

THE FIRE-RETARDANT TREATMENT OF WOOD  
**MAGAZINE**

WOODSAFE TIMBER PROTECTION AB - SWEDEN

**MULTIPURPOSE NEWSLETTER**

Guidance, newsletters, facts and interesting articles and reports, all in one publication. For more detailed information, please refer to [www.woodsafes.com](http://www.woodsafes.com)

**WHAT'S INSIDE**

The Woodsafe ALL-IN-ONE concept for those who value expert support and professional management.

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Sustainable and efficient technology gives you the opportunity to let the wood age naturally.

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Tried, trusted and used worldwide for decades. Woodsafe Exterior WFX is a unique fireretardant treatment.

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**Sustainable fire protection of solid wood**



That's how thirty years have passed since I started with passive fire protection. Years go by fast, no one can say anything else. In the rear-view mirror I see how the company Woodsafe has grown from being a very insignificant player in the market to a well-established and well-known brand name, not only in Sweden and the Nordic countries, but also in Europe.

It is not for nothing that Woodsafe's partner supplies fire-protected wood for projects such as Mjöstornet, Gardermoen Pir-Nord, Turning Torso, Mall of Scandinavia, Vallastaden and not least to the Swedish pavilion in the Dubai 2020 World Exhibition.

Since 2015, extensive investments have been made, including major production facilities, storage space and efficiency improvements. In the years 2018-2019, the company's historically largest investment with over SEK 24 million was invested, among other things, in a powerful biofuel plant, impregnation plant completely unique in its design, advanced control technology and extensive digitalisation, etc.

What is now in the pipeline is to further streamline both production and energy use as well as drying facilities to meet the increased demand for our services and our partners' products. This is Woodsafe's first magazine and will be published three times a year. The magazine will serve as both newsletters, fact-related articles and guidance for our services.

*Thomas Bengtsson*  
CEO and founder

### Next issue of Woodsafe magazine | Summer 2020

The next issue of Woodsafe magazine will tell us, among other things, our investment in increased drying capacity and efficiency within the doors of the fire protection factory.

This publication from Woodsafe has reservations for typos and printing errors. Woodsafe® is a registered trade mark of Woodsafe Timber Protection AB. Copyright © 2020

# Latest News



### World Expo Dubai 2020.

Woodsafe Timber Protection participates as an official sponsor of the Swedish pavilion at the Dubai 2020 World Exhibition. All wood that is part of the pavilion and which is technically possible to impregnate in our factory will pass our gates and then be shipped to Dubai and the Swedish pavilion.



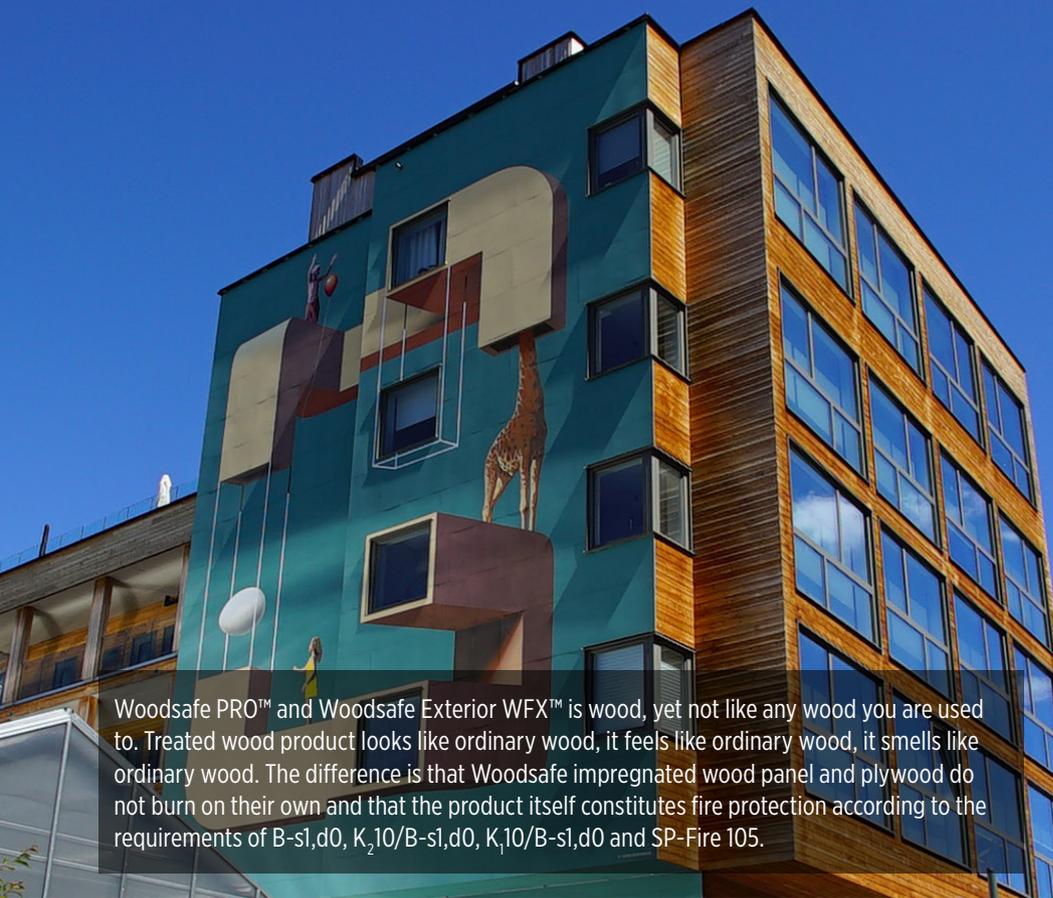
### Unique facility commissioned in 2019 at Woodsafe, Sweden.

