



**JOTUN**

***Penguard*** | EXPRESS

***CORROSION PROTECTION WITH  
SPEED, COLOUR AND EFFICIENCY***



# Penguard | EXPRESS

*Tailor corrosion protection to fit your needs!*



## SPEED

- Very fast dry-to-recoat
- Very fast dry-to-handle
- Fast drying in temperatures from -5°C to 40°C
- Full system completion within one day even at low temperatures



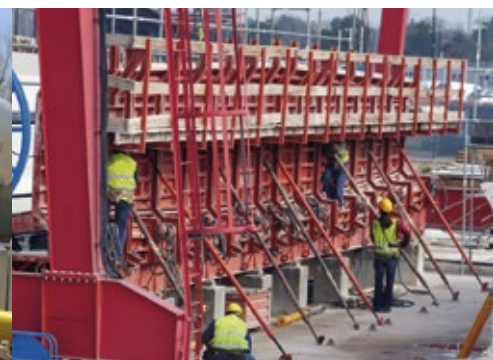
## COLOUR

- For areas where exact colour match and colour stability matter, Penguard Express CF offers the following benefits:
  - Jotun Multicolour Industry tinting system gives virtually unlimited colour choice
  - Less yellowing and darkening
  - Better performance in touch up and repair work at the new construction site



## EFFICIENCY

- Fast hardness development minimises damage when structures are moved and stacked
- Fast curing reduces the need for space for drying painted structures
- Low temperature cure extends production periods and also allows application in cold climates
- Extended production periods reduce heating costs, risk of errors and simplify application
- High volume solids reduces paint volume required



## **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. 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. Available in variant compliant with the requirements for LEED 2009 (VOC content (GS11)), BREEAM and BREEAM-NOR (VOC content (EU Directive 2004/42/CE)).

## **Penguard** | EXPRESS ZP

Penguard Express ZP is pigmented with active 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. Available in variant compliant with the requirements for LEED 2009 (VOC content (GS11)), BREEAM and BREEAM-NOR (VOC content (EU Directive 2004/42/CE)).

## **Penguard** | EXPRESS MIO

Penguard Express MIO is reinforced with micaceous iron oxide pigments for increased barrier effect. This 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. Available in variant compliant with the requirements for LEED 2009 (VOC content (GS11)), BREEAM and BREEAM-NOR (VOC content (EU Directive 2004/42/CE)).

## **Penguard** | EXPRESS CF

Penguard Express CF, the most recent addition to the Penguard Express range, offers more colour stability and a wide range of colours through MCI. It offers all the benefits of Penguard Express and can be delivered in small batches.



# Penguard | EXPRESS

## *The ideal solution for all steel substrates*

### **Exposed Steel Structures**

Steel structures which are exposed to tough atmospheric environments, need a coating system that provides long term, durable protection.



Typically the coating system can be based on a zinc rich primer, 1 or 2 coats of high build epoxy with a topcoat. Penguard Express will provide strong adhesion to both the zinc primer and the topcoat giving excellent protection.

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

### **Structural Steelwork**

Structural steel for infrastructure projects is usually protected with one or two coats of an epoxy eventually with a topcoat.

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



### **Where colour and colour stability matter**

Penguard Express CF meets our customers' needs for a fast curing epoxy coating that is available in a wide range of colours.

Penguard Express CF meets the demands for a more colour stable epoxy coating combined with excellent anticorrosive properties.

Penguard Express CF can be used direct to steel and in one coat application.



# Product data

	Penguard Express	Penguard Express ZP	Penguard Express MIO	Penguard Express CF	
Dry film thickness $\mu\text{m}$ (min – max)	75 – 250	75 – 250	75 – 250	100 – 250	
Solids (vol%)	74 $\pm$ 2	74 $\pm$ 2	74 $\pm$ 2	77 $\pm$ 2	
VOC g/l (EPA Method 24)	260	260	260	231	
Pot life	2 hr	2 hr	2 hr	1 hr	
Colours	Grey, Grey XO, Red, Buff, Light Red	Grey, Red	Grey, Red	Wide choice with MCI tinting system	
Mixing ratio	4 parts Comp. A (base) 1 part Comp. B (curing agent)				
Pot life (23°C)	2 hours (reduced at higher temperature)			1 hour	
Drying times	Surface Dry		Dry to recoat (min)	Surface Dry	Dry to recoat (min)
	40°C	0.5 hr	1 hr	1 hr	1.5 hrs
	23°C	1 hr	2 hrs	2.5 hrs	3 hrs
	10°C	2 hrs	4 hrs	4.5 hrs	6 hrs
	0°C	11 hrs	14 hrs	16 hrs	24 hrs
	-5°C	16 hrs	24 hrs	–	–

## Typical systems

There are many factors influencing the choice of coatings for protection of a steel structure. Penguard range of products can be applied in a wide range of situations.

