Technical Data Sheet

Marathon 1000 XHB

Product description

This is a two component polyamine cured epoxy coating. It is a high build, solvent free, glass flake reinforced product. It has very good impact and abrasion resistance. Suitable for environments with very high corrosivity, such as areas in the splash or tidal zone. Can be used as primer, mid coat, finish coat or as single coat system in atmospheric and immersed environments. Suitable for properly prepared carbon steel, galvanised steel, shop primed steel, concrete and coated surfaces.

Typical use

Marine:
Specially suited in areas where high mechanical strength is required.

Protective:
Suitable for structural steel and piping to be exposed to corrosive environments up to very high and immersed. Recommended for offshore environments, refineries, power plants, bridges, buildings, mining equipment and general structural steel. Specially suited in areas where high mechanical strength is required, such as splash or tidal zones. Can be used as a non-slip deck system in combination with appropriate Anti-Skid aggregate and finish coat.
Compatible with cathodic protection systems.

Approvals and certificates

Pre-qualified in accordance with NORSOK M-501 in selected systems

Additional certificates and approvals may be available on request.

Colours

selected range of colours

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	98 ± 2 %
Gloss level (GU 60 °)	ISO 2813	gloss (70-85)
Flash point	ISO 3679 Method 1	100 °C
Density	calculated	1.4 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	Calculated	46 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	Calculated	46 g/l
EU	European Paint Directive 2004/42/CE	Calculated	46 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	46 g/l
Korea	Korea Clean Air Conservation Act	KS M ISO 11890-1	75 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 34682-2017 8.3	17 g/l

This Technical Data Sheet supersedes those previously issued.
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The provided data is typical for factory produced products, subject to slight variation depending on colour.

Gloss description: According to Jotun Performance Coatings' definition.

Film thickness per coat

Typical recommended specification range

Dry film thickness	400	-	1000	µm
Wet film thickness	410	-	1020	µm
Theoretical spreading rate	2.4	-	1	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)
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.
Concrete	Minimum 4 weeks curing. Moisture content maximum 5 %. Prepare the surface by means of enclosed blast shot or diamond grinding and other appropriate means to abrade the surrounding concrete and to remove laitance.	Minimum 4 weeks curing. Moisture content maximum 5 %. Prepare the surface by means of enclosed blast shot or diamond grinding and other appropriate means to abrade the surrounding concrete and to remove laitance.
Shop primed steel	Clean, dry and undamaged approved shop primer	Sweep blasted or alternatively blasted to Sa 2 (ISO 8501-1) of at least 70 % of the surface.
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating
Stainless steel	-	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.

Application

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Application methods

The product can be applied by

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

Product mixing ratio (by volume)

Marathon 1000 XHB Comp A	3 part(s)
Marathon 1000 XHB Comp B	1 part(s)

Thinner/Cleaning solvent

Thinner:	Jotun Thinner No. 17
Thinning max.:	3 %

Thinning is not normally required. Consult the local representative for advice during application in extreme conditions. Do not thin more than allowed by local environmental legislation.

Note: Korean VOC regulation "Korea Clean Air Conservation Act" and its corresponding thinning limit will prevail over recommended thinning volumes.

Guiding data for airless spray

Nozzle tip (inch/1000):	21-27
Pressure at nozzle (minimum):	150 bar/2100 psi

Heavy duty nozzles to be used.
Pump capacity: min. 2.0 l/min

Drying and Curing time

Substrate temperature	5 °C	10 °C	15 °C	23 °C	40 °C
Surface (touch) dry	22 h	14 h	10 h	7 h	4 h
Walk-on-dry	33 h	19 h	16 h	9 h	6 h
Dry to over coat, minimum	33 h	19 h	16 h	9 h	6 h
Dried/cured for immersion	14 d	10 d	10 d	7 d	3 d
Dried/cured for service	14 d	10 d	10 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 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.

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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 immersion: Minimum time before the coating can be permanently immersed in sea water.

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	45 min

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120 °C	-
Immersed, sea water	50 °C	60 °C
Buried Pipelines and Fittings	90 °C	93 °C

Peak temperature duration max. 1 hour.

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

Note that the coating will be resistant to various immersion temperatures depending on the specific chemical and whether immersion is constant or intermittent. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

For buried pipelines and Fittings contact local TSS to ensure correct systems are used at elevated 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:	epoxy, zinc epoxy, epoxy shop primer, epoxy mastic, inorganic zinc silicate, zinc silicate
Subsequent coat:	vinyl epoxy, epoxy, polyurethane, polysiloxane

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Marathon 1000 XHB Comp A	13.5	20
Marathon 1000 XHB Comp B	4.5	5

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

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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.

Shelf life at 23 °C

Marathon 1000 XHB Comp A	12 month(s)
Marathon 1000 XHB Comp B	12 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.

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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