

## AMOTHERM<sup>®</sup> WOOD 540 SB

Fire protection system for wood

Rev. April 2023

### Transparent or coloured paint coating consisting of a primer and topcoat

**Characteristics:** paint coating consisting of a primer formulated with special solvent-based polyurethane resins and specific reactive substances which, when exposed to the action of flames or the heat of a fire, decompose chemically, generating inert gases and other extinguishing compounds which reduce flame propagation and slow down carbonisation of the wood.

The protective topcoat, an integral part of the system, is formulated with special solvent-based polyurethane resins and is available in different colours and degrees of gloss. It must be applied to ensure the integrity of the layer underneath.

**Applications:** special protective system to protect indoor wooden flooring from fire.

The system may be used outdoors with a hardener that is suitable for outdoor use.

**Technical performance:** the paint coating is classified:

• **REACTION TO FIRE:**

- **EUROCLASS Bfl-s1** in accordance with EN 13501- part 1. The classification is valid for the protection of all wood-based materials when used as flooring as required by the technical criteria indicated in the standards EN 9239 -1 reaction to fire tests for floorings and EN ISO 11925 reaction to fire tests for building products part 2: ignitability when exposed to a small flame.
- **CLASS 1** in accordance with UNI 9796/90 pursuant to Italian Ministerial Decree 6/3/92 approved with no. BL158PVI100003. The classification is valid for the protection of all wood-based materials for all uses, the only restrictions being those indicated in UNI 9796 and referring to materials with air cavities or assembled with thermoplastic adhesives.

### Technical data

Characteristics	PRIMER	TOPCOAT
Protective system:	AMOTHERM WOOD 540 SB	AMOTHERM WOOD 540 SB TOP
Components:	Dual-component product	Dual-component product
Colour:	Transparent, colourless	Transparent or coloured
Gloss:	---	matt (32 - 38 GLOSS) satin gloss (57 - 63 GLOSS)
Mass by volume:	➤ 1.05 +/- 0.02 g/cm <sup>3</sup> comp. "A" ➤ 1.02 +/- 0.02 g/cm <sup>3</sup> comp. "B"	➤ 1.10 +/- 0.02 g/cm <sup>3</sup> comp. "A" ➤ 1.01 +/- 0.02 g/cm <sup>3</sup> comp. "B"
Test viscosity:	➤ 38 – 42 s (DIN 4) comp. "A" ➤ 75 – 80 s (DIN 2) comp. "B"	➤ 45 – 55 s (DIN 4) comp. "A" ➤ 50 – 60 s (DIN 2) comp. "B"
Dry residue in weight:	➤ 61 – 65 % comp. "A" ➤ 34 – 38 % comp. "B"	➤ 64 – 68 % comp. "A" ➤ 33 – 37 % comp. "B"
Catalysis ratio:	2:1	1:1
Pot life	60 min	At least 3 hours
Drying time:	▪ dust dry 30' ▪ sanding 12 hours ▪ through-dry 12 hours	▪ dust dry 30' ▪ through-dry 24 hours ▪ dry to handle 24 hours
Topcoat:		▪ at least 12 hours after the last coat after intermediate sanding

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Storage:	at least 1 year in the original closed container at a temperature of >5°C
Packaging:	as per price list

The technical data given above refer to the results obtained for the transparent formula in the matt version. 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 with a thickness of 150 micron. Application of different thicknesses and/or in different environmental conditions may lead to considerable variations in the technical features given above.

### How to apply

Detailed information about the use of AMOTHERM WOOD 540 SB at all operative stages in the life cycle of the product, can be found on the Safety Data Sheet (SDS). Further information and instructions for applying the protective system can be found in the USER MANUAL. The technical product documentation is available on the company website and can be downloaded at [www.amonncolor.com](http://www.amonncolor.com).

A summary of the standard operating conditions for the correct application of this protective system is given below.  
**Surface preparation:** the primer must be applied directly to raw wood or wood treated with a non-film-forming primer but not with wax or water-repellent products.

The surfaces to be treated must be clean and dry; we recommend carefully removing dust and any traces of oil and grease.

