

# Technical Data

## Hardtop XP



### Product description

A two-pack high solid, aliphatic polyurethane topcoat with excellent gloss and colour retention. Hardtop XP bases are intermediates and need to be processed before use.

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### Recommended use

As a glossy topcoat over most epoxy systems where a durable, weather-resistant finish is required in a wide range of aggressive atmospheres.

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### Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry ( $\mu\text{m}$ )	40	100	60
Film thickness, wet ( $\mu\text{m}$ )	65	160	95
Theoretical spreading rate ( $\text{m}^2/\text{l}$ )	15,8	6,3	10,5

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### Physical properties

Colour	According to colour card and Multicolor tinting system (MCI)
Solids (vol %)*	63 $\pm$ 2
Flash point	30°C $\pm$ 2 (Setaflash)
VOC	2,8 lbs/gal (336 gms/ltr) USA-EPA Method 24 320 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Glossy
Gloss retention	Excellent
Water resistance	Very good
Abrasion resistance	Very good
Solvent resistance	Very good
Chemical resistance	Very good
Flexibility	Very good

\*Measured according to ISO 3233:1998 (E)

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### Surface preparation

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

#### Coated surfaces

Clean, dry and undamaged compatible primer. Please contact your local Jotun office for more information.

#### Other surfaces

The coating may be used on other substrates. Please contact your local Jotun office for more information.

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## Condition during application

The temperature of the substrate should be minimum 0°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying.

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## Application methods

<b>Spray</b>	Use airless spray or conventional spray
<b>Brush</b>	Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.
<b>Roller</b>	May be used. However when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness.

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## Application data

<b>Mixing ratio (volume)</b>	10:1
<b>Mixing</b>	10 parts Comp. A (Base) to be mixed thoroughly with 1 part Hardtop XP, Comp. B (Curing agent).
<b>Pot life (23°C)</b>	1,5 hours
<b>Thinner/Cleaner</b>	Jotun Thinner No. 10
<b>Guiding data airless spray</b>	
<b>Pressure at nozzle</b>	15 MPa (150 kp/cm <sup>2</sup> , 2100 psi)
<b>Nozzle tip</b>	0.28-0.38 mm (0.011-0.017")
<b>Spray angle</b>	40-80°
<b>Filter</b>	Check to ensure that filters are clean.
<b>Note</b>	Jotun Thinner No. 26 is supplied and used in USA due to legislation.

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## Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

- \* Good ventilation (Outdoor exposure or free circulation of air)
- \* Typical film thickness
- \* One coat on top of inert substrate

<b>Substrate temperature</b>	<b>5°C</b>	<b>10°C</b>	<b>23°C</b>	<b>40°C</b>
<b>Surface dry</b>	16 h	6 h	3,5 h	2 h
<b>Through dry</b>	24 h	14 h	7 h	4 h
<b>Cured</b>	21 d	14 d	7 d	3 d
<b>Dry to recoat, minimum</b>	24 h	14 h	7 h	4 h
<b>Dry to recoat, maximum <sup>1</sup></b>				

1. The surface should be dry and free from any contamination or chalking prior to application of the subsequent coat.
2. Early exposure to condensation (high humidity, low temperature) may cause colour and/or gloss variations.

The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

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## Typical paint system

Jotacote Universal	1 x 150 µm	(Dry Film Thickness)
<b>Hardtop XP</b>	<b>1 x 60 µm</b>	<b>(Dry Film Thickness)</b>
Jotamastic 87	1 x 150 µm	(Dry Film Thickness)
<b>Hardtop XP</b>	<b>1 x 60 µm</b>	<b>(Dry Film Thickness)</b>

**Note:** To obtain full coverage an extra coat may be necessary, especially for signal colours in red, orange and yellow.  
**Other systems may be specified, depending on area of use**

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## Storage

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

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## Handling

Handle with care. Stir well before use.

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## Packing size

20 litre unit: 18,2 litres Comp. A in a 20 litre container and 1,8 litres Hardtop XP Comp. B (curing agent) in a 3 litre container or  
5 litre unit: 4,55 litres Comp. A in a 5 litre container and 0.45 litre Hardtop XP Comp. B (curing agent) in a 1 litre container

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## Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

**For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.**

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### DISCLAIMER

*The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product is often used under conditions beyond our control, we cannot guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.*

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