At the beginning of year 2019 a new and completely unique tailored impregnation autoclave was installed at our factory in Västerås Sweden. After intensive work and completion resulted in Europe's most spectacular fire-proofing plant.

The plant serves Construction Contractors all over Europe with hardened polymerized fire retardant wood. The most effective and maintenance free fire protection for wood available on the market.

### Woodsafe once again shows the way as a leading manufacturer.

Woodsafe is the only manufacturer outside the UK certified according to WPA Benchmark approved treater. (certificate No. FR-1901)



Woodsafe PRO™ and Woodsafe Exterior WFX™ is wood, yet not like any wood you are used to. Treated wood product looks like ordinary wood, it feels like ordinary wood, it smells like ordinary wood. The difference is that Woodsafe impregnated wood panel and plywood do not burn on their own and that the product itself constitutes fire protection according to the requirements of B-s1,d0, K<sub>2</sub>10/B-s1,d0, K<sub>1</sub>10/B-s1,d0 and SP-Fire 105.

## Exterior WFX.

*The obvious choice for creative facades.*

The picture above shows one of many buildings with inspiring architecture. This facade is fire protected with Woodsafe Exterior WFX which is allowed to age completely naturally and over time change the character based on the weather's will.

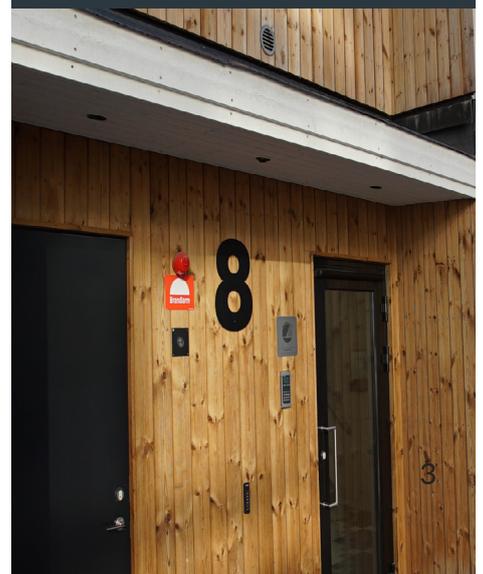
Woodsafe Exterior WFX is a hardened fire protection that is polymerized and classified according to the Wood Protection Association (WPA) according to EXT-LR (leach resistance).

# A world with **flame retardanting** opportunities

**“The Woodsafe ALL-IN-ONE concept means huge benefits can be enjoyed by architects and most importantly allows access to the best skills and suppliers in the market for flame retardant wood.”**

**W**oodsafe Timber Protection is the one manufacturer of flame retardant wood that genuinely opens up the creative opportunities of using wood. Using flame retardant wood from Woodsafe gives you the unique ability to create amazing structures using sustainable, durable and climate-enhancing construction materials. No other construction material is as versatile as wood, and no other make of flame retardant wood or method is comparable to Woodsafe PRO™ and Woodsafe Exterior WFX™ as they offer you the unique ability of using wood in applications that were not previously conceivable or feasible. When the developer and you as an architect chose the wood option, the following question arose.

**H**ow do we solve the fire protection requirements that are stipulated in the current building regulations? Dealing with issues such as determining the applicable requirements, the appropriate method, the interpretation of documentation and the choice of fire protection agent is not always easy.



