

# Integrated systems for passive fire protection.

Product catalogue

**AMONN**<sup>®</sup>  
Amotherm

3<sup>rd</sup> EDITION

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We would like to thank the following people for their help in putting together this catalogue

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# A story of safety

## 200 years of experience and innovation

For over two centuries Amonn has played a major role in carrying forward the tradition, innovation and values of an Italian enterprise, backed by long experience in manufacturing and distribution in a wide range of industrial and business sectors. The original company HQ is located in Bolzano, housing the registered office and administrative departments. The Amotherm and Stufex ranges are manufactured at the production facility in Ponte nelle Alpi (BL) which is also home to the sales department, while the Lignex and Bessemer products are made at the Korneuburg factory near Vienna. Last, but not least, the Amonn&I'A-quatech facility in Bangkok, Thailand was set up to supply the Asian markets with passive fire-protection products.



The Ponte nelle Alpi facility

## Everything is based on expertise

Amonn tells the story of intumescent paints in Italy, boasting over 40 years' experience in this market, led by the enterprises that came together to make it. The firms Italvis, Protect and Stufex laid the foundations of today's company know-how. Thanks to all their work and the major technological development engaged in over the years, Amonn is now Italy's leading company and one of the top firms in Europe in the field of passive fire protection for buildings and construction materials.



The Korneuburg facility

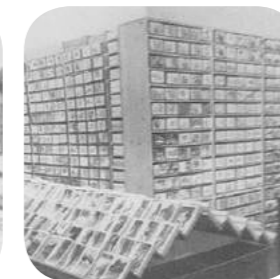


The Bolzano HQ



### FAMILY VALUES FOR AN INTERNATIONAL COMPANY

Ever since 1802, the company's growth and expansion has been based on the solid values of the Amonn family. These have led, in the 21<sup>st</sup> Century, to its role as an international player much appreciated for its high degree of specialisation and the skills that go into its products and services.



# The protection specialists

## Specific solutions for each material

Amonn gives each and every material the attention it needs, developing targeted products based on the mechanical properties of different surfaces and their behaviour when exposed to fire. The intumescent mechanism produced by Amonn and used for over 50 years, provides effective, tried-and-tested passive protection from fire for structures and materials. This result has been made possible by the resources Amonn commits to the research and development of high-tech solutions capable of meeting the changing needs of the market and ever more rigorous standards and regulations.

Amonn faces up to the fire-safety challenge with a constant commitment to partnering and creating synergy with all those involved in the field of passive protection, working alongside professionals, installers, standard-setters and competent authorities. The decision to apply an intumescent paint is made at the project design stage and the paint is chosen on the basis of the fire-protection requirements and the environmental factors and it is planned, installed, tested and certified. This whole process involves not only the application of a paint product but all the engineering considerations have to be taken into account.



# Innovation and specialist skills

## The advantage of a scientific approach

Amonn policies demand compliance with all the standards for testing, checking and certifying our own passive protection systems, all of which meet the requirements of Italian and European regulations. What's more, we abide by our ongoing commitment to quality and respect for the environment in which all our production facilities are located.

Amonn's strong bonds with the local area and community lead us to take great care over the production of waste and emissions into the air, water and soil and we make a conscious choice to use only those suppliers who show sensitivity to all aspects of quality and eco-sustainability.



## Quality and environmental certification

Amonn's two sophisticated laboratory testing centres at our Belluno and Vienna establishments run tests on all intumescent and fire-retardant products on different construction materials and in all fire conditions. Over the years this research and experimentation has yielded invaluable information for our product development, creating a major scientific knowledgebase which is essential for the engineering consultancy service we provide on the use of our systems.

## Constant control

In the interests of safety and in line with the Amonn philosophy, the production facility at Ponte nelle Alpi has for many years been certified according to the rigorous standards UNI EN ISO 9001 for the quality management system and UNI EN ISO 14001 for the environmental management system.

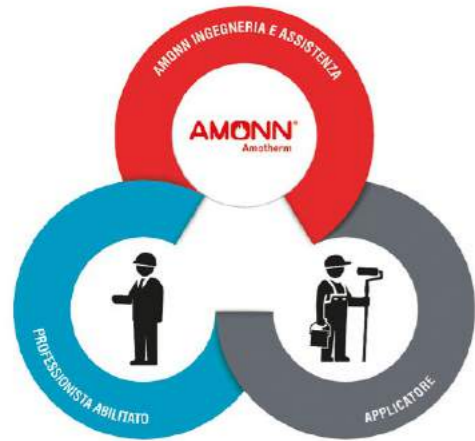


# The power of teamwork

## The technical and regulatory assistance service

Amonn has set up an in-house engineering and assistance department to provide help at all levels to all those involved in the complex process of fire-protection practice. This department is capable of providing excellent support to customers, qualified professionals and contractors throughout the stages of planning, installation and testing our protective systems.

**Request need to be sent to:**  
ingass@amonncolor.com



# A life in colour

## Amonn expertise

Human beings have always considered protection from the danger and damage caused by fire of primary importance in their life. This is why we at Amonn base our creation of Amotherm products on in-depth knowledge of the way different construction materials behave when exposed to fire. Moreover we make our skills available in matters of project planning, application and regulatory issues, making Amonn a competent, reliable partner in all those aspects of effective passive fire protection. With this catalogue we wish to share all our experience, guiding our customers in their choice of the ideal protective system.



In order to make it quicker and easier to consult this catalogue in terms of the various situations that present themselves, the section that follows is arranged according to the type of surface to be treated: steel, brickwork, concrete and wood. Two particular types of tested floors have been included among the related surfaces with details of the product used for their fire protection.



# Integrated systems for passive fire protection

Italian and European standards governing construction products (CPR EU 305 2011) place fire safety as an essential requirement, coming immediately after structural aspects.

The term fire protection refers to all those measures aimed at keeping to the minimum damage to people, the environment and property and at limiting the consequences of such damage.

The company J. F. Amonn srl offers competent and reliable partnership in the passive fire-protection sector, capable of providing solutions to meet the most diverse needs.

## Active and passive protection

Active fire protection aims to reduce the effects of fire by early detection and rapid extinguishing brought about by human action or by the activation of equipment such as sprinkler systems, alarms and fire extinguishers. Passive fire protection, on the other hand, has as its aim limiting the effects of the fire so as to make it possible to evacuate the building and to make people and property safe within a certain time period. Passive fire protection, in the sense of the fire resistance of structural elements, is generally indicated by the abbreviation REI, accompanied by a number representing the minimum duration in minutes of the required resistance.

## The REI abbreviation

The REI rating defines the capacity of a building, or part of it, or of a construction element, to maintain its various properties for a fixed time.

R: mechanical resistance for non-separating loadbearing elements

REI: mechanical resistance, integrity and insulation for loadbearing and separating elements

EI: integrity and insulation for non-loadbearing separating elements

The ratings for duration attributed to fire-resistance are set by the relevant regulations and are typically as follows: 15, 30, 45, 60, 90, 120, 180 and 240 minutes.

## Resistance and reaction

There are two different categories of passive fire-protection product

- **Products designed to slow down heat propagation in order to limit damage to buildings and structures – fire resistance**
- **Products designed to reduce the combustion capacity of normally inflammable materials – fire reaction.**

For non-combustible structural elements, the focus is on increasing fire resistance for a certain period of time. For combustible construction materials such as wood, in addition to fire resistance, the requirement is that it does not contribute to triggering the fire and to feeding its propagation.

## Fire reaction and resistance rating

Protective coatings are rated according to the standards and regulations in force at both national and international level.

As regards reaction to fire, fire-retardant paint products are grouped according to the field of use, for example flooring, wall boarding and ceiling planks.

For fire resistance, the contribution made by the protective coating of a loadbearing and/or separating, compartmentalising element can be determined using the following methods.

- **Tables**
- **Analysis**
- **Laboratory testing**

## Amotherm protective systems

Amotherm offers a choice of different passive fire-protection systems

- **Intumescent paints**
- **Fire-retardant paints**
- **Lightened plasters**

### Intumescent paints

Intumescent paints are reactive systems that change their physical state if subjected to fire. This process gives rise to the formation of a carbonaceous foam that insulates the underlying surface and reduces its heating.

They are used in the context of fire resistance.

These products can be painted or varnished over with different types of top coats. The top coat has a dual function: it creates resistance to atmospheric agents and improves the aesthetic end result.



### Fire-retardant paints

The properties of fire-retardant paints reduce the combustion capacity of the wooden elements to which they are applied. They are used in the context of the fire reaction of materials.



### Lightened fire-proofing soft plasters

Fire-proofing plasters are generally gypsum/cement based plasters to which inert substances of various types have been added, for example vermiculite, polystyrene and cellulose, to increase their heat-insulation properties.



## The main features of the systems

### Paints

- Easy to apply
- Preserve the aesthetic appearance of the protected element
- Reduced weight
- High mechanical resistance
- Reduced bulk

### Plasters

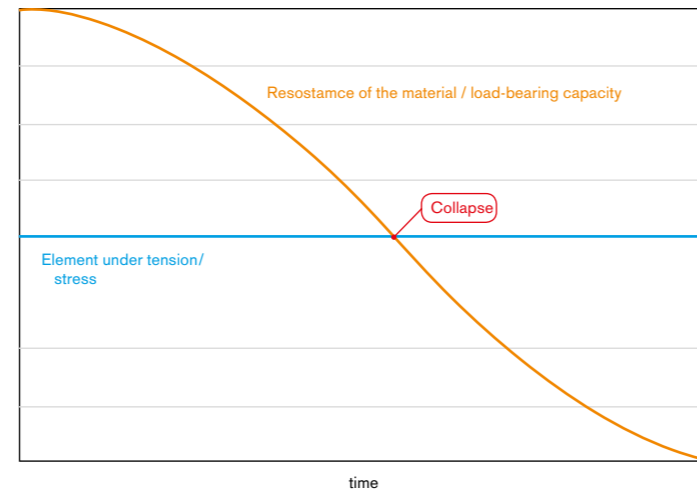
- An economical system
- Low specific weight
- High level of fire-resistance (up to 240min)

## Current regulatory framework: principle pieces of legislation

EN 13501-1	Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements. Part 2: Classification using data from fire resistance tests, excluding ventilation services
EN 13381-3	Test methods for determining the contribution to the fire resistance of structural members - Part 3: applied protection to concrete members
EN 13381-4	Test methods for determining the contribution to the fire resistance of structural members. Applied protection to steel members
EN 13381-5	Test methods for determining the contribution to the fire resistance of structural members: applied protection to concrete/profiled sheet steel composite members
EN 13381-8	Test methods for determining the contribution to the fire resistance of structural members. Applied reactive protection to steel members
EN 13381-7	Test methods for determining the contribution to the fire resistance of structural members - Part 7: Applied protection to timber members
EN 1364-1	Fire resistance tests for non-loadbearing elements. Walls
EN 1365-2	Fire resistance tests for loadbearing elements - Part 2: Floors and roofs

# Protection of steel structures

Metal structures exposed to the action of fire suffer a rapid increase in temperature, leading to reduction of their mechanical resistance properties.