Any Penguard Express variant can be used in the system examples shown.

Used in combination with zinc rich primers, the service life of the coating system will be prolonged in higher corrosive areas.

In UV exposed areas and where long colour and gloss durability are required, a high performance topcoat should be used.

### ONE COAT APPLICATION FOR LOWER CORROSIVE AREAS

Product	Coats	DFT $\mu\text{m}$
Penguard Express	1	80*

### SYSTEMS FOR MEDIUM CORROSIVE AREAS

Product	Coats	DFT $\mu\text{m}$
Penguard Express	1	175

Product	Coats	DFT $\mu\text{m}$
Penguard Express	1	80*
Penguard Express	1	80*

### TWO OR THREE COAT SYSTEMS FOR HIGH AND VERY HIGH CORROSIVE AREAS

Product	Coats	DFT $\mu\text{m}$
Penguard Express	1	160
Penguard Express	1	160

Product	Coats	DFT $\mu\text{m}$
Barrier 80	1	60
Penguard Express	1	100
Penguard Express	1	100

\*Penguard Express CF: Min. 100  $\mu\text{m}$  DFT



# **Penguard** | EXPRESS

*Delivering speed, colour and efficiency to the production process*

Reduced recoating times and shorter dry-to-handle periods save time, lower costs and increase output

- Speeds up the production process and improves efficiency for applicators, contractors and steel fabricators
- Saves heating costs
- Reduces risk of errors and simplifies application by using same curing agent at low and high temperatures
- Easy to apply. Can also be applied by brush and roller
- Save coats and processing times by using any Penguard Express variant as single coat, primer or intermediate coat

Penguard Express CF provides wider choice of colours and better colour stability

- More colour stable than other fast curing epoxy primers especially in non-UV exposed areas
- Can be applied directly to metal or as part of a system
- Provides all the benefits of Penguard Express and can be delivered fast and in small batches anywhere
- Provides fast handling, simplifies logistics and improves performance in touch up and repair work at the new construction site



Jotun Protects Property

# A global provider of coatings



Jotun is one of the world's leading manufacturers of paints, coatings and powder coatings.

We have 68 companies in 43 countries and 33 production facilities in 20 countries on all continents, and are represented in more than 90 countries with our network of agents, branch offices, distributors and sales offices around the world.

Our operations cover development, production, marketing, R&D and sales of paints and coatings to protect and decorate surfaces in residential, shipping and industrial markets.

## UNIFORM STANDARD ACROSS THE GLOBE



- Easy to exchange trained technical personnel across national borders and multi-national projects.
- Compulsory training for all technical and sales personnel in marine and protective segments. Most of our coating advisors and technical personnel have FROSIO and/or NACE certification.
- Same competence in maintaining company standard procedures globally.

## Jotun GreenSteps

### FOR A MORE COLOURFUL WORLD, WE ALL NEED TO BE A LITTLE GREENER

Jotun recognises the responsibility it has to the environment and has established its own GreenSteps programme.

Through the GreenSteps programme we address market demand for more sustainable coatings solutions.



# Jotun Marine Coatings and Jotun Protective Coatings offices worldwide

Legal Jotun entities worldwide are listed. For details of Branch offices and Jotun representation in countries not listed, please visit [jotun.com](http://jotun.com)

## AUSTRALIA

Jotun Australia Pty. Ltd.,  
P.O. Box 105, Altona North,  
9 Cawley Road,  
BROOKLYN, VIC 3025  
Tel: +61 3 9314 0722  
Fax: +61 3 9314 0423

## BRAZIL

Jotun Brasil Ltda.  
Estrada Ademair Ferreira Torres 250  
Caluge - Itaborai (RJ) CEP 24808-520  
RIO DE JANEIRO  
Tel: +55 21 3147 3850  
Fax: +55 21 3147 3861

## CYPRUS

Jotun Cyprus Ltd.  
56 Theodorou Potamianou  
Aphrodite Court, 1st Floor  
4155, Kato Polemida  
LIMASSOL  
Tel: +357 25 374455 / 374440 / 374477  
Fax: +357 25 374400

## P.R. of CHINA

Jotun Coatings (Zhangjiagang) Co. Ltd.  
Jotun COSCO Marine Coatings  
(Qingdao) Co. Ltd.  
Floor 20, Jiu Shi Mansions,  
No. 28 Zhong Shan Road (South)  
SHANGHAI 200010  
Tel: +86 21 6333 080 0  
Fax: +86 21 6326 968 6