# Opportunity for creative enterprise

Inspired by wood, imagine the possibility of using wood as standard with all that it entails, or as a bespoke product, special profile, wood or plywood composite element, perforated plywood for optimum acoustics, hardwood as a braided wall panel or simply just show the wood's unique character on walls or on ceilings such as laths, secondary spaced boarding or decoration. The possibilities are endless and Woodsafe together with ALL-IN-ONE partners are at your disposal.

Durable and sustainable, it is not always enough to just satisfy fire requirements. The product must withstand the stress it is subjected to such as in active athletics and sports facilities, in corridors such as evacuation routes, health care environment, schools and public environments such as airports. If an accident occurs when

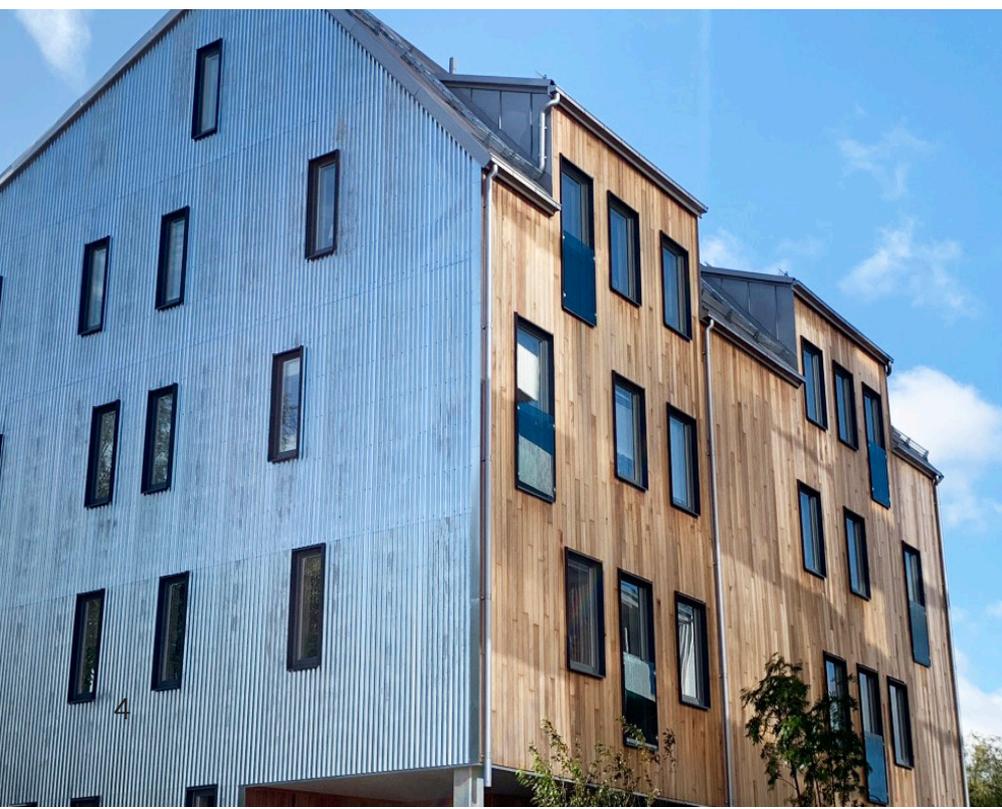
a panel is damaged, it can be replaced quickly, easily and cost-effectively. The fire protection agents we use do not generate more toxic flue gas than the fire itself and emit minimal values according to VOC.

## Unique properties that add value.

- Four sides of deep impregnation fire protection.
- The impregnation does not form a film-forming layer.
- Preserves the texture, feel and shade of the wood.
- The wood becomes the fire class following impregnation.
- Approval in several variants such as air gaps, secondary spaced boarding.
- Not impacted by the natural movements of the wood.
- Long-lasting properties.
- Non-hygroscopic properties

## Area of use.

- Multi-storey facade
- Balcony accesses, canopies
- Balconies, extensions.
- Wall and ceiling panels.
- Structures e.g. roof trusses, tongued and grooved boarding.
- Packaging e.g. aviation and mining industries.
- Offshore e.g. oil rigs, boat fittings.
- Board material such as variants of plywood.
- Acoustic material e.g. perforated plywood.



“Wood meets steel sheet in an inspiring design such as facade cladding.”

