

Technical Data

Marathon



Product description

Marathon is a high solids, two-component epoxy coating reinforced with glass flakes.

Recommended use

Steel and concrete structures subject to aggressive exposure, both atmospheric and mechanical. Offers extremely good protection against corrosion and has outstanding abrasion resistance. Proved records for use in high pressure vessels. Can be used as corrosion protection for subsea installations at high temperature areas (christmas trees and manifolds) in combination with cathodic protection.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (μm)	200	400	250
Film thickness, wet (μm)	250	500	310
Theoretical spreading rate (m^2/l)	4	2	3,2

Comments

Under certain conditions Marathon may be applied in a thickness corresponding to a DFT up to 500 μm provided prior approval from Jotun TSS and accompanying updated application instructions. For further information please contact your local Jotun office.

Approvals

APAS approved to specification 0213
NORSOK M-501, system 7A (TI report 30270 KA02)
NORSOK M-501, system 7C (SINTEF report F21006 (>150°C))

Physical properties

Colour	Limited number
Solids (vol %)*	80 ± 2
Flash point	30°C ± 2 (Setaflash)
VOC	1,75 lbs/gal (210 gms/ltr) USA-EPA Method 24 110 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Glossy
Gloss retention	Fair
Water resistance	Excellent
Abrasion resistance	Excellent
Solvent resistance	Excellent
Chemical resistance	Excellent
Flexibility	Good
Compatibility with cathodic protection	Very good

*Measured according to ISO 3233:1998 (E)

Hong Kong rules:

Category of paints - Other vessel coatings; VOC 210 gms/ltr HK EPD method (Ready to use); Exempt compound - N/A; Specific gravity: 1.26 (A+B); Both VOC and Specific gravity values provided are typical values, subject to changes when different colour involved.

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 min. Sa 2 ½ (ISO 8501 1:2007). Roughness: using abrasives suitable to achieve Grade Medium G (50 - 85 µm, Ry5) (ISO 8503-2).

Coated surfaces

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

Other surfaces

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 10°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is required in confined areas to ensure proper drying. The coating should not be exposed to oil, chemicals or mechanical stress until 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.

Application data

Mixing ratio (volume)	3:1
Mixing	3 parts Comp. A (base) to be mixed thoroughly with 1 part Marathon, Comp. B (curing agent)
Pot life (23°C)	1 hour (reduced at higher temperatures)
Thinner/Cleaner	Jotun Thinner No. 17
Guiding data airless spray	
Pressure at nozzle	15 MPa (150 kp/cm ² , 2100 psi)
Nozzle tip	0.63 - 1.09 mm (0.025-0.043")
Spray angle	65 - 80°
Filter	Filters to be removed prior to spraying.

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	10°C	23°C	40°C
Surface dry	14 h	5,5 h	3 h
Through dry	32 h	12 h	6 h
Cured	14 d	7 d	3 d
Dry to recoat, minimum	32 h	12 h	6 h
Dry to recoat, maximum ¹	5 d	3 d	2 d

1. The surface should be free from chalking and contamination prior to application. If the maximum dry to recoat time is exceeded, please contact Jotun for advice.

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

On Sa 2½ :		
Marathon	300 µm + 200 µm	(Dry Film Thickness)
For extended corrosion protection, on Sa 2½ :		
Barrier	1 x 25 µm *	(Dry Film Thickness)
Marathon	300 µm + 200 µm	(Dry Film Thickness)
For aggressive chemical exposure, on Sa 2½ :		
Tankguard HB	1 x 50 µm	(Dry Film Thickness)
Marathon	300 µm + 200 µm	(Dry Film Thickness)
For subsea structures, NORSOK M-501, system 7A, on Sa 2½ :		
Marathon	250 µm + 250 µm	(Dry Film Thickness)

* It is important that Barrier is applied with DFT 25 µm, and therefore Barrier must be thinned 25-40 %.

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: 15 litres Comp. A (base) in a 20 litre container and 5 litres Marathon, Comp. B (curing agent) in a 5 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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