

Technical Data Sheet

Marathon (2:1)

Product description

This is a two component polyamine cured epoxy coating. It is a high solids, high build, glass flake reinforced product. It is scratch and abrasion resistant. Suitable for environments with very high corrosivity. Can be used as primer, mid coat, finish coat or as single coat system in atmospheric and immersed environments. Suitable for properly prepared concrete and coated surfaces.

Typical use

Marine:

Specially suited in areas where high scratch resistance 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. Compatible with cathodic protection systems.

Approvals and certificates

APAS approved to specification 0213

NORSOK M-501, System 7A (TI report 30270 KA02)

NORSOK M-501, system 7C (SINTEF report F21006 (steel up to 120°C))

Pre-qualified in accordance with NORSOK M-501, Edition 6, System 7A, suitable for splash zone.

Additional certificates and approvals may be available on request.

Colours

selected range of colours

Product data

Property	Test/Standard	Description
STANDARD GRADE		
Solids by volume	ISO 3233	80 ± 2 %
Gloss level (60 °)	ISO 2813	gloss (70-85)
Flash point	ISO 3679 Method 1	30 °C
Specific gravity	calculated	1,26 kg/l
VOC-EU	calculated	180 g/l
WINTER GRADE		
Solids by volume	ISO 3233	76 ± 2 %
VOC-EU	calculated	210 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.

Evenness of the surface varies depending on application method and film thickness.

Recommended film thickness per coat

Film thickness and spreading rate	Dry film thickness (µm)	Wet film thickness (µm)	Theoretical spreading rate (m ² /l)
STANDARD GRADE			
Minimum	200	250	4,0
Maximum	500	625	1,6
Typical	250	310	3,2
WINTER GRADE			
Minimum	200	270	3,7
Maximum	500	670	1,5
Typical	250	340	3,0

Surface preparation

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

Substrate	Surface preparation	
	Minimum	Recommended
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.
Coated surfaces	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)
Shop primed steel	Sa 2 (ISO 8501-1)	Sa 2 (ISO 8501-1)

Application

Application method

The product can be applied by

Spray: Use airless spray

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

Product mixing ratio (by volume)

STANDARD GRADE

Marathon (2:1) Comp. A 2 parts
 Marathon (2:1) Comp. B 1 part

WINTER GRADE

Marathon (2:1) Comp. A 2 parts
 Marathon (2:1) Wintergrade Comp. B 1 part

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17 (max 10%)

Guiding data for airless spray

Nozzle tip (inch/1000): 25 – 43
 Pressure at nozzle (minium): 150 bar/2100 psi
 Filters (mesh): Remove filters

Drying and Curing time

Substrate temperature	-5 °C	5 °C	10 °C	23 °C	40 °C
STANDARD GRADE					
Surface (touch) dry			14 h	5,5 h	3 h
Walk-on-dry			32 h	12 h	6 h
Dried to over coat, minimum			32 h	12 h	6 h
Dried to over coat, max. atmospheric			14 d	10 d	7 d
Dried to over coat, max. water immersion			14 d	10 d	7 d
Dried to over coat, max. chemical exposure			5 d	3 d	2 d
Dried/cured for service			14 d	7 d	3 d
WINTER GRADE					
Surface (touch) dry	20 h	12 h	10 h		
Walk-on-dry	40 h	16 h	12 h		
WG-Comp. B is NOT recoated					
Dried/cured for service	21 d	14 d	10 d		

Drying and curing times are determined under controlled temperatures and relative humidity below 85%, and within the DFT range of the product.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness. Dry sand sprinkled on the surface can be brushed off without sticking to or causing damage to the surface.

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

Dried 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.

Dried/cured for immersion: Minimum time before the coating can be permanently immersed in sea water.

Induction time and Pot life

Paint temperature	23 °C
STANDARD GRADE	
Pot life	1 h
WINTER GRADE	
Pot life	1 h

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120 °C	120 °C
Immersed, sea water	70 °C	80 °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.

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, inorganic zinc silicate

Subsequent coat: polyurethane, polysiloxane, epoxy, vinyl epoxy

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Marathon (2:1) Comp. A	12	20
Marathon (2:1) Standard Comp. B	6	10
Marathon (2:1) Wintergrade Comp. B	6	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, 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 (2:1) Comp. A	36 month (s)
Marathon (2:1) standard Comp. B	36 month (s)
Marathon (2:1) wintergrade Comp. B	36 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

Products primarily meant for use as primers and antifouling may have slight color 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.

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