The fire-resistance of a steel structure depends on:

- **Resistance rating**
- **Section factor or mass factor:** the relationship between the ratio of the surfaces exposed to fire (A) and the volume (V) of the steel framework. The higher this value, the more the framework heats up
- **Critical temperature:** the temperature at which the structure collapses, established by the project designer according to stress and class of steel.



## Fire performance testing in steel structures

Steel structures can be tested for their fire performance using analysis according to the criteria laid down in Eurocodes EN1991-1-2 and EN1993-1-2.

If the analysis results fail to meet the required performance, it is possible to apply passive fire-protection coatings to the structure. The assessment reports, detailing specific laboratory tests for each product tested, make it possible to calculate the required thickness of the protective coating to be applied to the elements being treated, according to the above variables (critical temperature, section factor, resistance rating).

These assessments support the work of professionals and they present easy-to-read tables (see Table 1). The technical assessments are arrived at by laboratory testing conducted according to the following standards.

- EN 13381-4: Test methods for determining the contribution to the fire resistance of structural members. Part 4: Applied passive protection to steel members.
- EN 13381-8: Test methods for determining the contribution to the fire resistance of structural members. Part 8: Applied reactive protection to steel members.

## R30 fire-resistance – open frameworks – beams exposed on 3 sides – Amotherm Steel WB

Critical temperature	350	400	450	500	550	600	650
Section factor A/V [m-1]	Thickness of the protective material for keeping the temperature below the critical temperature [µm]						
70	390	390	390	390	390	390	390
75	390	390	390	390	390	390	390
85	390	390	390	390	390	390	390
95	478	390	390	390	390	390	390
105	591	390	390	390	390	390	390
115	684	390	390	390	390	390	390
125	763	414	390	390	390	390	390
135	830	506	390	390	390	390	390
145	888	585	390	390	390	390	390
155	938	654	412	390	390	390	390
165	1009	715	472	390	390	390	390
175	1096	769	525	390	390	390	390
185	1173	817	572	390	390	390	390
195	1243	860	614	390	390	390	390
205	1305	899	652	390	390	390	390
215	1362	934	687	413	390	390	390
225	1414	971	719	467	390	390	390
235	1478	1027	747	515	393	390	390
245	1555	1078	774	560	442	390	390
255	1627	1125	798	601	486	390	390
265	1692	1168	821	639	527	390	390
275	1754	1209	842	674	566	390	390
285	1810	1246	861	707	601	394	390
295	1863	1281	880	738	634	441	390
297	1874	1288	883	744	641	450	390

Figure 1 – Example of a performance table according to EN 13381-8

# Structures in reinforced and pre-stressed reinforced concrete

## Mixed steel and concrete flooring

Mixed steel and concrete flooring consists of a layer of corrugated steel sheet with an upper covering of reinforced concrete supported by beams generally of steel. The fire-resistance tests specified for this type of flooring can be conducted according to the standards EN 13381-5 and EN 1365-2. Amonn offers a specific solution for the above type of construction. A document giving the experimental results obtained according to the provisions of EN 1365-2 makes possible rapid assessment of whether the minimum requirements of the system being analysed have been met and compare these with the sample being tested.

The application limits are given in the relevant section of the test document, entitled field of direct application. Amotherm paints have been tested according to the following criteria.

Type of flooring	Load-bearing structure	Thickness [mm]	Protective coating	Rating
<b>Corrugated sheet metal topped with concrete</b>	Sheet metal with HEB180 beams underneath	110 (55+55)	<b>Amotherm Steel WB</b> <ul style="list-style-type: none"> <li>• 1000 g/m<sup>2</sup> on sheet metal</li> <li>• 2000 g/m<sup>2</sup> on beam HEB 180</li> <li>• Variable for other types of beam</li> </ul>	REI 120

The treatment applied is as for steel structures

## Application

Unprotected steel in harsh environmental conditions (high humidity, condensation, etc.) is affected by corrosion. This is why steel structures must be protected for the entire life-time required for the structure.

A passive fire-protection system using reactive paints must be integrated with an anti-corrosion treatment suitable for the design and the chemical, physical and atmospheric exposure.

The surfaces of steel structures to be protected can be divided into the following types.

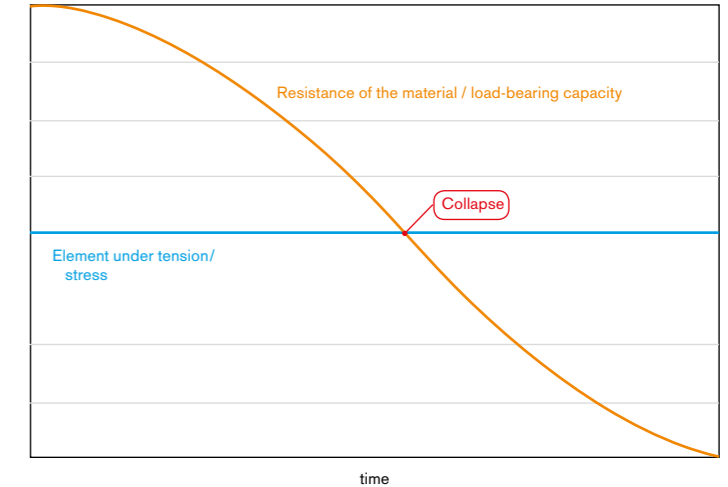
Type of surface	Preparation of the support	Primer	Reactive paint	Top Coat
<b>Rolled steel:</b> surfaces exhibiting calamine or rust	<ul style="list-style-type: none"> <li>• Sanding down</li> <li>• Brushing down</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amotherm Steel Primer SB</b> (urban or light industrial atmospheres)</li> <li>• <b>Amotherm Steel Primer Epoxy SB</b> (marine or heavy industrial atmospheres)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amotherm Steel WB/SB</b></li> <li>• <b>Protherm Steel</b></li> </ul>	<b>Amotherm Steel Top WB/SB</b>
<b>Galvanized steel:</b> surfaces with zinc bloom	<ul style="list-style-type: none"> <li>• Remove surface dirt</li> <li>• Clean with solvent</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amotherm Steel Primer Epoxy SB</b></li> <li>• <b>Amotherm Steel Primer WB</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amotherm Steel WB/SB</b></li> <li>• <b>Protherm Steel</b></li> </ul>	<b>Amotherm Steel Top WB/SB</b>
<b>Painted steel</b>	<ul style="list-style-type: none"> <li>• Remove existing paint.</li> <li>• Check compatibility with the intumescent paint</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amotherm Steel Primer SB</b> (urban or light industrial atmospheres)</li> <li>• <b>Amotherm Steel Primer Epoxy SB</b> (marine or heavy industrial atmospheres)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amotherm Steel WB/SB</b></li> <li>• <b>Protherm Steel</b></li> </ul>	<b>Amotherm Steel Top WB/SB</b>

Refer to the table below for the anti-corrosion treatment.

N 12944 corrosion rating – Indoor environment		ETAG/EAD/ EN 16623 environmental conditions	Primer			Reactive system			Top coat			
Rating	Description	Description	Amotherm Steel Primer WB	Amotherm Steel Primer SB	Amotherm Steel Primer Epoxy SB	Amotherm Steel WB	Amotherm Steel SB	Protherm Steel	Optional	Amotherm Steel Top WB	Amotherm Steel Top SB	Amotherm Steel Top PU SB
<b>C1</b>	Heated environment with a clean atmosphere	Z2	•	•	•	•	•	•	•	•	•	
<b>C2</b>	Unheated environment possibly with some condensation	Z1	•	•	•		•	•			•	
<b>C3</b>	Environment with high humidity and a certain degree of atmospheric pollution	Y	•	•	•		•	•				•
<b>C4</b>	Environment with chemical plants, swimming pools, coastal boatyards	X			•		•					•

The product should be chosen on the basis of the surface and its corrosion rating.

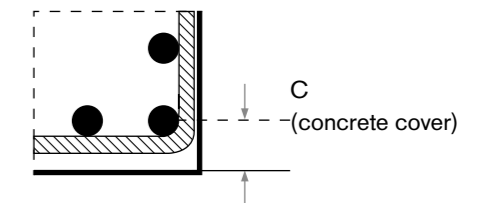
Ordinary reinforced and pre-stressed reinforced concrete is a system consisting of concrete with a steel reinforcement designed to improve the mechanical properties of both components.



When exposed to the action of fire, structures in reinforced and pre-stressed reinforced concrete undergo an increase in temperature leading to reduction in their mechanical resistance properties. Heating to high temperatures is of particular importance for the steel component that, as the heat increases, begins to lose its mechanical resistance properties leading to collapse of the entire structure.

The following parameters should be assessed to determine the fire resistance of a concrete structure.

- **Resistance rating**
- **Thickness** of the concrete covering the reinforcing bars, known as **concrete cover**
- **Critical temperature:** the temperature at which the structure collapses, established by the project designer according to stress and class of steel.



C: distance between the exposed edge of the section in reinforced/pre-stressed reinforced concrete and the axis of the principal, most exposed reinforcing bar.

## Testing structures in reinforced and pre-stressed reinforced concrete.

The contribution made by the protective coating to the fire-resistance of a structural element in reinforced or pre-stressed reinforced concrete can be determined for each type of surface using analytical calculation, comparison tables and/or laboratory testing. Structures in reinforced and pre-stressed reinforced concrete may be tested using analysis in compliance with the criteria laid down in Eurocodes EN1991-1-2 and EN1992-1-2.



If the analysis results in failure to meet the required fire-resistance performance, it is possible to apply passive fire-protection coatings to the structure.

The assessment reports, detailing specific laboratory tests for each product tested, make it possible to calculate the required thickness of the protective coating to be applied to the elements being treated, according to the above variables (critical temperature, concrete cover, resistance rating).

These assessments support the work of professionals and the quantity of protective coating to be used can be found in the performance tables.

The technical assessments are arrived at by laboratory testing conducted according to the following standards:

- EN 13381-3-2015: "Test methods for determining the contribution to the fire resistance of structural members. Part. 3: Applied protection to concrete members".

The technical assessments contain tables giving the fire-resistance rating according to the above parameters (concrete cover and critical temperature)

#### Thicknesses required for R120 fire-resistance rating – flooring and walls – Amotherm Brick WB

Critical temperature $\theta_{crit}$ [°C]								
d [mm]	300	350	400	450	500	550	600	650
10-14	**	1150	950	800	650	471	471	471
15-19	1150	1000	800	650	471	471	471	471
20-24	1100	900	700	471	471	471	471	471
25-29	1000	750	471	471	471	471	471	
30-34	850	500	471	471	471	471		
35-39	650	471	471	471	471			
40-44	471	471	471	471				
45-49	471	471	471					
50-54	471	471						
55-59	471							
60-64	471							
65-69								

Figure 2 – Example of a performance table according to EN 13381-3.

#### Table key:

- d: concrete cover
- $\theta_{crit}$ : critical temperature
- \*\* : Fire resistance class not available
- Note: empty fields indicate that the structure does not need to be protected

The standard EN 13381-3 also makes it possible to calculate the equivalent thickness of concrete of the protective coating Amotherm Concrete WB on the basis of the thickness and the partition class.