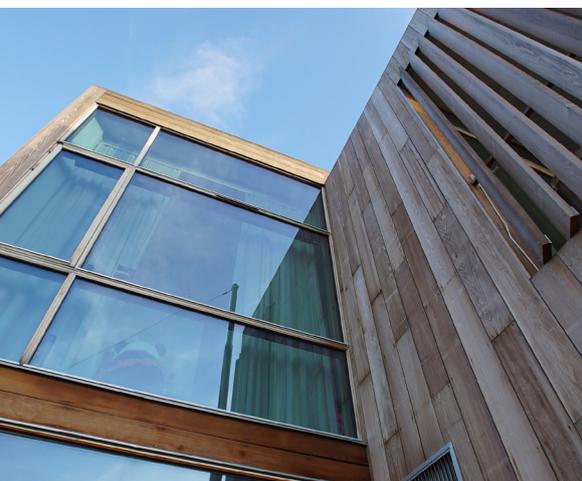
— *Western Red Cedar treated with Woodsafe Exterior WFX.*



Colorful wall panels in a college. Durable, easy-care, washable surfaces with the highest fire class B-s1, d0.

### Installations.

- Auditoriums, concert and convention halls.
- Athletics and sports facilities, arenas
- Evacuation routes, entrances, lobbies.
- Corridors, evacuation routes.
- Furnishings, acoustic panels.
- Shopping centres e.g. arcades.
- Roof terraces, extensions.
- Lift shafts, screening.
- Schools and education centers
- Public buildings and areas
- Vehicles like train, truck, boat
- Noises and sound attenuation
- Hospitals, healthcare facilities.
- Hotels
- and more.



## Facades that inspire

Unique façade where 60m<sup>3</sup> of cedar panel was used, flame retardanting applied with Woodsafe Exterior WFX.

The focus of the secondary school on sports has been reflected in inspirational silhouettes with the same wooden panel.



**Facts:** WRC panels impregnated with Woodsafe Exterior WFX for natural aging with no other surface treatment required.



## The world tallest wooden building.

Mjøstårnet, in Brumunddal Norway, is the result of a vision from Arthur Buchardt and his son Anders Buchardt. The design concept of Mjøstårnet was inspired by the Paris Agreement to combat climate change and began as an idea to reduce carbon dioxide emissions while sustainably sourcing construction materials locally.

All key structural components of Mjøstårnet are composed of engineered timber, utilizing glue-laminated timber for beams and columns and cross-laminated timber for the core walls containing the building's elevator and stairway shafts.



**Facts:** Exterior cladding of Thermowood-D impregnated with Woodsafe Exterior WFX.



## Holding of certificates since 2008

Long before the building product directive became a legal requirement.



## Our quality and certification

- Certificate of Constancy of Performance hEN14915.
- Certificate of Constancy of Performance hEN13986.
- Type approval certificate according to BBR and PBL, fireclass SP-Fire 105.
- Type approval certificate fireclass K<sub>2</sub>10/B-s1,d0 and K<sub>1</sub>10/B-s1,d0 according to BBR and PBL.
- Type approval certificate for durable properties CEN/TS 15912 EXT according to BBR and PBL.
- International Maritime Organization (IMO).
- MK Approved (Denmark)
- Quality management system ISO 9001:2015:
- Environmental management system ISO 14001:2015:
- CPR 305/2011 AVCP system 1.
- Continuous third party manufacturing control by RISE (0402).
- Wood Protection Association, UK, hold the Benchmark Approved Treater



Extensive fire tests by leading institutes around the world, including Sweden, Denmark, Great Britain and the United States, have shown that Woodsafe PRO™ and Woodsafe Exterior WFX™ treated wood have very high performance in the event of fire. All type tests have been carried out at accredited bodies, for example: RISE (formerly the Swedish testing and Research Institute) has carried out type testing, classification, continuous supervisory production control and certification of our product and the company's services.

Woodsafe Timber Protection holds complete certification of all our services, such as CE certificates, type approval certificates

and ratios according to the International Maritime Organization (IMO). Our production is ISO 9001 certified, our long-term sustainability environmental work is ISO 14001 certified, and our production is under surveillance and continuous manufacturing control in accordance with the requirements of CPR 305/2011, Annex ZA, AVCP system 1 and 8 chap. 22 and 23 of the Plan, and the Building Act (SFS 2010: 900) and 4 § 2 and 3 PBL and the National Board of Housing building regulations (BBR) 2:2, 5:231, 5:551, points 2, 3 and 4, 6:21.

## Industrial monitored impregnation

The Woodsafe method is a refining process using vacuum pressure impregnation which is an accepted process for impregnating wood around the world. The process is regulated by a specially developed control program, where a specific amount of fire protection agent for the wood type and fire class in question are monitored.

