

Technical Data

PENGUARD SPECIAL



Product description

Penguard Special 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 (μm)	80	150	100
Film thickness, wet (μm)	160	300	200
Theoretical spreading rate (m^2/l)	6.3	3.3	5

Physical properties

Colour	Red, Grey and off white.
Solids (vol %)*	50 ± 2
Flash point	$25^\circ\text{C} \pm 2$ (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 μm , Ry5) (ISO 8503-2)

Coated surfaces

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

Other surfaces

For aluminium, galvanized and stainless steel, the surface must be clean and dry. Consult your local Jotun office for further details

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

Condition during application

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. Good ventilation is usually required in confined areas to ensure proper drying. The coating should not be exposed to oil, chemicals or mechanical stress until cured. If necessary, Penguard Stayer, Penguard Primer, Penguard HB, Penguard Special may be used down to 2°C, provided a special accelerator is added.

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 Comp. A (base) to be mixed thoroughly with 1 part Comp. B (curing agent).
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 15 MPa (150 kp/cm² 2100 psi)
Nozzle tip 0.46-0.69 mm (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

Normal hardener

Substrate temperature	10°C	23°C	40°C
Surface dry	4 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 ¹			

- 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 Special 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. Preferred storage conditions are to keep the containers in a dry space provided with adequate ventilation. The containers should be sealed tightly.

Handling

Handle with care. Stir well before use.

Packing size

16 L. Comp. A (base) and 4 L. Comp. B (curing agent)

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.

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