Jotun Coatings (Zhangjiagang) Co. Ltd.  
Jotun COSCO Marine Coatings  
(Qingdao) Co. Ltd.  
Room 709-12, Goldlion Digital Network  
Centre, 138 Tiyu Road East,  
GUANGZHOU, 510620  
Tel: +86 20 38 78 07 49  
Fax: +86 20 38 78 19 66

## HONG KONG

Jotun COSCO Marine Coatings (H.K.) Ltd  
Room 902, 9/F,  
101 King's Road, North Point  
HONG KONG  
Tel: +852 2527 6466  
Fax: +852 2861 1307

## DENMARK

Jotun Danmark A/S Jotun Coatings  
Columbusvej 5, 2860 Søborg,  
COPENHAGEN  
Tel: +45 4492 9400  
Fax: +45 4492 9401

## EGYPT

El Mohandes Jotun S.A.E.  
Plot 193, Second District,  
City Center, Fifth Settlement,  
NEW CAIRO  
Tel: +202 2614 9999  
Fax: +202 2614 9998

## FINLAND

Nor-Maali OY  
Vanhatie 20, 15240 LAHTI  
Tel: +358 3 874 650  
Fax: +358 3 874 6550

## FRANCE

Jotun France S.A.  
22/24 Rue du President Wilson, Bat.A  
92300 LEVALLOIS PERRET  
Tel: +33 1 4519 3882  
Fax: +33 1 4519 3894

## GERMANY

Jotun (Deutschland) GmbH  
Haferweg 38  
22769 HAMBURG  
Tel: +49 40 851 960  
Fax: +49 40 856 234

## GREAT BRITAIN

Jotun Paints (Europe) Ltd.  
Stather Road, Flixborough,  
SCUNTHORPE DN15 8RR  
Tel: +44 1724 400 000  
Fax: +44 1724 400 100

## GREECE

Jotun Hellas Ltd.  
33, Zeppou Street,  
Glyfada  
ATHENS 16675  
Tel: +30 210 42 85 980-82  
+30 210 42 86 035-37  
Fax: +30 210 42 85 983/  
+30 210 42 87 237

## INDIA

Jotun India Pvt Ltd.  
502, 5th Floor,  
Boston House,  
Suren Road,  
Behind Cinemax Theatre,  
Andheri East,  
Mumbai - 400 093  
Tel: +91 22 2822 4600  
+91 22 2820 5900 (+fax)  
Fax: +91 22 2820 5900

## INDONESIA

P.T. Jotun Indonesia  
Kawasan Industri MM2100  
Blok KK-1, Cikarang Barat  
Bekasi 17520  
Tel: +62 21 8998 2657  
Fax: +62 21 8998 2658

## IRELAND

Jotun (Ireland) Ltd.,  
Unit K7, Marina Commercial Park,  
Centre Park Road, CORK  
Tel: +353 214 965955  
Fax: +353 214 965992

## ITALY

Jotun Italia S.P.A.  
Via Petronio, 8, Zona Ind. Noghese  
34147 - MUGGIA (TRIESTE)  
Tel: +39 040 23 98204  
Fax: +39 040 23 98222

## JAPAN

NKM Coatings Co., Ltd.  
12-1, Minamirokugo 3-chome,  
Ota-ku,  
TOKYO 144-0045  
Tel: +81 3 6758 2212  
Fax: +81 3 6758 2213

## KOREA (SOUTH)

Chokwang-Jotun Ltd.  
30th Block Jisa Science Park,  
1205 Jisa-dong, Gangseo-gu,  
BUSAN 618-230  
Tel: +82 517 976 000  
Fax: +82 517 117 735

## LIBYA

Jotun Libya J.S.Co  
Almumtaz Co. S.A. (Jotun).  
Aalseka Street  
P.O. Box 6850  
TRIPOLI  
Tel: +218 214777811  
Fax: +218 214780718

## MALAYSIA

Jotun Paints (Malaysia) Sdn. Bhd.  
Lot 7 Persiaran Perusahaan,  
Section 23, P.O. Box 7050  
40700 SHAH ALAM  
Tel: +60 351 235 500  
Fax: +60 351 235 632

## THE NETHERLANDS

Jotun B.V.  
Postbus 208  
3200 AE SPIJKENISSE  
Visiting address:  
Curieweg 11b, 3208 KJ Spijkenisse  
ROTTERDAM  
Tel: +31 181 678 300  
Fax: +31 181 617 899