The principle for refining the properties of the wood means that oxygen in the wood is removed through a vacuum. Fire retardants are then added under a constant vacuum which, once the autoclave is filled, reach pressures of up



**Photo:** Woodsafe PRO and Woodsafe Exterior WFX vacuum pressure treatment plant.

to 12bar depending on the type of wood and the process. The specified amount of fire protection agent is registered using flow meters and load cells. Following the pressurising process, the final vacuum process is terminated to reduce any excess.



## Let nature leave its unique mark on your wooden façade.

Sustainable and efficient technology gives you the opportunity to let the wood age naturally.

**W**oodsafe Exterior WFX is the only system with a type-approval certificate for wood façades as set out in SP-Fire 105 and Euro class B, without any requirement for other surface treatments. With its unique properties, the type of wood such as western red cedar, -shingles, larch, accoya, nobelwood, thermowood pine and spruce, platowood spruce and frake, douglas fir, scotch pine and many more can be exposed in an exterior environment.

**Y**ou can sit back and enjoy how the wind, sun, rain, dryness, cold and heat leave their mark and patina on your wood panels. The unique properties of the fire protection WFX are water-resistant and maintenance-free,

but it is important to remember that the life of fire protection properties is affected by the quality and degradation of the wood material, geographical location and so on.

**T**he natural aging process from the natural hue to the gray patina that will occur varies a long time and varies on the different sides of the facades depending on the weather.



**Note:** For the applicable type of fire class, downstream users are referred to: CPR-SC0260-15, TG-0263-08.



Fire class is one thing | the exterior environment is another!

Flame retardant wood may appear to be equivalent if you only look at the fire class of the product. While one wood panel may be suitable in an exterior environment, another panel may be directly unsuitable due to the hygroscopic, durable and stable properties of the fire protection agent.

This plays a crucial role, even if the fire class is the same, e.g. flame retardant wood panel is exposed in an externally moist environment, a hygroscopic fire protection absorbs moisture from the atmosphere, promotes mold growth and breaks down the wood due to recurring moisture absorption. It all depends on a fire protection agent that does not have the right properties for exterior applications.

# Showcase of facade cladding

**Woodsafe PRO** is the option you should choose when you want to traditionally paint a facade cladding.

**Woodsafe Exterior WFX** is the option for staining or letting the wood panel age naturally without any surface treatment.



## Worth knowing EXT <sup>v</sup>/<sub>s</sub> EXT-LR

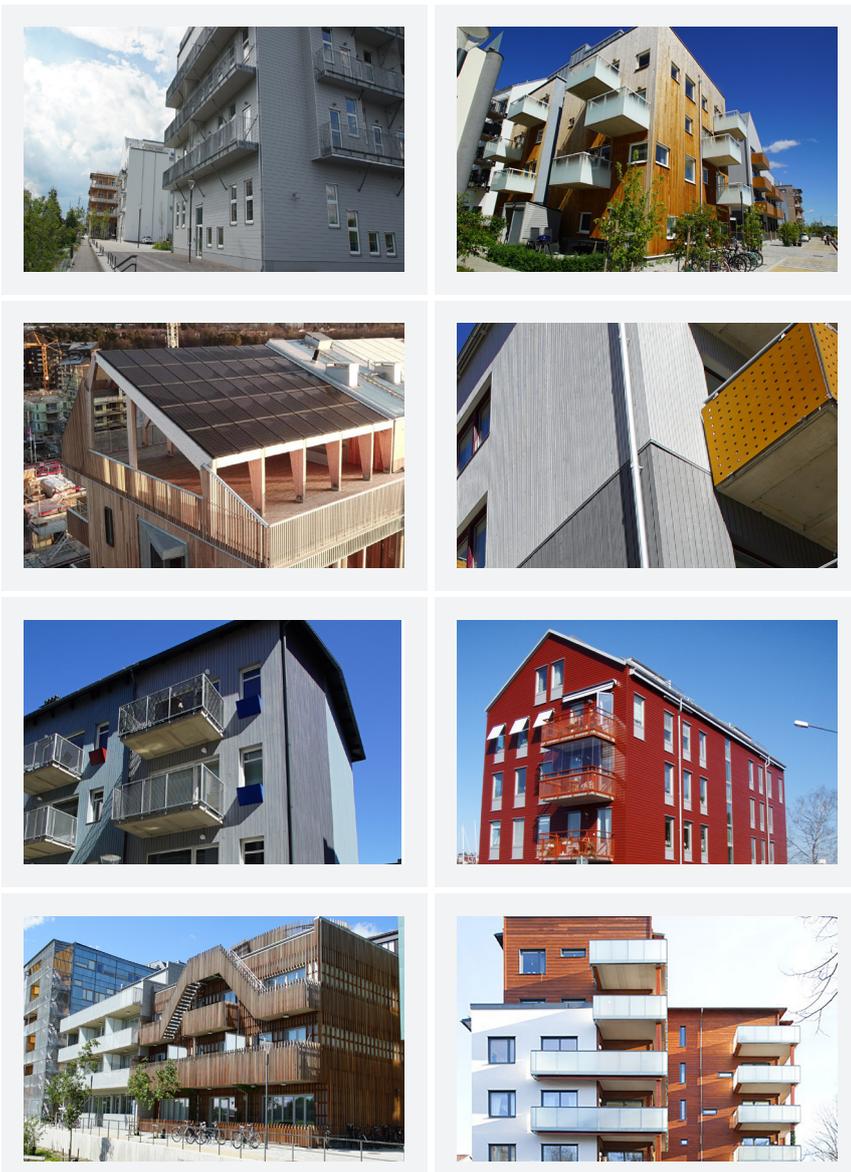
Fire-resistant impregnated wood, classified as EXT, is in principle an INT-2 that has been approved as EXT in combination where protective coatings have been applied. This property is nothing wrong with, but users must understand that the EXT property is only achieved with a protective layer of color.

