

# Technical Data

## PENGUARD HB ZP



### Product description

Penguard HB ZP is a two-pack zinc phosphate pigmented epoxy coating based on an epoxy resin with high molecular weight.

### Recommended use

Steel work in general, galvanized steel or aluminium. Usually used in combination with an epoxy or polyurethane system.

### Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry ( $\mu\text{m}$ )	100	150	125
Film thickness, wet ( $\mu\text{m}$ )	185	280	230
Theoretical spreading rate ( $\text{m}^2/\text{l}$ )	5.4	3.6	4.3

### Physical properties

Colour	Off White
Solids (vol %)*	54 $\pm$ 2
Flash point	23°C $\pm$ 2 (Setaflash)
Gloss	Flat
Water resistance	Very good
Abrasion resistance	Very good
Solvent resistance	Excellent
Chemical resistance	Excellent
Flexibility	Good

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

### Surface preparation

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

#### Bare steel

Cleanliness: Blast cleaning to Sa 2½ (ISO 8501-1:1988). Roughness: using abrasives suitable to achieve grade Fine to Medium G (30-85  $\mu\text{m}$ , Ry5) (ISO 8503-2)

#### Shopprimed steel

Clean, dry and undamaged approved blast-primer.

#### Coated surfaces

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

#### Other surfaces

The surface must be sound, clean and dry. Surface contamination to be removed by detergent and

fresh water cleaning.

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

## Condition during application

For steel substrate: The temperature of the substrate should be minimum 10°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. For Concrete: The moisture content in the concrete should not exceed 4 % (by weight). The coating should not be exposed to oil, chemicals or mechanical stress until fully cured.

## Application methods

**Spray** Airless spray  
**Brush** Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.

## Application data

**Mixing ratio (volume)** 4 parts of component A (base) to be thoroughly mixed with 1 part of component B (hardener), half an hour prior to application.  
**Mixing** ½ hour prior to use.  
**Pot life (23°C)** 8 hours. (Reduced at higher temp.)  
**Thinner/Cleaner** Jotun Thinner No. 17  
**Guiding data airless spray**  
**Pressure at nozzle** Min. 150 kg/sq. cm (2100 p.s.i.)  
**Nozzle tip** 0.46 - 0.69mm (0.018-0.027")  
**Spray angle** 40° - 80°  
**Filter** Check to ensure that filters are clean.

## 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

Substrate temperature	10°C	23°C	40°C
Surface dry	5 h	2 h	1 h
Through dry	16 h	8 h	3 h
Cured	14 d	7 d	3 d
Dry to recoat, minimum	16 h	8 h	3 h
Dry to recoat, maximum <sup>1</sup>			

1 Provided the surface is free from chalking and other contamination prior to application, there is normally no overcoating time limit. If the coating has been exposed to direct sunlight for some time, special attention must be paid to surface cleaning and mattening/removal of the surface layer in order to obtain good adhesion.

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.

## Typical paint system

**Penguard HB ZP** 1-2 x 100 µm (Dry Film Thickness)  
Normally topcoated with Epoxy or Polyurethane.

Other systems may be specified, depending on area of use

## 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.

## Handling

Handle with care. Stir well before use.

## Packing size

16 L. (comp. A) And 4 L. (comp. B).

Packing may vary from country to country according to local requirements.

## 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.**

## 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.*

### Head Office & Nordic

Jotun Paints  
P.O. Box 2021  
N-3248 Sandefjord  
Norway  
Phone +47 33 45 70 00  
Fax +47 33 46 46 13

### Europe

Jotun Paints (Europe) Ltd.  
Stather Road, Flixborough  
North Lincolnshire DN15 8RR  
United Kingdom  
Phone +44 172 44 00 000  
Fax +44 172 44 00 100

### Middle East

Jotun U.A.E Ltd. LLC.  
Al Quoz Industrial Area  
P.O Box 3671  
Dubai U.A.E  
Phone +971 4 3 39 50 00  
Fax +971 4 3 38 06 66

### South East Asia

Jotun (Singapore) Pte. Ltd.  
No 11-15, Sixth Lok Yang  
Road  
Jurong  
Singapore 628 111  
Phone +65 6265 4711  
Fax +65 6265 7484

Jotun is a World Wide company with factories, sales offices and stocks in more than 50 countries. For your nearest local Jotun address please contact the nearest regional office or visit our website at [www.jotun.com](http://www.jotun.com)

ISSUED 8 MAY 2002 BY JOTUN PAINTS  
THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED