix the base, hardener and thinner until the mixture is homogenous.
Preparation should be carried out between 15°C and 35°C (59°F and 95°F).

### INDUCTION TIME
None

**Spraying viscosity at 20°C / 68°F**

| | CA 4 | ISO 4 |
|---|---|---|
| 18°C - 30°C (64.4°F - 86°F) | 23 +/- 5s | 38 +/- 5s |
| 30°C - 35°C (86°F - 95°F) | 21 +/- 5s | 35 +/- 5s |

### POT LIFE
3 hours for the Thinner 713
1 hour for the Thinner 713-2

### NOTE
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 purpose.



MAPAERO SAS - 10, avenue de la Rijole - CS30098 - 09103 PAMIERS CEDEX - Tel : 33(0)5 34 01 34 01 - Fax : 33(0)5 61 60 23 30
e-mail: aero.cs.pamiers@akzonobel.com

Instructions for use

**BRUSH APPLICATION**

| | Mixing ratio by weight | Mixing ratio by volume |
|---|---|---|
| **Base** | 100 | 3 V |
| **Hardener / Catalyst** | 26 | 1 V |

**MIXING PROCEDURE**
Remove the safety ring and press down on the cap to release the XS420 hardener. Shake the container for approximately 1 minute. Remove the cap to be able to apply the XS420 topcoat with a suitable brush. If the material after shaking of 1min is not homogenious please use a stick for futher mixing (around 1min) until the material is homogen.

Do not hermetically close TUK after mixing base and hardener.

**INDUCTION TIME**
None

**POT LIFE**
3 hours

Application recommendations

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

**EQUIPMENT**
**Gravity compressed air gun** Nozzle 1.3 to 1.8 mm

**DRY / WET FILM THICKNESS**
20-60 µm (0.8 to 2.4 mils) dry / 45-120 µm (1.8-4.7 mils) wet

**NUMBER OF COATS**
The number of coats depends on the size and the shape of the part to which it is being applied.

**Application of 20-40 µm (0.8-1.6 mils):**
Application of two coats to obtain the required thickness.
Leave to flash off for 1 hour at 23°C ± 5°C (73°F ± 41°F) before drying.

**Application of 40-60 µm (1.6-2.4 mils):**
Application of several layers to obtain the required thickness.
Leave to flash off for 1.5 hours at 23°C ± 5°C (73°F ± 41°F) before drying.

**EQUIPMENT CLEANING**
Clean the equipment with an appropriate cleaning thinner, such as Mapaero D713.

**NOTE**
Spray with dry, oil-free air.



MAPAERO SAS - 10, avenue de la Rijole - CS30098 - 09103 PAMIERS CEDEX - Tel : 33(0)5 34 01 34 01 - Fax : 33(0)5 61 60 23 30
e-mail: aero.cs.pamiers@akzonobel.com

## Drying times

**NOTE**

| Thinner 713 | 23°C / 73.4°F | 40°C / 104°F | 60°C / 140°F | 80°C / 176°F | 100°C / 212°F |
|---|---|---|---|---|---|
| **Dry to touch** | 8 h (*) | 3 to 4 h | 2 h | 45 min to 1 h | 1 h |
| **Dry to handle** | 10 to 12 h (*) | 6 to 7 h | 3 to 3 h 30 | 2 h to 2 h 30 | 1 h |
| **Dry to tape** | 16 h (*) | 8 to 10 h | 4 to 5 h | 3 h to 3 h 30 | 1 h |
| **Fully cured** | 7 d | 72 h | 12 h | 6 h | 4 h |

| Thinner 713-2 | 23°C / 73.4°F | 40°C / 104°F | 60°C / 140°F | 80°C / 176°F | 100°C / 212°F |
|---|---|---|---|---|---|
| **Dry to touch** | 4 h | 1 h 30 to 2 h | 30 to 45 min | 15 to 30 min | N.A. |
| **Dry to handle** | 4 h 30 to 5 h 30 | 2 to 3 h | 45 min to 1 h 30 | 30 to 45 min | N.A. |
| **Dry to tape** | 6 h 30 to 7 h 30 | 3 to 4 h | 1 h 30 to 2 h | 1 h to 1 h 30 | N.A. |
| **Fully cured** | 3 d | 24 h | 7 h | 3 h | N.A. |

Drying times have been determined using test pieces of a thickness < 2 mm and for 40 µm (1.6 mils) of dry film.
Desolvation time : from 1 hour to 1.5 hours

*N.A. : Not applicable.
(*): values correspond to the white tint, N.A. for blacks.

## Defects & corrections

In the event of a defect, contact your Quality Department.

## Health & Safety

See the product Safety Data Sheet.

The MSDS are available through our website www.mapaero.com upon request.

## Packing

The base is available in 3 L.
The hardener is available in 1 L and 5 L.
The thinner D713 is available in 1 L and 5 L
Thinner D713-2 is available in 1 L and 5 L.
XS420 top coat are also available in 40 mL Touch-Up Kits (30 mL XS420 top coat Base + 10 mL XS420 top coat Hardener).





MAPAERO SAS - 10, avenue de la Rijole - CS30098 - 09103 PAMIERS CEDEX - Tel : 33(0)5 34 01 34 01 - Fax : 33(0)5 61 60 23 30
e-mail: aero.cs.pamiers@akzonobel.com