The approval applies together with the stain layer tested and cannot therefore be replaced by another staining system, oil, glaze or silica treatment.

The chemistry between the different brands of fire protection agents has major differences even if the same fire class is achieved, which means the different fire protection agents are classified into two groups.

- HR = Humidity Resistance.
- LR = Leach Resistance

Woodsafe Exterior WFX is classified as EXT-LR, which means that the fire protection agent has the chemical structure that is cured into a durable water-resistant polymer at the end of the process. Woodsafe Exterior WFX is the only certified system with properties that enable staining with specially developed staining systems from partners.





**Thermowood-D, pine panel.**  
The left is stained in grey, the right is natural.

**Stained woodpanels** grey,  
brown, white, black, red.  
the choice is yours

**S**tained not painted, Woodsafe Exterior WFX is available in a variety of colors and more shades are continuously being developed. This service is available through selected partners where the system has been developed to provide optimum pleasure for the eye and for those who do not want to wait for the wood panel to receive the gray patina that nature itself creates.

**I**mportant to remember is that stained is not the same as cover paint which means that the shade does not have the same life as the painted panel. It is also important to know that the unique structure and property of the wood can give a varying impression which is quite normal for a living material. As time goes on, you can improve the shade through re-treatment.



**EXT STAINED  
WOODPANELS  
CANNOT BE  
COMPARED TO  
STAINED EXT-LR**

*- Thomas Bengtsson,  
Technical support*

# DURABLE PERFORMANCE

The fact that some fire protection agents have hygroscopic properties has been known for decades. Despite this knowledge, products with such properties are still being used in exterior environments.

“In practice, it is the interior product properties that are used in the exterior environment”

Way too many contractors and developers remain convinced that their constructions are flame retardanted and comply with the law as they purchased a wood product that is classed as B-s1, d0 or SP-Fire 105. Unfortunately, we must disappoint you if you have not checked the durability of the fire protection agent.

It is of no significance if the product is certified or classified to suit the fire class in question if the impregnated wood panel or fire protection paint cannot demonstrate approval for permanent properties as set out in -INT 1, -INT 2, EXT and the EXT-LR supplement. The latter, EXT, EXT-LR, is a requirement if the product is approved for use in an exterior environment or not, for example as façade cladding in apartment blocks.

The standard is called EN16755 EXT should be stated in the type-approval certificate which is the only way to confirm whether the product has been approved or not. Keep in mind that it is your responsibility as a builder and/or developer to document this key fact that rarely



appears in regulatory text, but which is directly crucial to long-term performance.

Woodsafe PRO™ and Woodsafe Exterior WFX™ are safe to use and are third party certified as specified in Chapter 1 and Chapter 8, sections 22 and 23 of the Planning and Building Act (SFS 2010:900) and sections 2 and 3 PBL and the National Board of Housing, Building and Planning's Building Regulations (BBR) 2:2, 5:231, 5:551, points 2, 3 and 4, 6:21 and that include SS-EN16755 EXT and EXT-LR durability requirements for class Br1 for structures.

**Worth knowing** it circulates documentation in the market where various operators say that the product has approved EN16755 properties, but when requested by third party documentation from the notified body no documentation is presented. We recommend that you consider what this is due to, it is your investment that risks failing

Accelerated ageing process in climate chambers which, in recurring cycles, mimics rainfall, heat, drying, UV. Prior to testing, samples are taken from the current batch that are weighed and fire tested as set out in ISO 5660-1 (concalorimeter) for the determination of fire resistance data.

