

Barrier Plus

Product description

This is a two component polyamine cured zinc rich epoxy coating. It is a high solids, very high zinc dust containing product. It conforms to the compositional requirements of SSPC paint 20, level 2 and ISO 12944/ISO 20340. It provides excellent corrosion protection as part of a complete coating system. To be used as primer in atmospheric environments. Suitable for carbon steel, repair of inorganic zinc silicate coating and damaged galvanised steel substrates. It can be applied down to 0 °C surface temperature. This product complies with ASTM D520 type II zinc dust.

Typical use

Protective:

Suitable for structural steel and piping to be exposed to highly corrosive environments, C5I or C5M (ISO 12944-2). Recommended for offshore environments, refineries, power plants, bridges, buildings, mining equipment and general structural steel. Specially designed as a primer in coating systems where extended durability is required. Product testing shows superior performance in adhesion/cohesion and electrical conductivity when compared to traditional zinc rich epoxy coatings.

Approvals and certificates

Pre-qualification testing in accordance with NORSOK M-501, Rev. 5, System 1, suitable for exterior exposure in offshore environment, below 120 °C.

Additional certificates and approvals may be available on request.

Colours

grey

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	60 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	27 °C
Density	calculated	2,56 kg/l
VOC-US/Hong Kong	US EPA method 24 (tested)	405 g/l
VOC-EU	IED (2010/75/EU) (calculated)	442 g/l
VOC-China	GB/T 23985-2009 (ISO 11890-1) (tested)	420 g/l

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

All data is valid for mixed paint.

Gloss description: According to Jotun Performance Coatings' definition.

Film thickness per coat

Typical recommended specification range

Dry film thickness	50 - 125	µm
Wet film thickness	83 - 210	µm
Theoretical spreading rate	12 - 4,8	m ² /l

The drying time will increase if DFT exceeds 90 µm.

Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 3 (ISO 8501-1)	Sa 2½ (ISO 8501-1)
Shop primed steel	Clean, dry and undamaged approved shop primer (ISO 12944-4 6.1)	Abrasive swept or alternatively blasted to Sa 2 (ISO 8501-1) of at least 70 % of the surface.

Application

Application methods

The product can be applied by

Spray:	Use airless spray.
Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio (by volume)

Barrier Plus Comp A	3,38 part(s)
Barrier Plus Comp B	1 part(s)

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17

Guiding data for airless spray

Nozzle tip (inch/1000): 15-21
Pressure at nozzle (minimum): 150 bar/2100 psi

Drying and Curing time

Substrate temperature	0 °C	5 °C	10 °C	23 °C	40 °C
Surface (touch) dry	2 h	1 h	40 min	25 min	10 min
Dry to handle	30 h	8 h	7 h	5 h	1.5 h
Dry to over coat, minimum	30 h	8 h	7 h	5 h	1.5 h
Dried/cured for service	30 d	14 d	10 d	5 d	3 d

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, 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.

Dry to handle: Minimum time before the coated objects can be handled without physical damage.

Dry to over coat, minimum: The shortest time allowed 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	23 °C
Pot life	12 h

Heat resistance

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

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.

Previous coat: inorganic zinc shop primer
Subsequent coat: polyurethane, epoxy, epoxy mastic

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Barrier Plus Comp A	6.75	10
Barrier Plus Comp B	2	3

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, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Shelf life at 23 °C

Barrier Plus Comp A	24 month(s)
Barrier Plus Comp B	24 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 applicators and operators 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 shall 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 on 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 medical attention sought 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 may fade and chalk when exposed to sunlight and weathering.

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 given data 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.