$\varepsilon$ [mm]	$d_p$ [µm]	Time of exposure to fire [min]					
		30	60	90	120	180	240
$\varepsilon_{d_p (min)}$	471	22	27	25	22	20	21
$\varepsilon_{d_p (max)}$	1262	30	47	54	55	52	42

Figure 3 – Equivalent thickness of concrete

#### Table key:

- $\varepsilon$  = equivalent concrete thickness
- $d_p$  = protective coating thickness
- $d_{p (min)}$  = minimum equivalent thickness
- $d_{p (max)}$  = maximum equivalent thickness

#### Masonry-concrete floor

Flooring in masonry-concrete mix is laid with reinforced or pre-stressed reinforced concrete joists and lightening elements in brickwork. This type of flooring can be fire-tested according to the standard EN 1365-2: Fire resistance tests for load-bearing elements – Part 2: floors and roofs.

Amonn offers a specific solution for the above type of construction. A document giving the experimental results obtained according to the provisions of EN 1365-2 makes possible rapid assessment of whether the minimum requirements of the system being analysed have been met and compare these with the sample being tested.

The application limits are given in the relevant section of the test document, entitled field of direct application. The following type of flooring has been tested for Amotherm paints.

Type of flooring	Description of flooring	Thickness [cm]	Protective coating	Rating
Masonry-concrete floor	Flooring with reinforced joists and hollow masonry blocks	16 + 4	Amotherm Brick WB 800 g/m <sup>2</sup>	REI 90 –RE 120

The treatment applied is as for concrete structures.

#### Application

Structures in reinforced and pre-stressed reinforced concrete are rarely subject to mechanical stress but they may be subject to harsh climatic agents. It is therefore essential for the correct procedure to be followed, from the primer, to top coat, to ensure the system delivers effective fire protection.

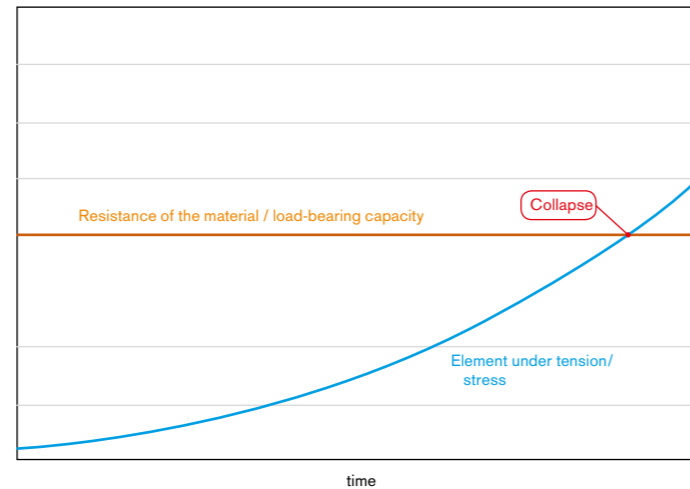
The table below shows the instructions to be followed for correct application according to the surface conditions.

State of the surface	Surface preparation	Primer	Reactive paint	Top coat
Unpainted	Thorough cleaning	Amotherm Brick Primer WB	Amotherm Concrete WB Pro/Brick	Amotherm Brick TOP WB
Painted, in a poor state	Remove existing paint by sanding or brushing down	Amotherm Brick Primer WB	Amotherm Concrete WB Pro/Brick	Amotherm Brick TOP WB
Painted, in a good state	Brushing down	Amotherm Brick Primer WB	Amotherm Concrete WB Pro/Brick	Amotherm Brick TOP WB
Exposed reinforcements	Reinforcements to be passivated + restore concrete cover	Amotherm Brick Primer WB	Amotherm Concrete WB Pro/Brick	Amotherm Brick TOP WB



# Protection of wooden structures

In contrast to other construction materials, such as steel or concrete, wood is a combustible material. Its combustibility is undoubtedly a negative feature of wood because it contributes to the development and propagation of a fire and to reduction of its resistant section.



## Fire-protection for wood with Amonn paints and varnishes

Amotherm paints and varnishes can be used for two specific functions.

- Fire reaction: fire-retardant paints that reduce the combustibility of the surface to which they are applied.
- Fire resistance: intumescent paints that reduce the speed of carbonization and contribute to the fire resistance of the structure.

## Regulatory framework

- **Fire-reaction:**
  - EN 13501-1: classifies the fire reaction of construction products according to the European ratings A1-A2-B-C-D-E-F. It also includes the parameter 's' for smoke and 'd' for dropping.
- **Fire resistance:**
  - EN 13501-2: classifies the fire resistance of construction products with tests performed according to the standard EN 13381-7.

Wooden structures can also be assessed analytically according to the criteria laid down in Eurocodes EN1991-1-2 and EN1995-1-2.

If the analysis results in failure to meet the required performance, it is possible to apply passive fire-protection coatings to the structures.

The thickness of the protective coating is calculated according to the following parameters

- Resistant sections
- Static framework and loads
- Resistance rating
- Carbonization speed

The assessment reports, detailing specific laboratory tests for each product tested, make it possible to calculate the required thickness of the protective coating to be applied to the elements being treated, according to the above variables. These assessments support the work of professionals and consist in easy-to-read tables (see Figure 4). The contribution made by the protective coating is defined in terms of its ability to slow down the carbonisation speed of the surface to which it is applied. The results of the technical assessments are obtained from laboratory tests according to the following standard:

- EN 13381-7: Test methods for determining the contribution to the fire resistance of structural members - Applied protection to timber members.

An example of the results table according to the standard EN 13381-7 is shown below, using the following parameters:

- $\beta'$ : Charring rate of the unprotected element
- $\beta''_{min}$ : Charring rate of the element protected with the smaller thickness
- $\beta''_{max}$ : Charring rate of the element protected with the greater thickness
- $k_{\beta min}$ : Charring rate reduction coefficient for the minimum thickness
- $k_{\beta max}$ : Charring rate reduction coefficient for the maximum thickness

Table for wooden slabs treated with Amotherm Wood WB

Parameter	Protection thickness [g/m <sup>2</sup> ]	R 15	R 30	R 45
$\beta'$ [mm/min]	0	0,760	0,760	0,760
$\beta''_{min}$ [mm/min]	400	0,406	0,609	0,677
$\beta''_{max}$ [mm/min]	800	0,086	0,469	0,597
$k_{\beta min}$	400	0,533	0,801	0,890
$k_{\beta max}$	800	0,113	0,617	0,785

Figure 4 – Performance table according to EN 13381-7

## Application

Fire-retardant/intumescent paints and varnishes are a solution for preserving the natural beauty of wood. They are applied and, once in place, appear like normal paints and transparent varnishes and they do not alter the look and the geometry of the elements to which they are applied. The choice of product may also depend on the use to which the element to be treated is put.

**Table for furniture, crabbled pieces of furniture and not for structural elements, curtains, scenographic decor and exhibition stand construction**

Product	Description	Euroclass EN 13501/1
<b>WOOD FOR FURNITURE AND INDUSTRIAL USE</b>		
<b>Amotherm Wood 450 SB</b>	Colourless solvent-based polyurethane treatment	200 + 160 g/mq*
<b>Amotherm Wood 451 SB</b>	Coloured solvent-based polyurethane treatment	200 + 160 g/mq*

\* Consumption obtained without intermediate sanding down. Recommended consumption 300 + 160 g/m² with intermediate sanding down for a better aesthetic result.

For this type of application fire retardant paints have a purge duration of 5 years as stated in the D.M. of the 06<sup>th</sup> March 1992.

**Table for structural and covering wood (claddings and ceilings, inserted ceilings, flooring and wooden walls)**

Product	Description	EN 13381-7 fire resistance	EN 13501-1 fire resistance class
<b>WOODEN FLOORING</b>			(Bfl-s1)
<b>Amotherm 540 SB</b>	Solvent-based treatment		320 g/mq*
<b>STRUCTURAL WOODEN ELEMENTS</b>			(B-s1, d0)
<b>Amotherm Wood WSB</b>	Colourless mixed treatment, water + solvent based	Consumption on request	360 + 100 g/mq
<b>Amotherm Wood WB + Wood Top WB</b>	Coloured water-based paint	Consumption on request	400 g/mq
<b>Amotherm Wood 450 SB</b>	Colourless solvent-based polyurethane treatment		200 + 160 g/mq**
<b>Amotherm Wood 451 SB</b>	Coloured solvent-based polyurethane treatment		200 + 160 g/mq**

\* Consumption obtained without intermediate sanding down. Recommended consumption 240 + 160 g/m² with intermediate sanding down for a better aesthetic result.

\*\* Consumption obtained without intermediate sanding down. Recommended consumption 300 + 160 g/m² with intermediate sanding down for a better aesthetic result.

#### Preparing the surface

As a preliminary operation, an inspection should be made of the structure and the area subsequently to be protected from fire by the application of intumescent paint. The general state of the structure must be checked, its solidity, the presence of any contaminants, emissions of water vapor, chemical attack, etc.

#### Structural and covering wood

Type of surface	Surface preparation	Reactive paint	Finishing paint
<b>New raw timber</b>	<ul style="list-style-type: none"> <li>Clean</li> <li>Check for damp</li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood WB</b></li> <li><b>Amotherm Wood WSB</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood Top WB</b> (optional)</li> <li><b>Amotherm Wood Top WSB</b> (essential)</li> </ul>
<b>Currently varnished/painted wood</b>	<ul style="list-style-type: none"> <li>Remove varnish/paint with sandpaper for wood</li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood WB</b></li> <li><b>Amotherm Wood WSB</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood Top WB</b> (optional)</li> <li><b>Amotherm Wood Top WSB</b> (essential)</li> </ul>

#### Wood for flooring

Type of surface	Surface preparation	Reactive paint	Finishing paint
<b>New raw timber</b>	<ul style="list-style-type: none"> <li>Clean</li> <li>Possibly add colour with a compatible colourant</li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood 540</b></li> </ul>	<b>Amotherm Wood 540 Top</b>
<b>Currently painted/varnished wood</b>	<ul style="list-style-type: none"> <li>Remove paint/varnish with sandpaper for wood</li> <li>Clean</li> <li>Possibly add colour with a compatible colourant</li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood 540</b></li> </ul>	<b>Amotherm Wood 540 Top</b>

#### Wood for furniture and industrial use

Type of surface	Surface preparation	Reactive paint	Finishing paint
<b>New raw timber</b>	<ul style="list-style-type: none"> <li>Clean</li> <li>Possibly add colour with a compatible colourant</li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood 450/451</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood 450/451 Top</b></li> </ul>
<b>Currently painted/varnished wood</b>	<ul style="list-style-type: none"> <li>Remove paint/varnish with sandpaper for wood</li> <li>Clean</li> <li>If the wood sandpapering cannot be done check compatibility with the current paint and adhesion sanding</li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood 450/451</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Amotherm Wood 450/451 Top</b></li> </ul>

**N.B.:** While transparent protective varnishes for wood are being applied, they can react when the moisture content is high. We would like to stress the importance of following the instructions carefully to avoid the varnish turning white or peeling off.

