

Technical Data Sheet



Steelmaster 1200WF

Product description

This is a one component waterborne acrylic thin film intumescent coating. Independently tested and approved for fire protection of structural steel exposed to cellulosic fire up to 180 minutes. Suitable for properly prepared carbon steel substrates.

Typical use

Specially designed as passive fire protection for steel constructions. Suitable for structural steel exposed to internal environments up to C3 corrosive category as defined in ISO 12944 -2.

Approvals and certificates

This product contributes to the Green Buildings Standard credits. Please see appendix.

BS 476 part 20/21

ASTM E84

CE marked product with European Technical Assessment ETA-13/1035

Additional certificates and approvals may be available on request.

Colours

white

Product data

| Property | Test/Standard | Description |
|------------------|---|-------------|
| Flash point | ISO 3679 Method 1 | 101 °C |
| Density | calculated | 1.4 kg/l |
| VOC-US/Hong Kong | US EPA Method (theoretical) (CARB(SCM)2007, SCAQMD rule 1113, Hong Kong) | 63 g/l |
| VOC-EU | IED (2010/75/EU) (theoretical) | 41 g/l |
| VOC-EU | EU VOC Directive 2004/42/CE (theoretical) | 30 g/l |
| VOC-China | GB/T 23986-2009 (ISO 11890-2) (tested) | 0 g/l |

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

Solids by volume: 69 ± 3 %

Volume solids measured according to ISO 3233 and ASFP-BCF Guidance Method

Film thickness per coat

Typical recommended specification range

| | |
|--------------------|---------------|
| Dry film thickness | 210 - 690 µm |
| Wet film thickness | 300 - 1000 µm |

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All steel sections must be coated with correct film thickness to achieve the required fire rating. Please refer to the current loading tables. For further advice please contact your local Jotun office.

Note: The film thickness is only achievable by airless spray application in one coat.

Surface preparation

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

Refer to the Application Guide (AG) for additional information.

Surface preparation summary table

| Substrate | Surface preparation | |
|--------------|---|---|
| | Minimum | Recommended |
| Carbon steel | Clean, dry and undamaged compatible coating (ISO 12944-4 6.1) | Clean, dry and undamaged compatible coating (ISO 12944-4 6.1) |

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.

Refer to the Application Guide (AG) for additional information.

Product mixing

Single pack

Thinner/Cleaning solvent

Do not add thinner. The product is ready to use and should not be thinned.

Cleaning solvent: Fresh water

Guiding data for airless spray

Nozzle tip (inch/1000): 19-23

Pressure at nozzle (minimum): 200 bar/2900 psi

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Drying and Curing time

| Substrate temperature | 10 °C | 23 °C | 40 °C |
|---------------------------|-------|-------|-------|
| Surface (touch) dry | 4 h | 2 h | 1 h |
| Dry to handle | 16 h | 6 h | 4 h |
| Dry to over coat, minimum | 16 h | 6 h | 4 h |

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 80 %, and at average of the DFT range for the product.

All drying times have been measured at a wet film thickness of 1000 µm.

Topcoating: The minimum overcoating interval of this product with approved topcoats is 48 hours. Prior to application of topcoat, the applicator must ensure that the specified dry film thickness has been achieved and the system is dried to handle.

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.

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.

To ensure fire performance, primers and topcoats must be compatible with Steelmaster 1200WF. Contact your local Jotun office for a list of approved Jotun primers and topcoats.

Packaging (typical)

| | Volume (litres) | Size of containers (litres) |
|--------------------|--------------------|--------------------------------|
| Steelmaster 1200WF | 18.5 | 20 |

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.

When storing and transporting, the temperature must be between 5 °C and 25 °C. Outside of this, it is advisable to use climatic control. Protect from freezing at all times during storage and transport.

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Shelf life at 23 °C

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6 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.

Green Building Standards - Appendix

This product contributes to Green Building Standard credits by meeting the following specific requirements:

LEED®v4 (2013)

EQ credit: Low emitting materials

VOC content for Fire Resistant Coatings (350 g/l) (CARB(CSM)2007) and emission 0.5 - 5.0 mg/m³ (CDPH method 1.1)

MR credit: Building product disclosure and optimization

- Material Ingredients, Option 2: Material Ingredient Optimization, International Alternative Compliance Path - REACH optimization: Fully inventoried chemical ingredients to 100 ppm and not containing substances on the REACH Authorization list - Annex XIV, the Restriction list - Annex XVII and the SVHC candidate list.

- Environmental Product Declarations. Product-specific Type III EPD (ISO 14025;21930, EN 15804) for U.A.E.

LEED® (2009)

IEQ Credit 4.2: The VOC requirements of Green Seal Standard GS-03, 1997.

BREEAM® International (2016)

Hea 02: Meets the VOC emission demands (ISO 16000-9/10 (2006) or CDPH method 1.1 (2010)).

Mat 01: Product-specific Type III EPD (ISO 14025;21930, EN 15804) for U.A.E.

BREEAM® International (2013)

Hea 02: VOC content for One-pack performance coating WB (140 g/l) (EU Directive 2004/42/CE)

BREEAM® NOR (2016)

Mat 01: The product Safety Data Sheet confirms that the product does not contain any substances on the Norwegian A20 list.

BREEAM® NOR (2012)

Mat 1.5: This product Safety Data Sheet confirms that the product does not contain any substances on the Norwegian A20 list.

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

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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.
