

AMOTHERM[®] STEEL 400 SB
AMOTHERM[®] STEEL 400 SB/FD
Passive fire protection system for steel

Rev. Settembre 2024

Intumescent coating

Characteristics: one-component, solvent-based intumescent coating capable of producing a foam with thermal insulating properties, when exposed to the action of flame or the heat of a fire.

The AMOTHERM STEEL 400 SB/FD variant has a faster drying time compared to the AMOTHERM STEEL 400 SB version, while maintaining the same properties when cured.

Fields of use: Specific protection system for fire protection of structural steel elements in buildings for civil or industrial use.

Technical performance: intumescent passive fire protection system, certified according to European standards of the EN 13381-8 series, providing fire resistance contribution up to 120 minutes (performance tested in relation to the type of structure treated).

CE marked product, in accordance with the procedures outlined in the reference guideline EAD 350402-00-1106.

Technical Data

Components:	Single-component
Colour:	White
Density:	1.34 ± 0.02 g/l
Viscosity:	Thixotropic
Dry residue in weight:	74 ±3 %
Dry residue in volume:	75 ±3 %
Recoatable:	After 6-8 h with the same product.
Theoretical performance	1000 µm dry with 1.78 kg/m ² wet product
Overcoating	AMOTHERM STEEL 400 SB Minimum 6 hours AMOTHERM STEEL 400 SB/FD Minimum 4 hours <i>with itself and thickness 750 µm</i>
Storage:	2 years in the original, well-sealed containers at temperatures between +5 and +40°C
Packaging:	as per price list

The product application details were obtained in normal environmental conditions (temperature 20 °C and relative humidity 60%) and refer to the application of a wet film of thickness 1000 micron. Application of different thicknesses and/or in different environmental conditions may lead to considerable variations in the technical features given above.

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How to apply

The information for the use and handling of AMOTHERM STEEL 400 SB – AMOTHERM STEEL 400 SB/FD, during all operational phases of the product's lifecycle, is detailed in the Safety Data Sheet (SDS); Technical documentation is available on the company website and can be downloaded at www.amonncolor.com. A summary of the standard operating conditions for the correct application of this intumescent coating is given below.

Surface preparation:

- New surfaces: sandblasting grade SA 2 ½ and treatment with compatible primer.
- Surfaces already treated with compatible primer (alkyds, epoxies, zinc silicate and zinc-rich epoxies): completely remove all traces of dirt and any traces of grease or oil. Check the condition of the substrate and the recoat time of the current product.
- Surfaces previously treated with an unknown product: it is recommended to sandblast and/or mechanically brush and/or sand, followed by a deep cleaning of the substrate and subsequent treatment with a compatible primer. Before proceeding with any work, it is advisable to consult our technical department.

Application quantity: the amount of intumescent coating to apply is determined based on the structural element to be protected and the required technical performance.

The number of coats to apply depends on the required dry film thickness for the desired level of protection and the type of application method used. Pre-dimensioning reports can be requested without obligation by contacting the Technical Department at ingass@amonncolor.com.

Product preparation: Stir the product well before use.

Dilution: the product is supplied ready to use; if necessary, dilute a maximum of 5-10% with STUFEX 001 thinner or equivalent, DO NOT exceed the recommended limits.

Application: conventional or airless spray, roller or brush.

Use an airless pump for spray application:

- Pneumatic pump with a compression ratio of 30:1
- Electric pump with motor power of at least 1.9 KW
- minimum pressure 160-180 bar, self-cleaning nozzle 0.019"-0.025", delivery hose 3/8", removing any filters.
- Maximum dry quantity applicable in a single layer:

	AMOTHERM STEEL 400 SB	AMOTHERM STEEL 400 SB/FD
Airless spray*	1500 µm	1000 µm
Brush	400 µm	400 µm
Roller	250 µm	250 µm

Environmental and support conditions: Do not apply in conditions of rain, wind, fog, high humidity, or solar radiation. Ensure adequate ventilation to guarantee the proper curing of the applied fire protection coating. Substrate temperature at least 3°C above the dew point.

AMOTHERM STEEL 400 SB Ambient temperature min +5°C / max +45°C, relative humidity < 85%

AMOTHERM STEEL 400 SB/FD Ambient temperature min + 5°C / max + 25°C, relative humidity < 85%

Cleaning of equipment: with STUFEX 003 thinner or equivalent, immediately after use.

Installation and protective coating: prior to installing the products, immediately proceed with the external sealing of the structures to minimise the possibility of exposing the protective system (during application) to direct weweathering.

Ensure that the application of the entire coating cycle occurs under favourable environmental conditions and verify that the various layers of product just applied are not exposed to direct contact with rain, fog, or high humidity.

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In the case of applying the protective system in indoor environments (type Z2 and Z1), no protective finish is required.

In cases where a coloured aesthetic finish is required, the application of an AMOTHERM STEEL TOP SB finish layer is recommended.

In cases where the protective system is applied in semi-exposed environments (such as canopies) or outdoors, and where there are issues of physical degradation or the presence of chemical pollutants, it is recommended to use a specific polyurethane-based protective topcoat for external use (such as AMOTHERM STEEL TOP PU SB). In these applications, it is essential to monitor the condition of the finish, and in the event of deterioration, promptly take action to restore the passive fire protection.

It is recommended not to use high-thickness surface treatments that could hinder the characteristic fire expansion of the material, and to avoid applying panels, sheets, or other bonded coverings that, in the event of a fire, would prevent the intumescent coating underneath from undergoing its normal protective foam formation mechanism.

The instructions provided in this document represent the most recent state of the information, development and use of product. The application of the materials is out of our control and, therefore, we can only answer for the constant quality of the product supplied.