# Protection of brickwork walls and plasterboards

The existing walls sometimes have no resistance to fire.

One method for improving the fire performance of a wall is to increase its thickness in order to bring it up to the required fire resistance rating. If this is not possible, this result can be achieved with the use of passive protective systems.

In particular, reactive paints are applied like normal paints and they have the following advantages:

- they do not alter the look and geometry of the structural elements to which they are applied
- they are applied like normal paint and do not need special tools or equipment
- there are an excellent solution in environments with limited moving space or where there are such technical systems as central heating and electrical systems.

## Brickwork wall rating

The rating of separating walls may be checked by means of laboratory tests performed according to the standard EN 1364-1 (for non-loadbearing walls) and EN 1365-1 (for loadbearing walls).

The test results are given in a rating report in which the field of direct application indicates the essential parameters that must be used to compare the test sample with the element analyzed. In order for the results to be comprehensive, the minimum conditions must apply to the element being checked.

The table below shows the Amonn solutions for non-loadbearing walls in perforated brickwork or concrete blocks.

Type of block	Block thickness [mm]	Plaster thickness each side [mm]	Amotherm Brick WB [kg/m <sup>2</sup> ]	Fire-resistance rating	Rating report Number
masonry block	80	10	0,8	EI 45	CSI 1791FR
masonry block	80	10	1,4	EI 60	CSI 1792FR
masonry block	120	10	0,4	EI 90	CSI 1788FR
masonry block	80	15	1,4	EI 120	CSI 1814FR
masonry block	120	15	1,0	EI 180	CSI 1816FR
masonry block	180	10 <sup>1</sup>	1,4	EI 240	CSI 1820FR
hollow concrete block	200	0	0,8	EI 120	CSI 1937FR

Figure 5 – Table of solutions for walls with Amotherm Brick WB

1 – Plaster only on the non-exposed side

Plasterboard partition walls are made of a metallic structure that is mechanically fasten to both pavement and ceiling. One or more plasterboard sheets are fixed onto these beams. This solution is frequently used to divide rooms in offices, hospitals, schools, shops, ecc.

All ongoing activities in public environments are regulated by specific anti-fire regulations; therefore the walls have to comply with specific factors: "E" for integrity and "I" for insulation.

In order to meet the necessary requests the only solution - until today - was to use special anti-fire plasterboards in possession of the necessary "EI" classification.

The new Amonn solutions are designed to treat ordinary plasterboard sheet with the intumescent fireproofing paint AMOTHERM GYPS WB in order to improve their "fire" performance.

Product assessment tests are arrived at by testing, conducted according to the European standards UNI EN 1363-1 and UNI EN 1364-1 on self-supporting wall elements "GW 75/50/500" and "GW 100/50/400".

Type of wall element	Plasterboards type A (standard), per side	Thickness of plasterboards [mm]	Dimensions of carrier beams and spacing between them [mm]	Schematic wall drawing	Amotherm GYPS Primer WB diluted at 30% [kg/m <sup>2</sup> ]	Amotherm GYPS WB [kg/m <sup>2</sup> ]	Classification of fire resistance
Light drywall	1	12,5 mm	50/600		0,1	1	EI 60
Light drywall	2	12,5 mm	50/600		0,1	0,8	EI 90
Light drywall	2	12,5 mm	50/600		0,1	1,2	EI 120

## Fields of use:

- Plasterboard sheets with a min. thickness of 12,5 mm and above
- Dimensions of zinc-plated steel carrier beams min. 50 mm and above
- Applicable on boards up to 4 m in height for classification EI 90
- Applicable on boards up to 6 m in height for classification EI 60 and EI 120 (paper documentation of technical report pending, please contact [ingass@amonncolor.com](mailto:ingass@amonncolor.com))

## Application

Indoor brickwork structures are not subject to particular climatic attack or mechanical stress. The choice of a protective treatment must therefore take into account aesthetic factors and adhesion. Ease of application and integration with technological systems are also essential considerations.

## Separating walls in brickwork, concrete blocks and plasterboards

Type of surface	Surface preparation	Primer	Intumescent paint	Finishing coat
Newly plastered wall	Thorough cleaning	Amotherm Brick Primer WB	Amotherm Brick WB	Amotherm Brick TOP WB
Plastered and painted wall in a poor state	Remove paint by sanding or brushing	Amotherm Brick Primer WB	Amotherm Brick WB	Amotherm Brick TOP WB
Plastered and painted wall in a good state	Thorough cleaning	Amotherm Brick Primer WB	Amotherm Brick WB	Amotherm Brick TOP WB
Non-plastered wall in concrete blocks	Thorough cleaning	Amotherm Brick Primer WB	Amotherm Brick WB	Amotherm Brick TOP WB
Pre-existing plasterboard walls	Thorough cleaning	Amotherm Gyps Primer WB	Amotherm Gyps WB	Amotherm Gyps TOP WB

# Our range of products

## Amotherm Steel

- 27 Amotherm Steel WB
- 28 Amotherm Steel SB
- 29 Protherm Steel
- 30 Amotherm Steel Primer WB
- 31 Amotherm Steel Primer SB
- 31 Amotherm Steel Primer Epoxy SB
- 32 Amotherm Steel Top WB
- 33 Amotherm Steel Top SB
- 33 Amotherm Steel Top PU SB
- 34 SEA 3000

## Amotherm Wood

- Varnishes for wooden walls/claddings and ceilings**
- 36 Amotherm Wood WB + TOP
  - 37 Amotherm Wood WSB
- Varnishes for wooden furnishing and fittings for industrial use**
- 38 Amotherm Wood 451 SB
  - 39 Amotherm Wood 450 SB
- Varnishes for wooden flooring**
- 40 Amotherm Wood 540 SB

## Amotherm Brick

- 42 Amotherm Brick WB
- 43 Amotherm Brick Primer WB
- 43 Amotherm Brick Top WB

## Amotherm Concrete

- 45 Amotherm Concrete WB
- 46 Amotherm Concrete Primer WB
- 46 Amotherm Concrete Top WB

## Amotherm Gyps

- 48 Amotherm Gyps WB
- 49 Amotherm Gyps Primer WB
- 49 Amotherm Gyps Top WB

## Monokote

- 51 Monokote MK6-S

# Amotherm Steel

## LOW ENVIRONMENTAL IMPACT

White water-based paint for the fire-protection of steel structures.

## Amotherm Steel WB

Single-component water-based varnish for fire-protection of steel elements

### Technical features

- Once in place it looks like a normal varnish
- It does not alter the aesthetics of the element
- Easy to use
- It does not add weight to the geometry of the structural element to which it is applied
- A very slight initial odour, odourless once dry
- Can be applied as a single thick coat (airless)

### Applications

Specifically designed for fire-protection of structural building elements in steel for civil or industrial use. Recommended for indoor use, following application of an anti-corrosion or bonding primer for galvanised structures. Ideal for use in closed environments or where solvent-based products cannot be used.

### Drying time

- 6 – 12 hours at surface
- 24 – 48 hours at depth

### Consumption

Depends on the structural element to be protected and the technical performance required.

### Recommended treatments

#### Interior:

- 1 x Amotherm Steel Primer Epoxy SB on galvanized structures / 1x Amotherm Steel Primer WB on black iron
- Amotherm Steel WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top WB (optional for coloured finishes)

### Packaging

5 – 20 Kg

### Certifications

- Rated according to EN 13501 – 2
- Tested according to EN 13381 – 4 and 13381 - 8
- European Technical Assessment 14/0417
- Technical approval VKF (CH)
- Technical approval IBS (A)
- Tested according to GHOST regulation

Please contact the Amotherm Engineering and Assistance service for detailed information on consumption: [ingass@amonncolor.com](mailto:ingass@amonncolor.com).



Brushing



Rolling



Spraying

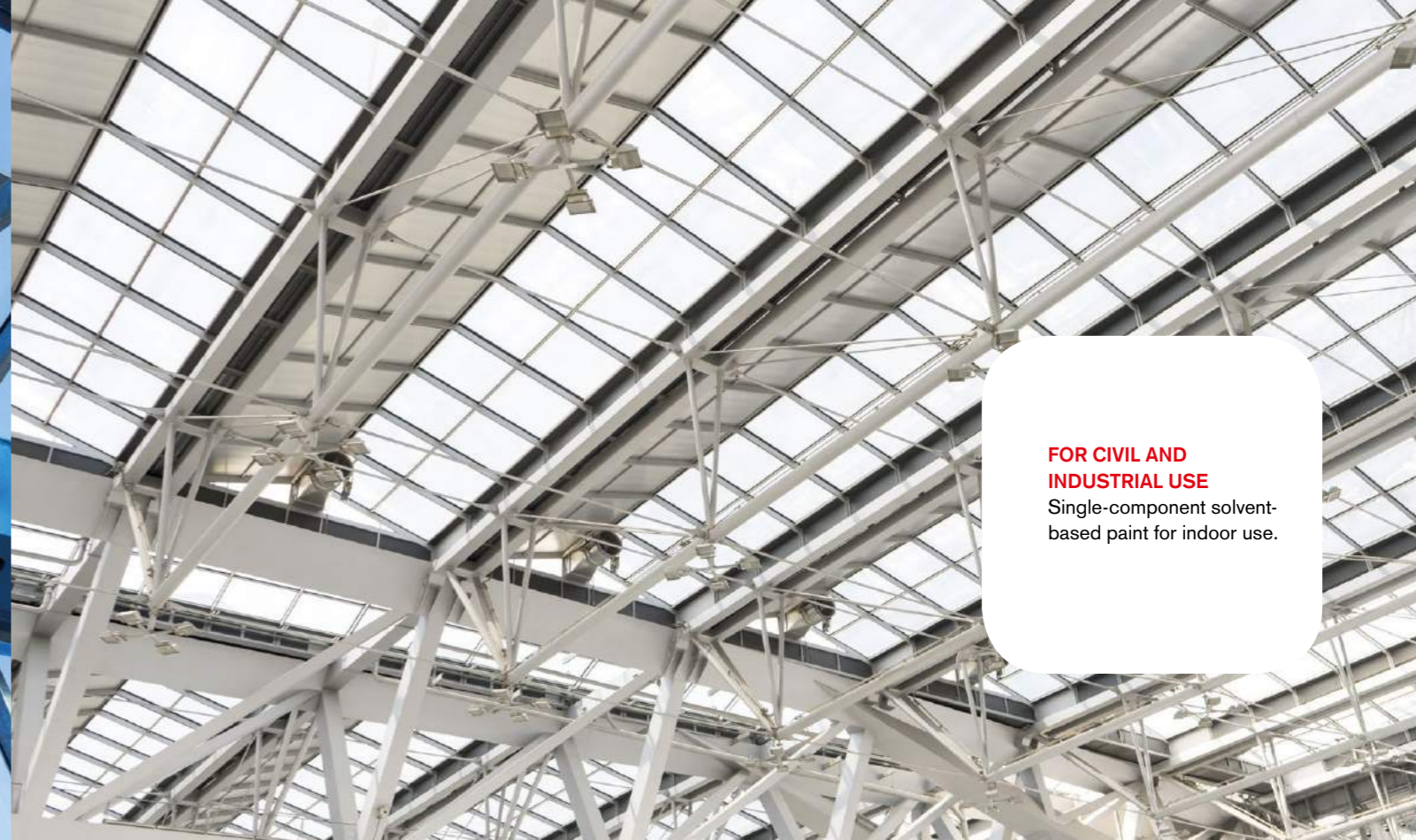


Water based





**SEMI-EXPOSED LOCATIONS**  
Solvent-based paint for the protection of steel structures located in complex climatic conditions.