## INT-1

### Application class for interior use.

Hygroscopic condition (70, +/-5) % RH and (25, +/-2) °C. Testing requires wood surfaces without any surface treatment. The moisture content in the material must not exceed 28 %. Impact on the wood's surface such as mould growth must not arise.

This application class always forms the basis for continuing testing in line with INT-2 and EXT classification. Woodsafe Exterior WFX and Woodsafe PRO are certified in accordance with INT-1 via a type-approval certificate.

## INT-2

### Application class for interior use, high humidity.

Hygroscopic condition (90, +/-5) % RH and (27, +/-2) °C. Testing requires wood surfaces without any surface treatment. The moisture content in the material must not exceed 28 %. There must be no impacts on the wood's surface such as mould growth.

This application class always forms the basis for continuing testing in line with EXT classification. Woodsafe Exterior WFX and Woodsafe PRO are certified in accordance with INT-2 via a type-approval certificate (TG0268-08).

## EXT

### Application class for exterior use (requirements for surface treatment)

Hygroscopic condition 90, +/-5) % RH and (27, +/-2) °C. The moisture content in the material must not exceed < 28 %. Test standard EN16755:2017 (CEN/TS15912:2012) with underlying test EN927-6 and ISO 5660-1. Euro class B products (as per EN 13501-1): Heat Release Rate, HRR30save  $\leq 150 \text{ kW/m}^2$  600 s after ignition and Total Heat Release, THR600s increase <20 % compared to before the accelerated ageing test.

**Important:** Confirmed data according to THR with limit value in SBI EN13823 (THR <7.5MJ) cannot be linked to EN-16755 EXT.

## EXT-LR

### Exterior use (without surface treatment requirements)

This classification is not included in EN-16755:2017/AC2018. The same conditions set for EXT apply except that EXT-LR classified fire protection agent means curing of the fire-retardant substances that are converted to water-resistant polymer. EXT-LR class is always a wood panel impregnated to resist fire without any other layer of protective paint or coating to achieve the classification.

**Worth knowing:** An EXT classified product cannot be used without painting with an approved system and therefore an EXT product cannot replace an EXT-LR classified product such as Woodsafe Exterior WFX.

# Woodsafe PRO™

## A multifaceted product

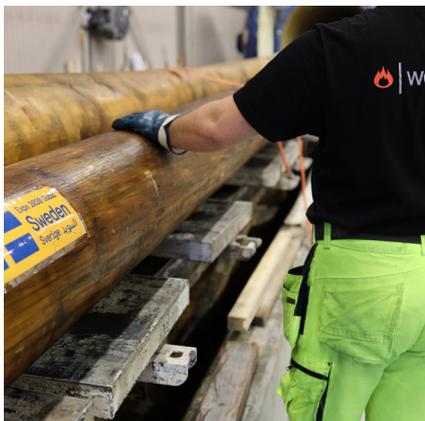
*Tried, trusted and used worldwide for decades.*

**W**oodsafe PRO has properties that can be used to great effect for façade cladding in apartment blocks to be treated with traditional façade paint, ceilings, walls and roofing indoors, constructions, applications for acoustics (e.g. secondary spaced boarding, perforated plywood, packaging, offshore, vehicles such as trains and lorries etc.

Woodsafe PRO that can be used in both interior and exterior environment is available in woods such as pine, spruce, oak, larch, cedar, birch, ash, maple, poplar and more, and is manufactured in accordance with the quality requirements of the Planning and Building Act and the European Commission's Building Product Regulation CPR 305/2011.



**Facts:** Gluelam of spruce, FR-treated with Woodsafe PRO and painted.  
Photo: Michael Perlmutter.



# Woodsafe PRO

*generation 2*

**Industrial fire protection impregnation in autoclave 2x13m, monitored by latest technology with associated measurement system, flowmeter, heating system, flow management and more.**

## CE-MARKED WOODPANELS

Woodsafe PRO is available through partners with reaction to fire performance, B-s1, d0 (-s2), in woods such as oak, ash, maple, birch, pine, spruce, poplar, spruce laminated wood and plywood of spruce, poplar, birch etc. All types of wood are available as standard or special, most approved with further treatment eg. painting, staining etc. Thinnest approved thickness is 12mm but may vary depending on wood type and underlying substrate.

