Penguard E33 WF II

Product description

This is a two component waterborne amine cured epoxy coating. It is a fast drying product containing flash rust inhibitors. Specially designed for equipment manufacturing where fast dry to handle and over coating times are required. Can be used as primer or mid coat in atmospheric environments. Suitable for properly prepared carbon steel, galvanised steel, stainless steel, aluminium and concrete substrates. It is part of a complete waterborne system with a recommended Jotun waterborne topcoat. For special pump application use SPE Comp B.

Typical use

Recommended for special vehicle, manufacturing equipment, steel and piping to be exposed to various corrosive environments.

Colours

grey, grey XO, red, black, off-white, green

Product data

Property	Test/Standard	Description
STANDARD GRADE		
Solids by volume	ISO 3233	52 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	non-flammable
Density	calculated	1.3 kg/l

Region	Regulation	Test Standard	VOC Value
China	Mandatory national standard of China	GB 30981.2-2025	118 g/l

SPE GRADE		
Solids by volume	ISO 3233	52 ± 2 %
Flash point	ISO 3679 Method 1	Non-flammable.
Density	calculated	1.3 kg/l

Region	Regulation	Test Standard	VOC Value
China	Mandatory national standard of China	GB 30981.2-2025	118 g/l

The provided data is typical for factory produced products, subject to slight variation depending on colour.

Gloss description: According to Jotun Performance Coatings' definition.

This Technical Data Sheet supersedes those previously issued.

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Film thickness per coat

Typical recommended specification range

STANDARD GRADE

Dry film thickness	30	-	80	µm
Wet film thickness	58	-	154	µm
Theoretical spreading rate	17.3	-	6.5	m²/l

SPE GRADE

Dry film thickness	30	-	80	µm
Wet film thickness	58	-	154	µm
Theoretical spreading rate	17.3	-	6.5	m²/l

Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	Sa 2½ (ISO 8501-1)
Aluminium	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface.	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Galvanised steel	The surface shall be clean, dry and appear with a rough and dull profile.	Sweep blast-cleaning using non-metallic abrasive leaving a clean, rough and even pattern.
Stainless steel	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface.	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Concrete	Minimum 4 weeks curing. Moisture content maximum 5 %. Mechanically prepare the existing concrete surface by scabbling, needle gun, mechanical disc grinding.	Minimum 4 weeks curing. Moisture content maximum 5 %. Mechanically prepare the existing concrete surface by scabbling, needle gun, mechanical disc grinding.
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating

Application

Application methods

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The product can be applied by

Spray:	Use air spray or airless spray.
Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.
Roller:	May be used for small areas. Not recommended for first primer coat. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio (by volume)

STANDARD GRADE

Penguard E33 WF II Comp A	7 part(s)
Penguard E33 WF II Comp B	10 part(s)

SPE GRADE

Penguard E33 WF II Comp A	7 part(s)
Penguard E33 WF II SPE Comp B	10 part(s)

Thinner/Cleaning solvent

Thinner:	Deionized water
Cleaning solvent:	Jotun Thinner No. 17 / Jotun Thinner No. 4

Jotun Thinner No. 28 can replace Jotun Thinner No. 4 as an alternative cleaning solvent.

When thinners are used as a cleaning solvent, the use must be in accordance with prevailing local regulations.

Guiding data for airless spray

Nozzle tip (inch/1000):	7-17
Pressure at nozzle (minimum):	150 bar/2175 psi

Guiding data for air spray

Nozzle tip:	Pressure pot: 1.1-1.9 (mm)
Pressure at nozzle (minimum):	Pressure pot: 2.1 bar / 30 psi

Drying and Curing time

Substrate temperature	5 °C	10 °C	23 °C	40 °C
STANDARD GRADE				
Surface (touch) dry	2 h	45 min	25 min	15 min
Walk-on-dry	15 h	8 h	3 h	2 h
Dry to over coat, minimum	15 h	8 h	3 h	2 h
Dried/cured for service	21 d	14 d	7 d	3 d
SPE GRADE				
Surface (touch) dry	2 h	45 min	25 min	15 min

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Walk-on-dry	15 h	8 h	3 h	2 h
Dry to over coat, minimum	15 h	8 h	3 h	2 h
Dried/cured for service	21 d	14 d	7 d	3 d

For maximum overcoating intervals, refer to the Application Guide (AG) for this product.

Drying and curing times are determined under controlled temperatures and relative humidity below 80 %, and at average of the DFT range for the product.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage.

Dry to over coat, minimum: The recommended shortest time before the next coat can be applied.

Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

Induction time and Pot life

Paint temperature	**10 °C**	**23 °C**	**40 °C**
STANDARD GRADE			
Pot life	1.5 h	1.5 h	1 h
SPE GRADE			
Pot life	1.5 h	1.5 h	1 h

The paint is not to be used after exceeded pot life time.

Heat resistance

	Temperature	
	Continuous	**Peak**
Dry, atmospheric	120 °C	140 °C

Applies to both Standard Grade and SPE Grade

Peak temperature duration max. 1 hour.

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jotun for specific system recommendation.

Subsequent coat: epoxy, polyurethane, acrylic

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Packaging (typical)

	Volume (litres)	Size of containers (litres)
STANDARD GRADE		
Penguard E33 WF II Comp A	7	20
Penguard E33 WF II Comp B	10	10
SPE GRADE		
Penguard E33 WF II SPE Comp B	10	10

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, shaded, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Protect from freezing at all times during storage and transport. Recommended storage temperature is between 5 °C and 35 °C.

Shelf life at 23 °C

Penguard E33 WF II Comp A	12 month(s)
Penguard E33 WF II Comp B	9 month(s)
Penguard E33 WF II SPE Comp B	9 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Caution

This product is for professional use only. The applicator and operator shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Jotun's technical documentation. Applicators and operators should use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Jotun representative for approval before commencing the work.

Health and safety

Please observe the precautionary notices displayed in the container. Use under well-ventilated conditions. Do not inhale spray 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 sought medical attention immediately.

Colour variation

When applicable, products primarily meant for use as primers or antifoulings may have slight colour variations from batch to batch. Such products and epoxy-based products used as a finish coat may chalk when exposed to sunlight and weathering.

Colour and gloss retention on topcoats/finish coats may vary depending on type of colour, exposure environment such as temperature, UV intensity etc., application quality and generic type of paint. Contact your local Jotun office for further information.

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Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the data given without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

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