**FOR CIVIL AND INDUSTRIAL USE**  
Single-component solvent-based paint for indoor use.

## Amotherm Steel SB

Single-component solvent-based varnish for fire-protection of steel elements

### Technical features

- Once in place it looks like a normal varnish
- It does not alter the aesthetics of the element
- It does not add weight to the geometry of the structural element to which it is applied
- Can be used in both indoor and semi-exposed outdoor environments

### Applications

Specifically designed for fire-protection of structural building elements in steel for civil or industrial use. Recommended for use in indoor environments following application of an anti-corrosive primer and without the need for covering with any protective topcoat, or it can be used in partially-exposed or outdoor environments with a protective topcoat.

### Drying time

- 6 - 12 hours at surface
- 24 - 48 hours at depth

### Consumption

Depends on the structural element to be protected and the technical performance required.

### Recommended treatments

#### Interior:

- 1 x Amotherm Steel Primer Epoxy SB on galvanised structures / 1x Amotherm Steel Primer SB on black iron
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB (optional for coloured finishes)

#### Outdoors (semi-exposed):

- 1 x Amotherm Steel Primer Epoxy SB on galvanised structures / 1x Amotherm Steel Primer SB on black iron
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB

#### Outdoors:

- 1 x Amotherm Steel Primer Epoxy SB
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top PU SB

### Packaging

5 - 20 Kg

### Certifications

- Rated according to EN 13501 - 2
- Tested according to EN 13381 - 4 and 13381 - 8
- European Technical Assessment 15/0303
- Tested according to GHOST regulation



Brushing



Rolling



Spraying



## Protherm Steel

Single-component solvent-based varnish for fire-protection of steel elements

### Technical features

- Once in place it looks like a normal varnish
- It does not alter the aesthetics of the element
- It does not add weight to the geometry of the structural element to which it is applied

### Applications

Specifically designed for fire-protection of structural building elements in steel for civil or industrial use.

### Drying time

- 6 - 12 h hours at surface
- 24 - 48 h hours at depth

### Consumption

Depends on the structural element to be protected and the technical performance required.

### Recommended treatments

#### Interior:

- 1 x Amotherm Steel Primer Epoxy SB on galvanised structures / 1x Amotherm Steel Primer SB on black iron
- Protherm Steel in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB (optional for coloured finishes)

### Packaging

5 - 25 Kg

### Certifications

- Tested according to EN 13381-4
- Tested according to GHOST regulation



Brushing



Rolling



Spraying





#### SAFE AND COMPATIBLE

A range of anti-corrosive primers for complete protection of steel surfaces providing better adherence for the protective covering.

## Amotherm Steel Primer SB

Anti-corrosive solvent-based primer for protective intumescent paint treatments for steel

#### Technical features

- Anti-corrosive alkyd zinc phosphate primer
- Quick drying
- Single component

#### Applications

Specifically designed for use with Amotherm Steel intumescent paint coatings, particularly recommended for treating non-galvanised metal surfaces, for indoor applications or semi-exposed outdoor situations subject to weak chemical attack.

#### Drying time

- 30' at surface
- 2 hours at depth

#### Consumption

150 g/m<sup>2</sup> (100 µm wet film, 50 µm dry film)

#### Recommended treatments

##### Interior:

- 1 x Amotherm Steel Primer SB
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB (optional or for coloured finishes)

##### Outdoors (semi-exposed):

- 1 x Amotherm Steel Primer SB
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB (coloured finish options)

#### Packaging

5 – 25 Kg

#### Certifications

- Certified for the purposes of European technical assessment ETA 15 / 0303



Brushing



Spraying



## Amotherm Steel Primer WB

Anti-corrosive water-based primer for protective intumescent paint treatments for steel

#### Technical features

- Single component
- Ready to use
- Low content of volatile organic compounds
- For indoor use or semi-exposed outdoors
- A very slight initial odour, odourless once dry

#### Applications

Anti-corrosive primer to be used before subsequent treatment with the intumescent paints Amotherm Steel WB.

#### Drying time

- 1 hour at surface / 24 hours at depth

#### Consumption

100 g/m<sup>2</sup> (80µm wet film, 40µm dry film)

#### Recommended treatments

##### Interior:

- 1 x Amotherm Steel Primer WB
- Amotherm Steel WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top WB (optional or for coloured finishes)

#### Packaging

5 – 20 Kg

#### Certifications

- Certified for the purposes of European technical assessment ETA 14 / 0417



Brushing



Rolling



Spraying



Water based



## Amotherm Steel Primer Epoxy SB

Epoxy solvent-based primer for protective intumescent paint treatments for steel

#### Technical features

- Anti-corrosive zinc phosphate primer for the protection of steel surfaces
- Ideal as an initial adhesive coat for treatments applied to galvanised, aluminium or stainless steel surfaces
- Protects the treatment in severe environmental conditions and industrial atmospheres
- Air drying
- Dual component

#### Applications

Anti-corrosive primer to be used before subsequent treatment with the intumescent paints Amotherm Steel SB or WB. Can also be used as an intermediate paint coating, specifically designed to favour adhesion on galvanised steel or iron surfaces treated with inorganic zinc-based coverings.

#### Drying time

- 2 hours at surface
- 24 – 36 hours at depth

#### Consumption

200 g/m<sup>2</sup> (60-70µm dry film)

#### Recommended treatments

##### Interior (only on galvanised surfaces)

- 1 x Amotherm Steel Primer Epoxy SB
- Amotherm Steel SB or WB applied in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB or WB (coloured finish options)

##### Semi-exposed outdoors (only on galvanised surfaces)

- 1 x Amotherm Steel Primer Epoxy SB
- Amotherm Steel SB or WB applied in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB (coloured finish options)
- 1 x Amotherm Steel Top PU SB (coloured finish options)

#### Packaging

A 4 – 20 Kg / B 1 – 5 Kg

#### Certifications

- Certified for the purposes of European technical assessment ETA 15 / 0303



Brushing



Spraying







**MAXIMUM COVER**  
 Amonn offers finishing treatments designed for protecting surfaces in diverse environmental and climatic conditions. All are available in a range of colours for an excellent aesthetic result.

## Amotherm Steel Top SB

Protective solvent-based vinyl topcoat for intumescent coatings on steel

### Technical features

- Makes the film resistant to condensation, damp and water
- Can be used to obtain coloured effects indoors but above all for protecting coatings in semi-exposed outdoor environments
- Single component

### Applications

The ideal solution for the protection of Amotherm Steel SB intumescent paint coatings, giving them extra resistance in semi-exposed environments (sheds) or in humid atmospheres.

### Drying time

- 2 hours at surface
- 24 – 48 hours at depth

### Consumption

- Interior: 150 g/m<sup>2</sup> (120µm of wet film, 60µm of dry film)
- Outdoors: about 250 g/m<sup>2</sup>

### Recommended treatments

#### Interior:

- 1 x Amotherm Steel Primer Epoxy SB on galvanised structures / 1x Amotherm Steel Primer SB on black iron
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB (optional for coloured finishes)

#### Outdoors (semi-exposed):

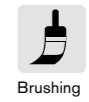
- 1 x Amotherm Steel Primer Epoxy SB on galvanised structures / 1x Amotherm Steel Primer SB on black iron
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top SB

### Packaging

5 – 10 Kg

### Certifications

- Certified for the purposes of European technical assessment ETA 15 / 0303



Brushing



Spraying



## Amotherm Steel Top WB

Protective water-based acrylic topcoat for intumescent coatings on steel

### Technical features

- Makes the film resistant to condensation in indoor environments
- Ideal to provide a coloured finish to the intumescent paint applied
- Available in different RAL or NCS shades
- Little odour and low content of volatile organic compounds
- Single component

### Applications

The ideal solution for decorating and protecting Amotherm Steel WB intumescent paint coatings located in indoor environments. Recommended for use in closed environments where it is not possible to use solvent-based products.

### Drying time

- 1 – 2 hours at surface
- 12 – 24 hours at depth

### Consumption

120 g/m<sup>2</sup> (100µm of wet film, 50µm of dry film)

### Recommended treatments

#### Interior:

- 1 x Amotherm Steel Primer Epoxy SB on galvanised structures / 1x Amotherm Steel Primer WB on black iron
- Amotherm Steel WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top WB (optional for coloured finishes)

### Packaging

5 – 10 Kg

### Certifications

- Certified for the purposes of European technical assessment ETA 14 / 0417



Brushing



Spraying



Water based



## Amotherm Steel Top PU SB

Dual-component solvent-based polyurethane topcoat for intumescent coatings on steel

### Technical features

- Particularly suitable for outdoor use
- Protects the coating from severe environmental attack, including in particularly harsh atmospheres
- Gives the coating applied excellent resistance to attack by physical and chemical agents
- Ideal for any colourings

### Applications

The solution specifically designed for protection of Amotherm Steel SB intumescent paint coatings, giving them extra resistance in outdoor environments or where subject to harsh atmospheres (industrial, marine areas, etc.).