## NORWAY

Jotun A/S  
P.O. Box 2021,  
3202 SANDEFJORD  
Visiting address:  
Hystadveien 167, 3209 Sandefjord  
Tel: +47 33 45 70 00  
Fax: +47 33 45 79 00

## OMAN

Jotun Paints Co. LLC  
Rusayl Ind. Estate, Road No.10  
P.O. Box 672 Code 111, MUSCAT  
Tel: +968 2444 6100  
Fax: +968 2444 6105

## PAKISTAN

Jotun Pakistan (Pvt.) Ltd.  
2KM Defence Road, Off 9KM Raiwind  
Road, Adjacent Valencia Homes Gate  
LAHORE 544770  
Tel: +92 423 532 350 0-3  
Fax: +92 423 532 1387

## PHILIPPINES

Jotun (Philippines) Inc.  
846 West Service Road, Km.18  
South Super Highway  
Paranaque City,  
METRO MANILA 1714  
Tel: +63 2239 1032-34  
Fax: +63 2822 0760

## POLAND

Jotun Polska Sp.zo.o.  
ul. Magnacka 15,  
80-180 GDAŃSK KOWALE  
Tel: +48 58 555 1515  
Fax: +48 58 781 9692

## RUSSIA

Jotun Paints O.O.O.  
Varshavskaya Str., 23/2, Office 75  
196128 ST. PETERSBURG  
Tel: +7 812 640 00 80  
Fax: +7 812 640 00 81

## SAUDI ARABIA

Jotun Saudia Co. Ltd.  
Jeddah Industrial City, Phase 3,  
P.O. Box 34698, JEDDAH 21478  
Tel: +966 2635 0535 / 2636 1271  
Fax: +966 2636 2483

## SINGAPORE

Jotun (Singapore) Pte. Ltd.  
37 Tuas View Crescent  
Singapore 637236  
Tel: +65 650 882 88  
Fax: +65 6265 7484

## SOUTH AFRICA

Jotun Paints South Africa (PTY) Ltd.  
Wimbledon Road, P.O.Box 187  
BLACKHEATH 7581  
Tel: +27 21 905 1070  
Fax: +27 21 905 1652

## SPAIN

Jotun Iberica S.A.  
Poligon Santa Rita,  
Calle Estatica no. 3,  
08755 Castellbisbal,  
BARCELONA  
Tel: +34 937 711 800  
Fax: +34 937 711 801

## SWEDEN

Jotun Sverige AB  
P.O. Box 151, Klangfärgsgatan 13,  
421 22 VÄSTRA FRÖLUNDA  
Tel: +46 3169 6300  
Fax: +46 3169 6397

## THAILAND

Jotun Thailand Ltd  
Amata Nakom Ind. Estate (BIPII)  
700/353 Moo 6 Tumbol  
Donhualoh, Amphur Muang  
CHONBURI 2000  
Tel: +66 2 022 9888  
Fax: +66 38 214 373/375

## TURKEY

Jotun Boya San. ve Ticaret. A.S.  
Balabandere Caddesi Hilpark Suites Sitesi No.10,  
Istinye 34460 Sariyer  
ISTANBUL  
Tel: +90 21 2279 7878  
Fax: +90 21 2279 2549

## U. A. E.

Abu Dhabi  
Jotun Abu Dhabi (LLC)  
P.O. Box 3714, Mussafah  
ABU DHABI  
Tel: +971 2691 0700  
Fax: +971 2551 0232

## Dubai

Jotun U.A.E. Ltd. (LLC)  
P.O. Box 3671,  
Al Quoz Industrial Area  
DUBAI  
Tel: +971 4339 5000  
Fax: +971 4338 0666

## USA

Jotun Paints Inc.  
9203 Highway 23, P.O. Box 159,  
Belle Chasse, LA 70037  
Tel: +1 713 860 8241  
Fax: +1 713 860 8242

## VIETNAM

Jotun Paints (Vietnam) Co. Ltd.  
Song Than Industrial. Zone,  
No.1 Street 10,  
Di An District, Binh Duong Province  
Tel: +84 650 3742206  
Fax: +84 650 374 2205

## YEMEN

Jotun Yemen Paints Co. Ltd  
P.O. Box 70183, Al Alam  
ADEN  
Tel: +967 2820 546-9  
Fax: +967 2249 362

## Jotun A/S

P.O. Box 2021,  
N-3202 Sandefjord, Norway  
Tel: +47 33 45 70 00

[jotun.com](http://jotun.com)



Jotun Protects Property