As the fire protection system is a film-forming treatment (closed pore), it is important to check that the moisture content of the surface does not exceed 12% before it is applied.

**Application quantity:** the amount of product to be applied is determined by the reaction to fire requirements.

- **REACTION TO FIRE:**

- EUROCLASS Bfl-s1: 160 g/m<sup>2</sup> of AMOTHERM WOOD 540 SB primer + 160 g/m<sup>2</sup> of AMOTHERM WOOD 540 TOP SB protective topcoat.
- CLASS 1: 200 g/m<sup>2</sup> of AMOTHERM WOOD 540 SB primer + 200 g/m<sup>2</sup> of AMOTHERM WOOD 540 TOP SB protective topcoat.

**Product preparation:** stir component "A" carefully then add the catalyser and continue stirring until the components are completely mixed in.

**Dilution:** the products are supplied ready to use. If dilution is necessary, follow the instructions in the table below.

**Application methods:** The product can be applied with either a roller or brush and, in industrial applications, with conventional or airless spray.

For other application methods please contact our technical service.

Use the quantities indicated and avoid varnish build-up as it may become cloudy.

Follow these instructions and quantities when applying to wooden flooring that is installed and properly prepared:

- One coat of min. 160 g/m<sup>2</sup> of AMOTHERM WOOD 540 SB
- After at least 12 hours sand down with medium grain (180–200) sandpaper
- Clean with an electrostatic cloth
- Apply one coat of min. 160 g/m<sup>2</sup> of AMOTHERM WOOD 540 SB TOP protective topcoat. For best results, we recommend applying the topcoat in two coats, each a min. of 100 g/m<sup>2</sup>, sanding down between coats as above.

For industrial applications, follow these instructions and quantities:

- Apply one coat of min. 160 g/m<sup>2</sup> of AMOTHERM WOOD 540 SB.
- After at least 12 hours, sand down with medium grain (180–200) sandpaper.
- Apply one coat of min. 160 g/m<sup>2</sup> of AMOTHERM WOOD 540 SB TOP.

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The product will adhere between coats if the over-painting times and sanding stages are respected. Sanding must be particularly thorough.

We recommend working in an ambient and product temperature of at least 10 °C with relative humidity below 60%.

METHOD	% dilution	pressure	nozzle
<i>Brush/roller</i>	<i>0 - 10%</i> <i>(PU thinner or PU retardant thinner**)</i>	---	---
<i>Air spray (cup spray gun)</i>	<i>0 - 5%</i> <i>(PU thinner or PU retardant thinner**)</i>	<i>2.5 – 3.0 bar</i>	<i>1.5 – 2.0 mm</i>
<i>Airless spray*</i>	---	<i>80 – 120 bar</i>	<i>0.011 - 0.015 inch</i>

\* Use an airless pump for spray application:

- Pneumatic pump with a compression ratio of 15:1
- Electric pump with motor power of at least 1.9 KW

\*\* with an ambient temperature of >25 °C

**Tool cleaning:** with Stufex 003 thinner (or nitro thinner) immediately after use.

### Warnings:

- When stored for a long time, the fire-retardant substances in the product tend to settle at the bottom of the tin. Always mix the product thoroughly with a paddle mixer or metal rod before using it.
- Applying different quantities per coat than indicated in this data sheet can cause problems, such as the varnish becoming cloudy or turning white, etc..
- Humidity during the application and drying stages can affect the product, so we do not recommend applying it in very damp and humid conditions.
- Applying this product to oily woods (iroko, rosewood, etc.) can lead to common defects such as air bubbles, cloudy finish, etc.. Always carry out preliminary tests and/or apply a coat of polyurethane insulating primer on these types of wood.
- The system does not offer biological protection or protection against UV rays, so an appropriate impregnating primer must be used for this.
- Given the applications of this product, it is important to monitor the condition of the finish.

**The instructions provided in this document are consistent with the most recently available information on the development and use of our product. Because we have no control over the onsite use and application of the product, we may only be held liable for the quality of the product as supplied.**