### Drying time

- 4 hours at surface
- 24 – 48 hours at depth

### Consumption

100-120 g/m<sup>2</sup> (80µm of wet film, 50µm of dry film)

### Recommended treatments

#### Outdoors (semi-exposed):

- 1 x Amotherm Steel Primer Epoxy SB
- Amotherm Steel SB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Steel Top PU SB (coloured finish options)

### Packaging

A 16 Lt / B 4 Lt

### Certifications

- Certified for the purposes of European technical assessment ETA 15 / 0303

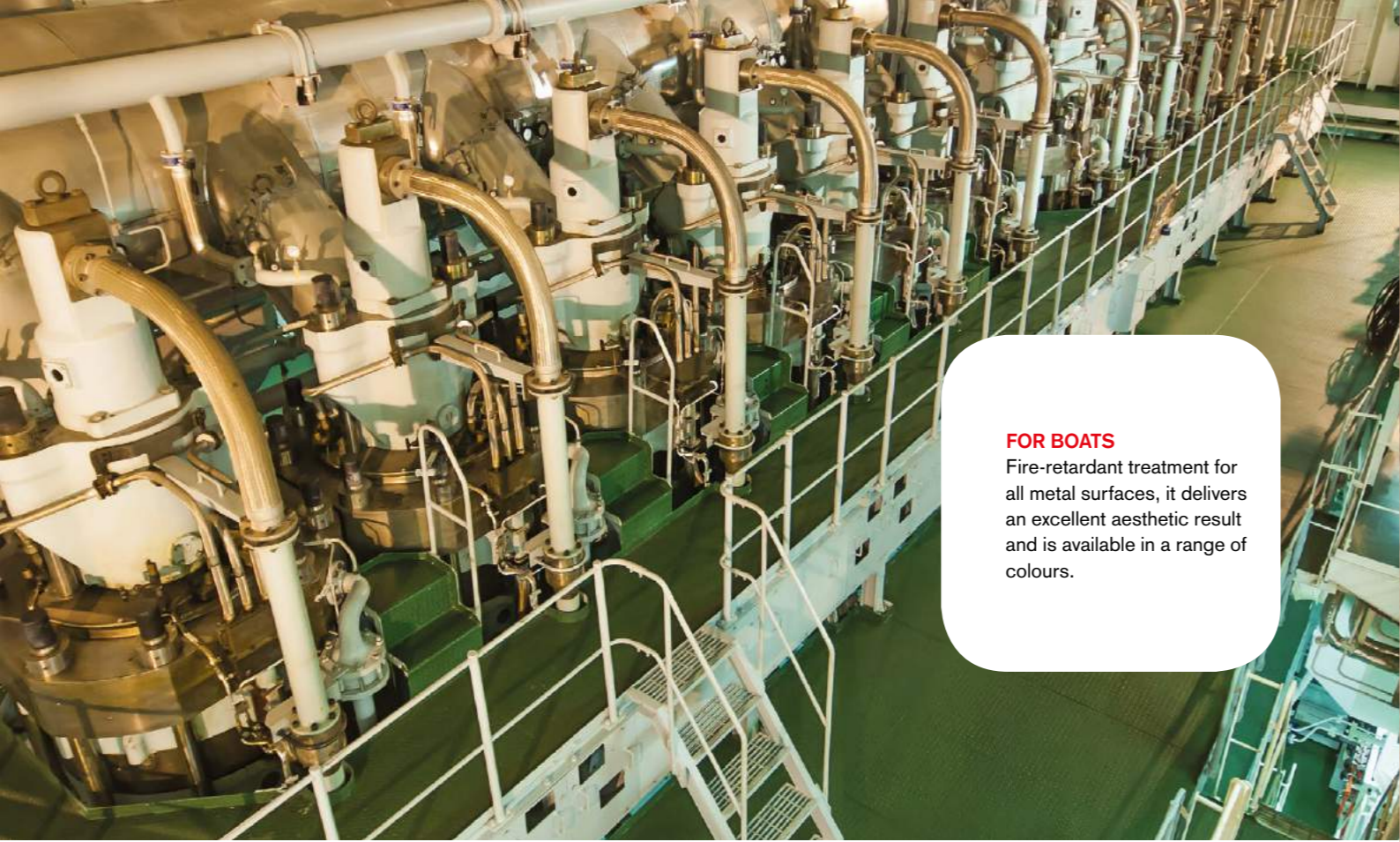


Brushing



Spraying





**FOR BOATS**  
 Fire-retardant treatment for all metal surfaces, it delivers an excellent aesthetic result and is available in a range of colours.

# Amotherm Wood

## SEA 3000

Dual-component solvent-based polyurethane fire-proofing treatment for metal and other non-inflammable surfaces

### Technical features

- Can be applied to all metal and non-inflammable surfaces
- Reduces flame spread
- Reduces smoke emission
- Coloured and available in different RAL or NCS shades
- Stain-resistant
- Extremely hard and scratch-resistant

### Applications

Specifically designed as a fire-proofing and decorative treatment for non-inflammable surfaces. The treatment guarantees an attractive aesthetic appearance and is available in a vast range of colours.

### Drying time

- Dry to the touch 40 - 50'
- 24 - 48 hours at depth

### Consumption

150 g/m<sup>2</sup> + 120 g/m<sup>2</sup> topcoat

### Recommended treatments

- Amotherm Steel Primer WB son galvanised surfaces
- 1 x Sea 3000 base
- 1 x Sea 3000 top

### Packaging

BASE A 5 - 25 Kg / BASE B 1 - 5 Kg  
 TOP A 5 - 10 Kg / TOP B 2,5 - 5 Kg

### Certifications

- MED B marine certification



Brushing



Spraying

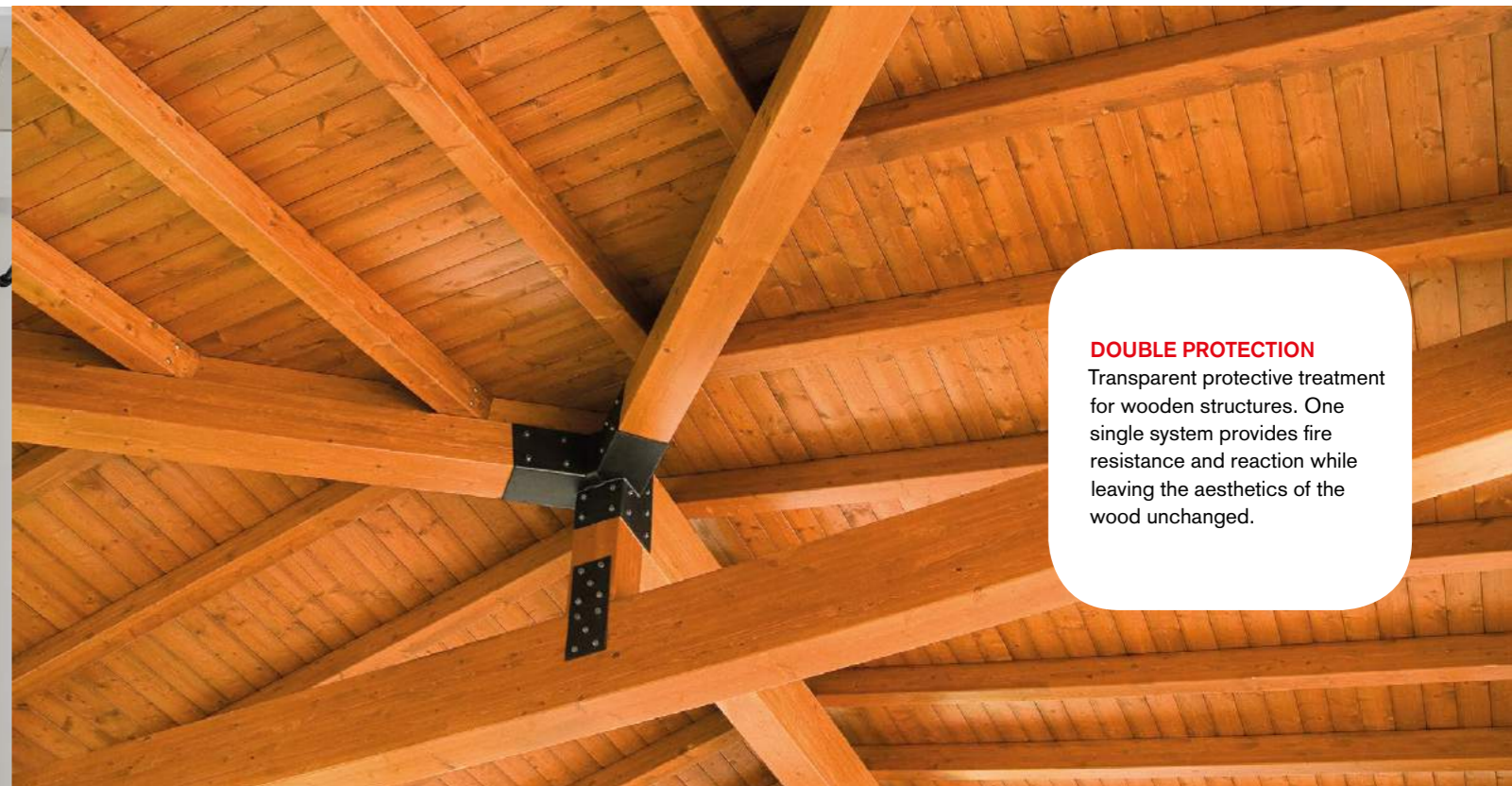


## Varnishes for wooden walls/claddings and ceilings



### TOTAL PROTECTION

Single-component water-based paint for wooden structures. A single product combining fire resistance and reaction in a good range of colours.



### DOUBLE PROTECTION

Transparent protective treatment for wooden structures. One single system provides fire resistance and reaction while leaving the aesthetics of the wood unchanged.

## Amotherm Wood WB e Amotherm Wood Top WB

Single-component water-based fire-proofing varnish for fire protection of wooden elements

### Technical features

#### Basecoat:

- Once in place it looks like a normal varnish
- Single component
- Easy to use
- A very slight initial odour, odourless once dry

#### Topcoat:

- Makes the film resistant to condensation in indoor environments
- Ideal to provide a coloured finish to the intumescent paint applied
- Available in different RAL or NCS shades

### Applications

Single-component, water-based varnish for improving the reaction and resistance to fire of items made of wood or its derivatives, fitted to walls and ceilings in indoor environments and not subject to mechanical stress nor subject to abrasion and foot traffic.

### Drying time

#### Basecoat:

6 – 12 hours at surface  
24 – 48 hours at depth

#### Topcoat:

1 – 2 hours at surface  
12 – 24 hours at depth

### Consumption and recommended treatments

Please consult table on page 20.

### Packaging

Base: 5 – 20 Kg  
Top: 5 – 10 Lt

### Certifications

- Rated Class B-s1, d0 according to EN 13501 – 1 and EN 13381-7
- Tested according to EN 13823 and EN 11925 - 2



Brushing



Rolling



Spraying



Water based



## Amotherm Wood WSB

Single-component transparent fire-proofing treatment for fire-protection of wooden elements

### Technical features

- Available in different degrees of gloss
- Transparent
- Easy to use
- Single-component treatment

### Applications

Transparent varnish treatment used to reduce the reaction to fire of items made of wood or its derivatives fitted indoors when the aesthetic effect must be maintained and which are not subject to mechanical stress and that are not subject to abrasion and foot traffic.

### Drying time

#### Base:

12 – 24 hours at surface  
24 – 48 hours at depth

#### Top:

6 – 8 hours at surface  
24 – 36 hours at depth

### Consumption and recommended treatments

Please consult table on page 20.

