

Promat FENDOLITE®-MII

Cementitious fire protection spray system



MATERIAL PROPERTIES

Colour and finish	Off-white, monolithic, spray texture
Alkalinity	12.0 - 12.5 pH
Sound absorption	0.35 Noise reduction coefficient (NRC)
Cure	By hydrolic set
Initial set	2 to 6 hours at 20°C (68°F) and 50% RH
Minimal practical thickness	8mm (5/16") unreinforced, 15mm (5/8") Reinforced
Theoretical coverage	62m ² /tonne (15 Bd. Ft/Bag) at 25mm (1") thickness

PHYSICAL TESTING PERFORMANCE

Physical property	Test method	Test results
Density	ASTM E605	775 kg/m ³ (48.4pcf) ± 15%
Durometer hardness	ASTM D2240	40 (Shore D)
Compressive strength	ASTM E761	3778 kPa (548 psi)
Combustibility	ASTM E136 BS476	Non-combustible
Surface burning	ASTM E84	0 flame spread, 0 smoke development
Deflection	ASTM E759	No cracking, delamination or spalling
Impact resistance	ASTM E760	No cracking, delamination or spalling
Thermal conductivity	ASTM C518	1.5 BTU in/hr ft ² (0.216 W/mK) at 75°F (24°C)
Corrosion resistance	ASTM E937	Does not promote corrosion of steel
Fungal resistance	ASTM G21	0 Rating - No fungus growth

General description

Promat FENDOLITE®-MII is an easy to apply, extremely effective and durable cementitious fireproofing spray. It is designed specifically for steel and concrete structures in the oil and gas and petrochemical industry. All thin and lightweight Promat FENDOLITE®-MII solutions are fully weatherproof, can withstand thermal shocks and will not crack or spall under impact.

Promat FENDOLITE®-MII offers a reliable protection during and even after a fire, blast or explosion. It creates an efficient barrier that will last up to 240 minutes in the event of hydrocarbon pool fire and up to 120 minutes in the event of a jet fire.

Our global team of experts can offer you dedicated technical and commercial support at each stage of your project.

Promat FENDOLITE®-MII has been rigorously tested and certified for a variety of fire performance protocols.

- USA - UL 1709 (Design No. XR719), UL 263 and ASTM E119
- UK - BS 476 (Parts 20-21: 1987 Appendix D) Hydrocarbon Ratings
- International Standards ISO 834
- Germany - DIN 4102
- France - Hydrocarbon Modified HCM
- Italy - UNI 11076
- UL Environmental Testing
- Blast from Gas Explosion Test (more than 3 bar overpressure)
- ISO 22899-1: 2007 - Resistance to Jet Fires
- ISO 22899-1: 2007 - Resistance to Jet Fires Following Gas Explosion

Promat has tested Promat FENDOLITE®-MII according to a wide range of standards and regulations, such as UL1709, UL2431, EN 13381-4, ISO 22899-1 and ISO 20088-1.

The Promat FENDOLITE®-MII system is assessed and certified by the following institutes and notified bodies for the performance of blast, cryogenic and fire resistance with ISO, hydrocarbon and RWS fire curves: UL, Lloyds, Efectis, Warrington

- Fully waterproof
- Thin and lightweight
- Resistant to thermal shock
- Does not crack or spall under impact
- Maintains its integrity during and after a fire, blast or explosion
- Service life exceeding 30 years
- Applied by Promat licensed installers
- Expert technical and commercial advice

The application areas of Promat FENDOLITE®-MII

- Refineries and petrochemical facilities
- Steel and concrete structures
- Spheres, tanks and barrels
- Vessels and vessel skirts

Preparation

Typical substrate

Concrete and steel

Substrate preparation

The substrate must be clean, dry and free from visible moisture (including condensation), concrete laitance, formwork release oils, loose millscale, loose rust and any other condition preventing good adhesion. Concrete curing agents should not be used.

Mesh reinforcement

Most fire tests conducted have been carried out without mesh reinforcement, to demonstrate the ability of Promat FENDOLITE®-MII to stay in place under the most severe fire conditions. However, for maximum long-term service durability, the use of mesh is recommended. The use of mesh is mandatory where resistance to gas explosion is required.

Application

Initial steps

Application of Promat FENDOLITE®-MII must be carried out by an applicator recognized by Promat and applied in accordance with the installation guides available from Promat.

Methods

Mix Promat FENDOLITE®-MII with potable water in a suitable mixer and apply using equipment approved by Promat. Promat FENDOLITE®-MII may also be float or roller finished or left. A hand applied patching mix is available for minor repairs.

Limitations

Promat FENDOLITE®-MII may be applied when the substrate and air temperatures is at least 2°C (36°F) and rising, but should not be applied if the substrate or air temperatures is less than 4°C (39°F) and falling. Maximum substrate and air temperature should not exceed 50°C (122°F). Substrate should be at least 2°C (36°F) above dew point temperature.

Top coating

Under certain circumstances Promat TOPCOAT® 200 and/or other nominated top coatings may be used as protection from frequent wash down, long term chemical spills, or for improved resistance to fungal, algal and bacterial growth.

Packaging

20 kg bags.

Storage

Off the ground and kept dry until ready for use.

Shelf life

Max. 12 months.

All specified technical data are mean values from the production which are subject to the usual fluctuations and do not represent guaranteed properties in the sense of a guarantee. All information corresponds to the current state of the art and has been presented and described to the best of our knowledge. Changes due to new findings are possible, errors and misprints are not excluded. With regard to any liability, our delivery and payment terms apply exclusively. Request safety datasheet. With the publication of this edition, all previously published datasheets are invalid. © Copyright Etex NV, Brussels, Belgium. All rights reserved. 2020-10