

Technical Data

Penguard FC



Product description

This is a high build, two component polyamide cured epoxy coating. This product is tintable in a wide range of colours in Jotuns Multicolour Industry system.

Recommended use

An epoxy finish coat to be used when cosmetic appearance of an epoxy finish is acceptable. It can also be used as an anti corrosive primer in mild to medium environment for steel and concrete above water areas or as an intermediate coat in more corrosive environment.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (μm)	80	200	100
Film thickness, wet (μm)	130	320	160
Theoretical spreading rate (m^2/l)	7,8	3,1	6,2

Comments

For application below typical film thickness, 160 microns WFT, up to 5% thinning may be needed to obtain proper flow and film forming.

Physical properties

Colour	Selected colours over Multicolour tinting system (MCI)
Solids (vol %)*	62 ± 2
Flash point	28°C ± 2 (Setaflash)
VOC	310 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Semigloss
Gloss retention	Fair
Water resistance	Very good
Abrasion resistance	Very good
Solvent resistance	Very good
Chemical resistance	Very good
Flexibility	Good

*Measured according to ISO 3233:1998 (E)

Hong Kong rules: Category of paints - Other vessel coatings; VOC 348 gms/ltr HK EPD method (Ready to use); Exempt compound - N/A; Specific gravity: 1,48 (A+B); Both VOC and Specific gravity values provided are typical values, and will vary according to colour chosen.

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 8501-1:2007). Roughness: using abrasives suitable to achieve grade Fine to Medium G (30-85 µm, Ry5) (ISO 8503-2)

Shopprimed steel

Clean, dry and undamaged approved shopprimer.

Coated surfaces

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

Other surfaces

For aluminium and galvanized surface; degreasing, light abrading or sand sweeping.

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 0°C and minimum 3°C above the dew point of the air. The temperature and the relative humidity should be measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying. With forced ventilation, avoid heated air at first as this may cause surface drying and solvent entrapment. The coating should not be exposed to oil, chemicals or mechanical stress until fully cured.

Application methods

Spray	Use airless spray
Brush	Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.
Roller	Use a suitable roller. However when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness.

Application data

Mixing ratio (volume)	4:1
Mixing	4 parts Comp. A (base) to be mixed thoroughly with 1 part Penguard FC, Comp. B (curing agent) 15 minutes prior to use.
Pot life (23°C)	2 hours (reduced at higher temp.)
Thinner/Cleaner	Jotun Thinner No. 17
Guiding data airless spray	
Pressure at nozzle	15 MPa (150 kp/cm ² , 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

Substrate temperature	0°C	5°C	10°C	23°C	40°C
Surface dry	9 h	8 h	7 h	2,5 h	1 h
Through dry	36 h	24 h	15 h	7,5 h	2 h
Cured		14 d	8 d	4 d	2 d
Dry to recoat, minimum	36 h	24 h	15 h	7,5 h	4 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 FC can be applied direct to metal or over a wide range of primers including:

Barrier	Penguard Midcoat	Primastic Universal
Jotamastic 87	Penguard Express	Penguard Tie Coat 100
Jotacote Universal	Penguard HB	

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

20 litre unit: 16 litres Comp. A (base) in a 20 litre container and 4 litres Penguard FC, Comp. B (curing agent) in a 5 litre container.

5 litre unit: 4 litres Comp. A (base) in a 5 litre container and 1 litre Penguard FC, Comp. B (curing agent) in a 1 litre container.

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 can be used under conditions beyond our control, we can only guarantee the quality of the product itself. We also reserve the right to change the given data without notice. Minor product variations may be implemented in order to comply with local requirements.

If there is any inconsistency in the text the English (UK) version will prevail.

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