### Packaging

Base: 5 – 20 Kg  
Top: 5 – 9 Kg

### Certifications

- Rated Class B-s1, d0 according to EN 13501-1
- Tested according to EN 13823 and EN 11925-2
- Tested according to EN 13381-7



Brushing



Rolling



Spraying



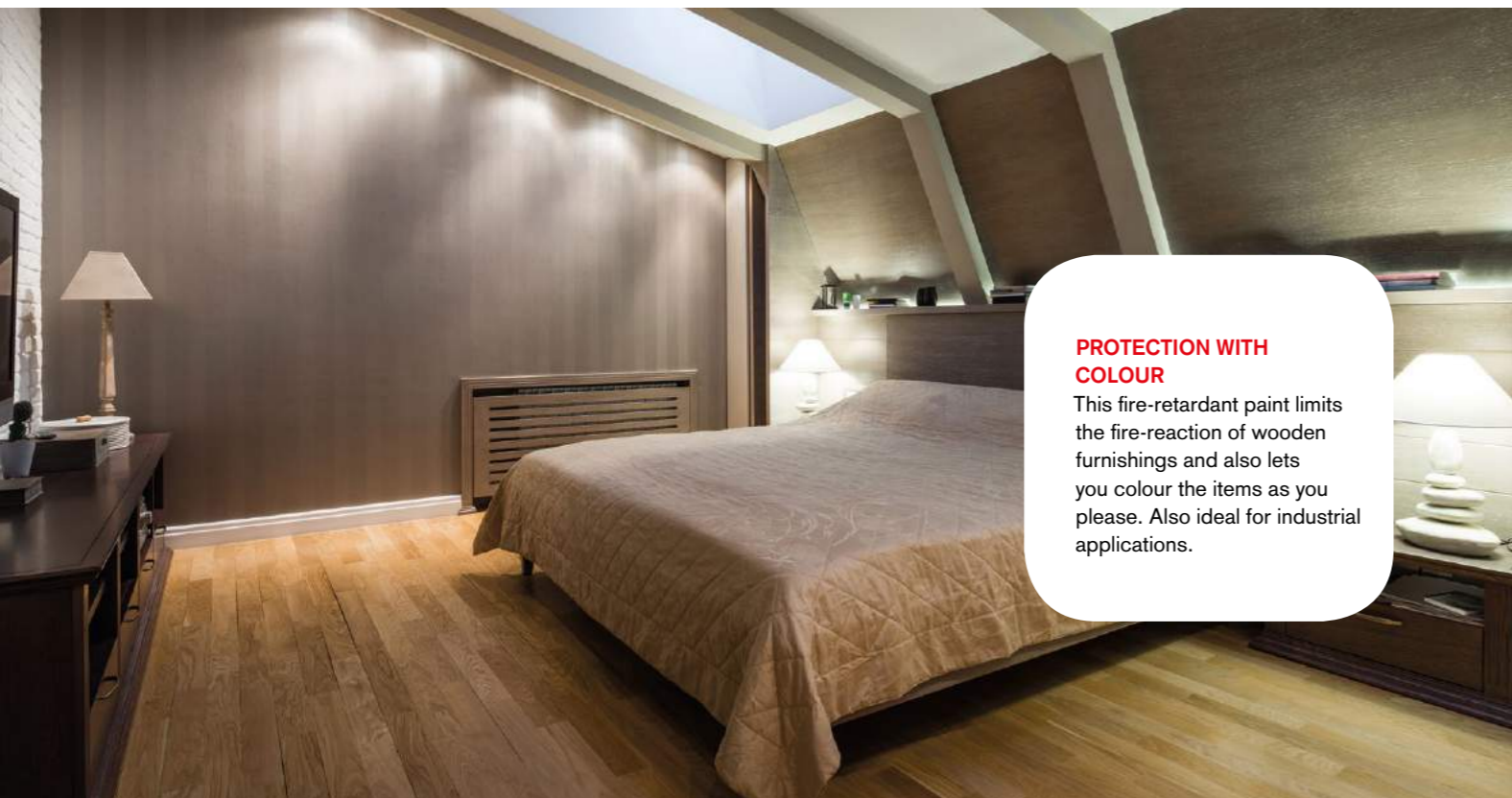
Matt



Semigloss



## Varnishes for wooden furnishing and fittings for industrial use



### PROTECTION WITH COLOUR

This fire-retardant paint limits the fire-reaction of wooden furnishings and also lets you colour the items as you please. Also ideal for industrial applications.



### TRANSPARENT PROTECTION

Transparent fire-retardant paint, perfect for limiting the fire-reaction of wooden furnishings while maintaining their aesthetics. Also ideal for industrial applications.

## Amotherm Wood 451 SB

Dual -component solvent-based polyurethane fire-proofing treatment for wood

### Technical features

- Extremely hard
- Protects against scratches and abrasion
- Stain-resistant
- Quick hardening
- Available in different RAL or NCS shades
- Available in different degrees of gloss

### Applications

Coloured dual-component polyurethane treatment used to reduce the reaction to fire of wooden furniture and fittings. Also used to reduce the reaction to fire of items made of wood or its derivatives, for example matchboard laid on walls or ceilings, in industrial environments.

### Drying time

#### Basecoat:

Dry to the touch 15'  
Ready for sanding down 6-8 hours  
24 hours at depth

#### Topcoat:

Dry to the touch 20'  
Ready for sanding down 12 hours  
24 hours at depth

### Consumption and recommended treatments

Please consult table on page 20.

### Packaging

**Base:**  
5 + 2,5 Kg  
10 + 5 Kg

**Top:**  
2,5 + 2,5 Kg  
5 + 5 Kg  
10 + 10 Kg

### Certifications

- Rated Class B-s1, d0 according to EN 13501 - 1
- Tested according to EN 13823 and EN 11925 - 2



Spraying



Matt



Semigloss



Glossy



## Amotherm Wood 450 SB

Dual-component solvent-based polyurethane fire-proofing treatment for wood

### Technical features

- Extremely hard
- Protects against scratches and abrasion
- Stain-resistant
- Quick hardening
- Transparent
- Available in different degrees of gloss

### Applications

Transparent dual-component polyurethane treatment used to reduce the reaction to fire of wooden furniture and fittings. Also used to reduce the reaction to fire of items made of wood or its derivatives, for example matchboard laid on walls or ceilings, in industrial environments.

### Drying time

#### Basecoat:

Dry to the touch 20'  
Ready for sanding down 4 hours  
12 hours at depth

#### Topcoat:

Dry to the touch 15'  
Ready for sanding down 2 hours  
8 hours at depth

### Consumption and recommended treatments

Please consult table on page 20.

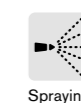
### Packaging

**Base:**  
5 + 2,5 Kg  
10 + 5 Kg

**Top:**  
2,5 + 2,5 Kg  
5 + 5 Kg  
10 + 10 Kg

### Certifications

- Rated Class B-s1, d0 according to EN 13501 - 1
- Tested according to EN 13823 and EN 11925 - 2



Spraying



Matt



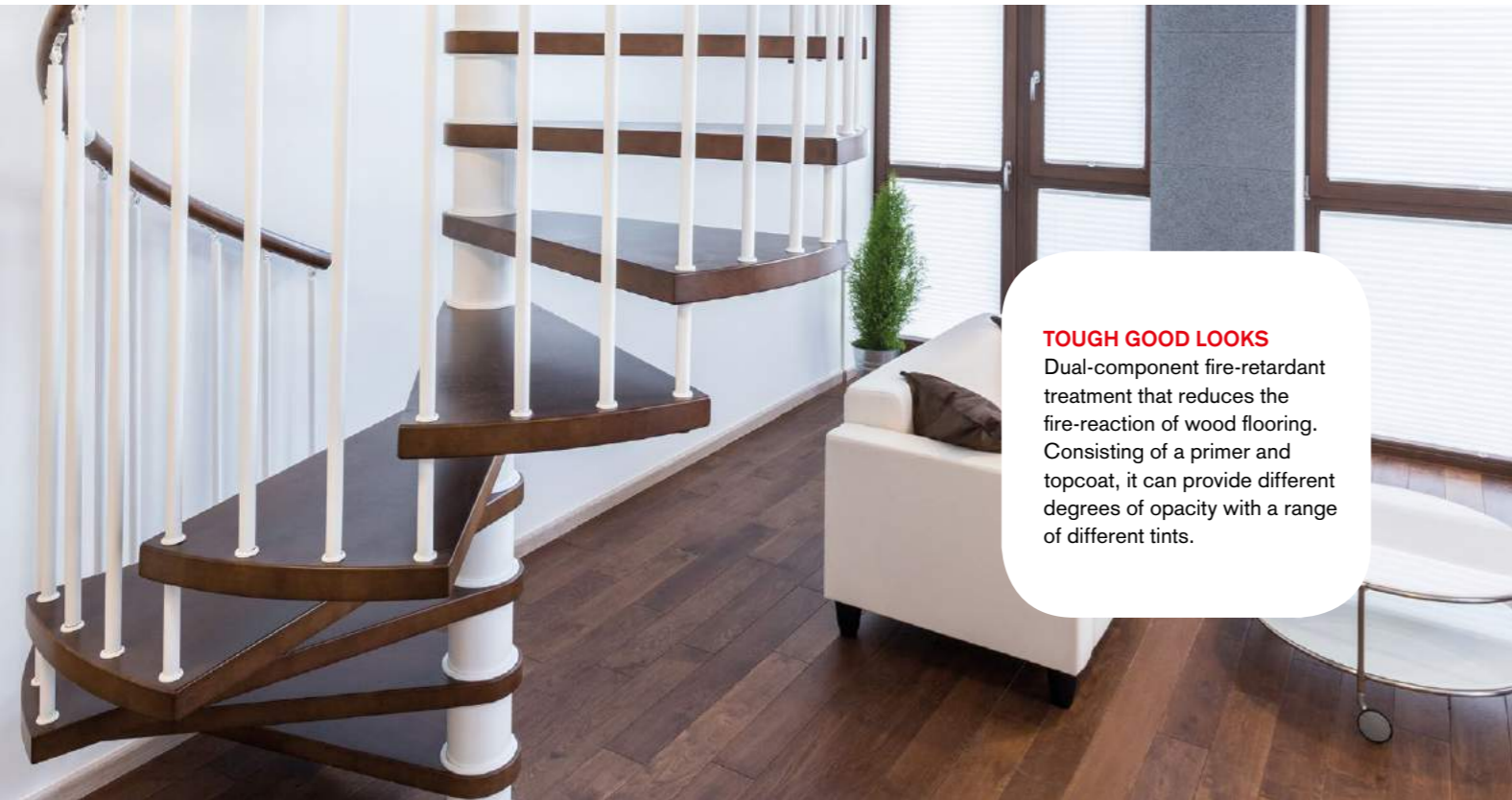
Semigloss



Glossy



## Varnishes for wooden flooring



### TOUGH GOOD LOOKS

Dual-component fire-retardant treatment that reduces the fire-reaction of wood flooring. Consisting of a primer and topcoat, it can provide different degrees of opacity with a range of different tints.

## Amotherm Brick

## Amotherm Wood 540 SB

Dual-component solvent-based polyurethane fire-proofing treatment for wood flooring

### Technical features

- Extremely hard
- Protects against scratches and abrasion
- Highly resistant to chemical agents
- Available in transparent finish or various RAL or NCS colours
- Available in different degrees of gloss

### Applications

Dual-component polyurethane treatment used to improve the reaction to fire of items made of wood or its derivatives used as flooring and otherwise installed indoors, such as parquet, platforms, stands.

### Drying time

#### Basecoat:

Dry to the touch 30'  
Ready for sanding down 6 hours  
12 hours at depth

#### Topcoat:

Dry to the touch 30'  
Ready for sanding down 6 hours  
18 hours at depth

### Consumption and recommended treatments

Please consult table on page 20.

