

AMOTHERM® WOOD 540 SB

Fire-protection system for wood

Rev. October 2017

A fire-retardant varnish consisting of an intumescent base and protective finish

Characteristics: a two-component fire-retardant , polyurethane varnish consisting of a fire-retardant base AMOTHERM WOOD SB 540 and relative protective finish AMOTHERM WOOD 540 TOP SB available, on request, in a transparent version with different glossiness or in a pigmented version with or in different RAL colors. Its fire-retardant properties are based on decomposition reactions that start when, under the action of heat or temperature, the coating releases substances able to slow the process of carbonization of the wood. In addition to its fire-retardant action, the varnishing cycle is characterized by the high elasticity of the film, which gives the protective system effective mechanical stability and excellent resistance to chemicals.

Fields of application: fire protection system, used to reduce the reaction to fire of articles made of wood or derivatives, placed on the floor and installed indoors, such as **parquet, platforms, stages, etc.**

Technical performance: The fire-retardant varnish is classified based on data derived from fire-reaction tests, performed according to European standard EN 13501 - Part 1. The classification is valid for the protection of all wood-based substrates used as flooring, as required by the technical specifications indicated in the EN ISO 9239 standards, *Reaction to fire tests for floorings - Part 1: evaluation of burning behavior using a radiant heat source* and EN ISO 11925 *Reaction to fire tests for building products - Part 2: ignition when subjected to small flame.*

Technical data

Characteristics	BASE	FINISH
Protective system:	AMOTHERM WOOD 540 SB	AMOTHERM WOOD 540 SB TOP
Painting cycle:	Two-component product	Two-component product
Color:	Transparent, colorless	Transparent, colorless
Gloss:		dull matt (12-18 GLOSS)* matt (19-25 GLOSS) satin (57 – 63 GLOSS) glossy (>85 GLOSS)
Volumetric mass:	<ul style="list-style-type: none"> ➤ 1.05/- 0.02 g/cm³ comp. "A" ➤ 1.02/- 0.02 g/cm³ comp. "B" 	<ul style="list-style-type: none"> ➤ 1.10/- 0.02 g/cm³ comp. "A" ➤ 1.01/- 0.02 g/cm³ comp. "B"
Viscosity at acceptance test:	<ul style="list-style-type: none"> ➤ 38 – 42 s (DIN 4) comp. "A" ➤ 75 – 80 s (DIN 2) comp. "B" 	<ul style="list-style-type: none"> ➤ 45 – 55 s (DIN 4) comp. "A" ➤ 50 – 60 s (DIN 2) comp. "B"
Solid content in weight:	<ul style="list-style-type: none"> ➤ 61-65% comp. "A" ➤ 34-38% comp. "B" 	<ul style="list-style-type: none"> ➤ 64-68% comp. "A" ➤ 33-37% comp. "B"
Mixture ratio	2:1	1:1
Useful life of the mixture	1 hour	At least 3 hours
Drying:	<ul style="list-style-type: none"> ▪ Tack 30 ' ▪ sandable 6 h ▪ deep dry 12 h 	<ul style="list-style-type: none"> ▪ Tack 30 ' ▪ sandable 6 h ▪ deep dry 18 h
Open time:	Can be painted over after 24 h	
Storage:	indoors at normal temperature.	
Packaging:	per the price list	

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The technical data provided above refer to measurements of the opaque version of the standard transparent formulation. The application characteristics of the product were measured under normal environmental conditions (temperature 20 °C and relative humidity 60%) and refer to the application of a wet film thickness of 150 microns. Formulations different from the standard examined, applied in different thicknesses and under different environmental conditions could exhibit significant variations from the technical characteristics shown above.

**deep opaque version is only available on request, and can only be used for industrial spray applications*

Application notes

Detailed information for the use of AMOTHERM WOOD 540 SB, in all the operational phases of the product life cycle, is provided in the relative Material Safety Data Sheet (MSDS); additional information about the application of the product is provided in the APPLICATION MANUAL of reference. The technical documentation of product is available on, and can be downloaded from, the site www.amonncolor.com.

Below, we summarize the standard operating conditions for correctly applying the protective system in question.

Surface preparation: Make sure that the wood moisture content is below 12% and that the surfaces to be treated are thoroughly dry, clean, free of dust and/or other pollutants (oils, waxes, etc.) that might compromise the perfect anchoring of the varnish.

The varnishing cycle in question can also be applied on old and/or pre-painted wood with other products, even if not fire-retardant, after verifying its compatibility and adherence to the existing layers (we recommend performing preliminary tests on small areas of the surfaces to be treated).

Application quantity: the quantities of fire-retardant coating to be applied are defined based on the fire-reaction tests performed. The theoretical consumption of fire-retardant base AMOTHERM WOOD 540 SB and protective finish AMOTHERM WOOD 540 TOP SB to consider are, respectively, 160 + 160 g/m².

Preparation of the product: Mix component "A" well, then add the catalyst and stir well to homogenize the product.

Dilution: products are supplied ready for use; if necessary, dilute with up to 5% polyurethane thinner, keeping the product under constant agitation for the duration of the operation.

Application: brush, roller or curtain coater; other spray systems according to the methods described below.

- Apply one coat of 160 g/m² of the fire-retardant base AMOTHERM WOOD 540 SB.
- After 24 hours, sand with medium grit sandpaper (180-200) and apply a coat of 160 g/m² of protective finish AMOTHERM WOOD 540 SB TOP.

The floor can be walked on 48 hours after the application of the last coat; however, we recommend caution in walking on treated surfaces for at least a week. The product provides its best mechanical and fire-retardant properties after about 30 days from the application of the protective finishing coat. Therefore, we recommend that you wait for this period to elapse before testing the fire-retardant characteristics of the product.

Cleaning of tools: with nitro thinner immediately after use.

Protective coating: finishing treatment AMOTHERM WOOD 540 SB TOP is an integral part of the application cycle and the fire-reaction characteristics of the AMOTHERM WOOD 540 SB protective system were tested in combination with the proposed finish. The use of different finishes than those indicated in our painting cycles could compromise the fire performance of fire-retardant protection and the overall thermal insulation efficiency of the system in question.

Finishes with different opacities than those defined in the standard are available on request; the application of these versions requires special care and attention and, to avoid scratches and roller marks during application, we recommend consulting our technical department.

This information is based on the most recent state of the art information, development and application of our product. Since we have no influence on the application of this product, we can only guarantee its constant quality.