



JOTUN

Penguard Express

Speeding up the production process



Fast Drying High Solids Epoxy Coatings

3 choices for Tailored Protection

Penguard Express

Penguard Express is a fast drying, high solids 2-pack epoxy coating which may be applied in high film thickness and at lower temperatures. It is for use as an anti-corrosive primer or intermediate coat for the protection of steel and other substrates in atmospheric exposure. The fast dry-to-recoat and dry-to-handle times allow for increased throughput and efficiency during the paint application process.

Penguard Express ZP

Penguard Express ZP offers all the benefits of Penguard Express. It is pigmented with zinc phosphate for increased corrosion protection and is the natural choice as a first coat for protection of metal structures exposed in highly corrosive environments.

Penguard Express MIO

Penguard Express MIO is reinforced with micaceous iron oxide pigments for increased barrier effect. This barrier effect is provided by overlapping layers of the MIO pigments which prevent moisture penetrating through the paint film. It further provides increased hardness and improved adhesion of subsequent coats.

Product Data

Dry film thickness μm (min/max)	75 - 250			
Solids (vol%)	74 \pm 2			
Colours:				
Penguard Express	Grey, Red, Buff, Light Red, Turquoise			
Penguard Express ZP	Grey, Red			
Penguard Express MIO	Grey, Red			
Mixing ratio	4 parts Comp.A (base) 1 part Comp.B (curing agent)			
Pot life (23°C)	2 hours (reduced at higher temperature)			
Drying times:	40°C	23°C	10°C	-5°C
Surface dry	0.5 hr	1 hr	2 hrs	16 hrs
Dry to recoat (minimum)	1 hr	2 hrs	4 hrs	24 hrs

Penguard Express

Fast Drying High Solids Epoxy Coatings



Fast to dry

Dry to recoat after only 2 hours at 23°C

- Speeds up the process and improves efficiency of applicators, contractors and steel fabricators
- Reduces the need for space for drying of painted structures
- Reduces risk of damage during transport and handling



Low & High temperature application

Application range from -5°C to above 40°C

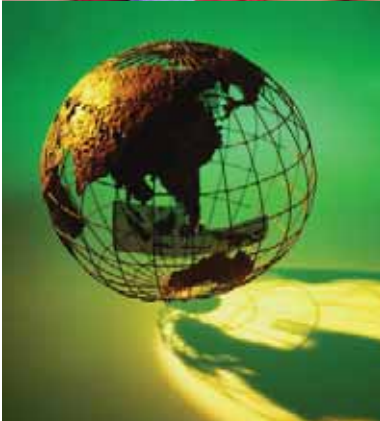
- Low temperature curing enables the application process to continue – even at temperatures below freezing
- Pot life of 45 minutes at 40°C enables users in hot climates to reap the benefits of Penguard Express
- Same curing agent at low and high temperatures reduces risk of errors and simplifies application



High volume solids

74% volume solids, 230 g/l VOCs

- Ensures compliance with existing and future legislation
- Reduced wastage and volume of paint required
- Reduced solvent emission mean less environmental impact and safer to use



Optimum topcoat hiding power

Colour Management Concept

- Colours designed to ensure optimum hiding power by any selected topcoat colour
- Reduction in topcoat thickness requirement



Broad dry film thickness range

Application range from 75µm to 250µm DFT

- Easy application with good flow and film formation at 75µm combined with no sagging at 250µm in one coat ensures a wide flexibility in application
- Primer and intermediate coat can be applied as a single coat
- Improved efficiency – saves application time – saves money

Reducing recoating times or shortening dry-to-handle periods can offer real benefits – especially in production processes.

These are exactly the features provided by Penguard Express

The Penguard Express range is designed to speed up the production process. Each of the three products – Penguard Express, Penguard Express ZP and Penguard Express MIO – provides fast dry-to-recoat and fast dry-to-handle times. These are the essential elements that increase the speed and efficiency for paint contractors and fabrication lines.

Penguard Express is designed for protection of structural steel, external tanks, pipes, cranes and numerous steel structures and objects. Coating systems for such structures must be specified according to the particular corrosive environment and expected lifetime. The common factor with Penguard Express products is that they are fast drying and high build epoxies, allowing the coating system to be completed within one day in most cases, even at low temperatures.

Exposed Steel Structures

Steel structures which are exposed to heavy atmospheric environments, such as onshore and offshore oil & gas installations, cranes, bridges, power plants and exteriors of tanks, need a coating system that provides long term, durable protection.

In such cases the coating system will often be based on a zinc rich primer, followed by 1 or 2 coats of high build epoxy with a polyurethane topcoat. Penguard Express is designed to provide excellent protection and strong adhesion to both the zinc primer and the topcoat in such coating systems.

Using Penguard Express it is possible to apply even a 4-coat system in one day. At 10°C this can be completed within 10 hours. In hot climates where the steel substrate may reach 40°C, it can even be completed in less than 3 hours.

EXPOSED STEEL STRUCTURES		Dry to recoat (minimum)			
Coat no.	Product	DFT μm	10°C	23°C	40°C
1	Barrier	50	2 hrs	1.5 hrs	40 min
2	Penguard Express	125	4 hrs	2 hrs	1 hr
3	Penguard Express	125	4 hrs	2 hrs	1 hr
4	Hardtop AS/Hardtop XP	50	-	-	-



Structural Steel

Structural steel for office blocks, sport stadia, exhibition halls and infrastructure projects are usually protected with one or two coats of an epoxy – with or without zinc phosphate and MIO-pigmentation. Where a good cosmetic appearance is desired, a polyurethane topcoat is often part of the coating system.

Application of a 3 coat system, including Penguard Express, can be completed within 8 hours at 10°C or within just 2 hours should the temperature reach 40°C.

STRUCTURAL STEEL		Dry to recoat (minimum)			
Coat no.	Product	DFT μm	10°C	23°C	40°C
1	Penguard Express ZP	75	4 hrs	2 hrs	1 hr
2	Penguard Express MIO	125	4 hrs	2 hrs	1 hr
3	Hardtop ASI/Hardtop XP	50	-	-	-



Colour Management Concept

Offers the potential to reduce the number of topcoats needed and the total topcoat DFT

Jotun offers the unique Colour Management Concept. Three basic primer colours have been developed to ensure optimum hiding power by any selected topcoat colour.

These three colours are buff, light red and turquoise. By selecting the right primer colour, good hiding power and cosmetic appearance can be achieved by fewer number of coats or lower DFTs when compared to other primer colours.

The primer colour can be selected using the guidelines below.

THE PENGUARD EXPRESS COLOUR SHOULD BE:

IDENTIFY YOUR TOPCOAT COLOUR WITHIN THE RANGE BELOW:

Buff	White
	Yellow
	Yellow – Orange
	Orange
Light Red	Red – Orange
	Red
	Bordeaux
Turquoise	Violet
	Blue
	Green
	Greenish – Yellow



Jotun A/S, P.O. Box 2021,
N-3248 Sandefjord, Norway
Tel: +47 33 45 70 00
Fax: +47 33 46 46 13

www.jotun.com