### Packaging

**Base:**  
5 + 2,5 Kg  
10 + 5 Kg

**Top:**  
2,5 + 2,5 Kg  
5 + 5 Kg  
10 + 10 Kg

### Certifications

- Rated Class B<sub>fl</sub>-s1 according to EN 13501 - 1
- Tested according to EN 13823 and EN 11925 - 2



Brushing



Spraying



Matt



Semigloss



Glossy





**FAST, EASY AND SAFE**

The intumescent fire-proofing system providing ideal fire protection for brickwork. Easy to apply, it appears in-situ just like a normal water-based paint and does not alter the look of the structural element to which it is applied nor alter its geometry.

## Amotherm Brick Primer WB

Water-based fixative insulating primer for concrete

**Technical features**

- Promotes adhesion on concrete and brickwork surfaces
- Odourless
- Consolidates plasterwork or old slightly pulverised paintwork
- Prevents the formation of mould and bacteria.

**Applications**

An insulating, consolidating primer for buildings, the ideal preliminary treatment for surfaces in brickwork, concrete, reinforced and pre-stressed concrete. Specifically designed as a consolidating primer that promotes adhesion in the intumescent paint coatings Amotherm Brick / Concrete WB.

**Drying time**

- 1 hours at surface
- 4 – 6 hours at depth

**Consumption**

100 g/m<sup>2</sup> (100µm of wet film corresponds to 15 µm of dry film)

**Recommended treatments**

- 1 x Amotherm Brick Primer WB
- Amotherm Brick / Concrete WB multiple coats
- 1 x Amotherm Brick Top WB for colours other than white

**Packaging**

5 – 10 Kg



Brushing



Spraying



Water based



## Amotherm Brick WB

Single-component water-based paint for fire-protection of brickwork walls and floors in masonry-concrete mix

**Technical features**

- Once in place it looks like a normal water-based paint
- It does not alter the aesthetics of the element
- Easy to use
- It does not add weight to the geometry of the structural element to which it is applied
- For interior use
- A very slight initial odour, odourless once dry

**Applications**

Specifically designed for fire-protection of brickwork compartmentalising elements. Can be applied directly to non-plastered brickwork.

**Drying time**

- 6 – 12 hours at surface
- 24 – 48 hours at depth

**Consumption**

Depends on the element to be protected and the technical performance required.

**Recommended treatments**

- 1 x Amotherm Brick Primer WB
- Amotherm Brick WB multiple coats
- 1 x Amotherm Brick Top WB for colours other than white

**Packaging**

5 – 10 – 20 Kg

**Certifications**

- Rated according to EN 1364 – 1 and EN 1363 – 1.



Brushing



Rolling



Spraying



Water based



## Amotherm Brick Top WB

Protective water-based topcoat for intumescent coatings

**Technical features**

- Makes the film resistant to condensation and damp
- Ideal for different colourings
- A very slight initial odour, odourless once dry
- Low content of volatile organic compounds
- Single component

**Applications**

The ideal solution for decorating and protecting Amotherm Brick WB or Concrete WB intumescent paint coatings located in indoor environments.

**Drying time**

- 1 – 2 hours at surface
- 12 – 24 hours at depth

**Consumption**

120 g/m<sup>2</sup> (100µm of wet film, 50 µm of dry film)

**Recommended treatments**

- 1 x Amotherm Brick Primer WB
- Amotherm Brick WB / Concrete WB applied in multiple coats to reach the prescribed quantity
- 1 x Amotherm Brick Top WB (optional, for coloured finishes)

**Packaging**

5 – 10 Kg



Brushing



Rolling



Spraying



Water based



# Amotherm Concrete

## FOR STRUCTURES AND DIVIDING WALLS

Amotherm Concrete WB is the intumescent paint providing ideal fire-protection for structures in reinforced and pre-stressed concrete and flooring in masonry-concrete mix.

## Amotherm Concrete WB (Pro)

Single-component water-based paint for fire-protection of reinforced concrete structures

### Technical features

- Once in place it looks like a normal water-based paint
- It does not alter the aesthetics of the element
- Easy to use
- It does not add weight to the geometry of the structural element to which it is applied
- For interior use
- A very slight initial odour and odourless once dry

### Applications

Specifically designed for fire-protection of reinforced and pre-stressed concrete structural and compartmentalising elements and floors in masonry-concrete mix.

### Drying time

- 6 – 12 hours at surface
- 24 – 48 hours at depth

### Consumption

Depends on the element to be protected and the technical performance required

### Recommended treatments

- 1 x Amotherm Brick Primer WB
- Amotherm Concrete WB multiple coats
- 1 x Amotherm Brick Top WB for colours other than white

### Packaging

5 – 10 – 20 Kg

### Certifications

- Rated according to EN 13501 – 2
- Tested according to EN 13381 – 3

The product is also available in the alternative version Amotherm Concrete WB Pro. For further information and consumption details please contact the Amotherm Engineering and Assistance service: [ingass@amonncolor.com](mailto:ingass@amonncolor.com)



Brushing



Rolling



Spraying



Water based



# Amotherm Concrete Primer WB

Water-based fixative insulating primer for concrete

## Technical features

- Promotes adhesion on concrete and brickwork surfaces
- Odourless
- Consolidates plasterwork or old slightly pulverised paintwork
- Prevents the formation of mould and bacteria.

## Applications

An insulating, consolidating primer for buildings, the ideal preliminary treatment for surfaces in concrete, reinforced and pre-stressed concrete. Specifically designed as a consolidating primer that promotes adhesion in the intumescent paint coatings Amotherm Concrete WB.

## Drying time

1 h at surface  
4 – 6 hours at depth

## Consumption

100 g/m<sup>2</sup> (100µm of wet film corresponds to 15 µm of dry film)

## Recommended treatments

### Interior:

- 1 x Amotherm Concrete Primer WB  
Amotherm Concrete WB multiple coats
- 1 x Amotherm Brick Top WB for colours other than white

## Packaging

5 – 10 Kg



Brushing



Spraying



Water based



# Amotherm Concrete Top WB

Protective water-based finish for intumescent coatings on reinforced and precompressed concrete structures

## Technical features

- Provides resistance to condensation and moisture to the applied film
- Ideal for obtaining different colors
- A very slight initial odour and odourless once dry
- Low VOC contents
- Mono-component

## Applications

The ideal solution for decorating and protecting intumescent treatments on the basis of Amotherm Brick WB or Concrete WB in indoor environments.

## Drying time

1 - 2 h at surface  
12 - 24 h at depth

## Consumption

120 gr/m<sup>2</sup> (100µm wet film, 50µm dry film)

## Recommended treatments

- 1 x Amotherm Concrete Primer WB
- Amotherm Concrete WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Concrete Top WB (optional, for colored finishes)

## Packaging

5 – 10 Kg



Brushing



Spraying



Water based



Gyps





**QUICK AND HANDY**

Amotherm Gyps WB is a quick solution for the passive fire protection of plasterboard wall elements. Quick application, easy transport and cleaning, quick certification process.

## Amotherm Gyps Primer WB

Water-based primer for intumescent protective coating systems on plasterboards

**Technical features**

- Single component
- Ready to use
- Low content of volatile organic compounds
- For indoor use
- A very slight initial odour, odourless once dry
- The product has to be diluted with a maximum of 30-40% water, the recommended quantity of use is 100 g/m<sup>2</sup>

**Applications**

Insulating and consolidating primer, suitable for the preliminary treatment of plasterboard surfaces. Specific primer for increasing adhesion and consolidation in coating cycles based on Amotherm Gyps WB.

**Drying time**

- 1 hour at surface
- 24 hours at depth

**Consumption**

100 g/m<sup>2</sup> (80µm wet film, 40µm dry film)

**Recommended treatments**

**Interior:**

- 1 x Amotherm Gyps Primer WB  
Amotherm Gyps WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Gyps Top WB (optional or for coloured finishes)

**Packaging**

5 – 20 Kg

**Certifications**

- Tested according to EN 1364-1 in a certified European laboratory



Brushing



Rolling



Spraying



Water based



## Amotherm Gyps WB

One-component water based intumescent coating for the passive fire protection of plasterboards

**Technical features**

- Once in place it looks like a normal varnish
- It does not alter the aesthetics of the element
- Easy to use
- It does not add weight to the geometry of the structural element to which it is applied
- A very slight initial odour, odourless once dry

**Applications**

Specific for the fire protection of partitions in plasterboard (standard) in indoor environments.

**Drying time**

- 6 - 12 hours at surface
- 24 - 48 hours at depth

**Consumption**

Depends on the structural element to be protected and the technical performance required.

**Recommended treatments**

**Interior:**

- 1x Amotherm Gyps Primer WB  
Amotherm Gyps WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Gyps Top WB (optional for colored finishes)

**Packaging**

5 - 20 Kg  
Special Kit: base and primer 10 +1 kg  
The kit protects:  
• 10 m<sup>2</sup> of plasterboards classified EI 60 or  
• 12 m<sup>2</sup> of plasterboards classified EI 90 or  
• 8 m<sup>2</sup> of plasterboards classified EI 120

**Certifications**

Tested according to EN 1364 – 1 in a certified European laboratory



Brushing



Rolling



Spraying



Water based



## Amotherm Gyps Top WB

Water-based finish for intumescent protective coating systems

**Technical features**

- Makes the film resistant to condensation in indoor environments
- Ideal to provide a coloured finish to the intumescent paint applied
- Available in different RAL or NCS shades
- Very slight odour and low content of volatile organic compounds
- Single component

**Applications**

The ideal solution for decorating and protecting Amotherm Gyps WB intumescent paint coatings located in indoor environments.

**Drying time**

- 1 – 2 hours at surface
- 12 – 24 hours at depth

**Consumption**

120g/m<sup>2</sup> (100 µm of wet film, 50 µm of dry film)

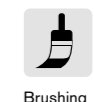
**Recommended treatments**

**Interior**

- 1x Amotherm Gyps Primer WB  
Amotherm Gyps WB in multiple coats to reach the prescribed quantity
- 1 x Amotherm Gyps Top WB (optional for coloured finishes)

**Packaging**

5 – 10 Kg



Brushing



Spraying



Water based



# Monokote



## Monokote MK 6 - S

Lightened fire-proofing plaster to increase the fire-resistance of structures in steel, concrete and corrugated sheet metal

### Technical features

- Spray-on plaster
- Ultralight
- Easy to use
- High yield
- Ready to use and quick to apply

### Applications

Specifically designed for the fire-protection of structures in steel and concrete. Particularly suitable for use on such structural elements as beams, columns, roofs and structures made of a mix of steel and reinforced concrete.

### Consumption

Depends on the structural element to be protected and the technical performance required.

### Recommended treatments

Enough coats to achieve the required thickness.

### Packaging

22,5 Kg

### Certifications

- Fire-reaction rating A1 according to EN 13501 – 1
- Tested according to EN 13381 – 3/ EN 13381 – 4/EN 13381 – 5
- European Technical Assessment ETA 10/0082



Plasterspraymaschine



Water based





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