## CE-CERTIFICATE.

Woodsafe PRO hold the Certificate of Constancy of Performance according to hEN14915:2013, CPR 305/2011, AVCP system 1. Type tested and classified according to EN13823, EN13501-1. Certificate No. 0402-CPR-SC0243-09

## DURABILITY

Woodsafe PRO is certified with durable properties SS-EN16755 INT1, INT2, EXT. (Typeapproval no: 0263-08)

Certified according to Wood Protection Association (WPA) as EXT-HR (humidity resistance).

## REACH

Woodsafe PRO has content of substance that is included in the REACH SVHC list. The substance is boric acid which does not require labeling at levels below 5.5%. This is important to know when misleading information is disseminated regarding the rules for boric acid and its harmfulness.

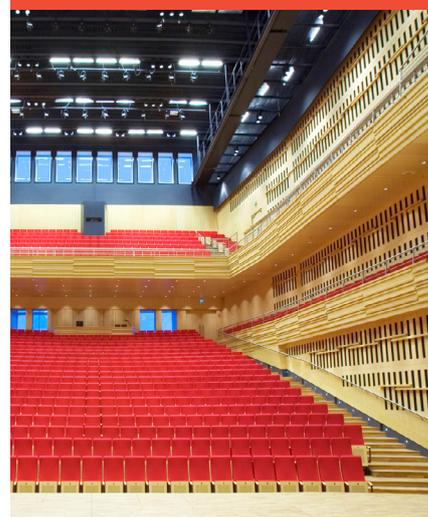
Woodsafe PRO finished end product has a content of boric acid well below the applicable limit values and is not subject to labeling or special permit requirements. Content of SVHC substances must be informed to downstream users and this is done via performance declaration according to CPD and REACH articles.

## BEFORE USE

Use of Woodsafe PRO must always be linked to fact sheets, instructions and current certificates for use.

## Examples of installations

- Athletics and sports facilities.
- Hospitals & nursing homes.
- Concert halls.
- Arenas.
- Packaging.
- Construction.
- Wall and ceiling cladding.
- Façade cladding.
- Evacuation routes.
- Furnishings.
- Screening.
- Framework.
- Construction.



# Woodsafe Exterior WFX™

## A unique product

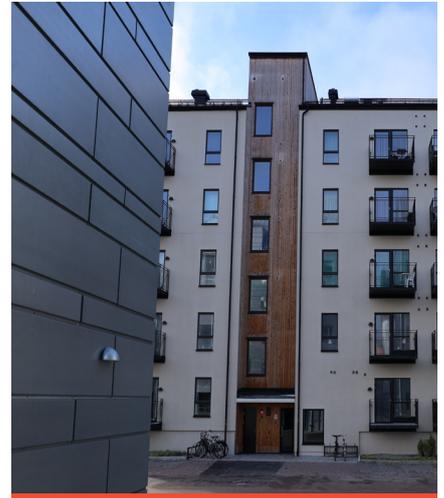
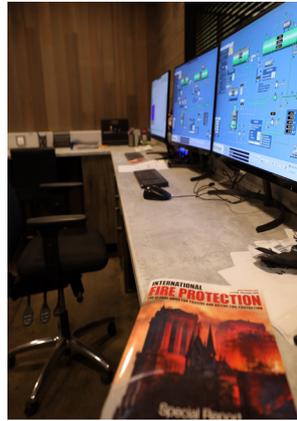
*Tried, trusted and used worldwide for decades.*

**E**xterior WFX is specially developed to ensure long-lasting safe properties against fire in exterior and humid environments such as bathhouses, underground and exterior environment both inland and coastal location. Woodsafe Exterior WFX is a hardened polymerized fire protection with waterproof properties due to hardened condition.

**T**hese unique features are very well suited to fire protection of exterior woods such as thermowood -pine, -ash, -spruce, scotch pine, platowood spruce and frake, superwood spruce, nobelwood, cedar, cedar shingle, douglas fir, larch with several types of wood.

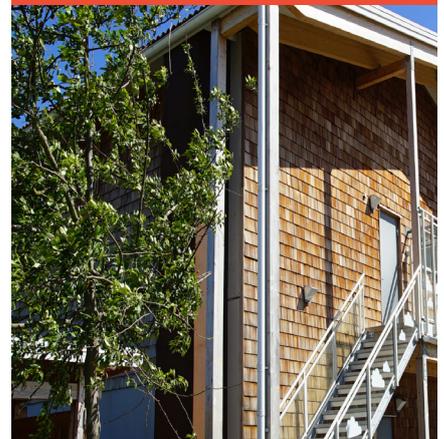
**W**oodsafe Exterior WFX is manufactured in accordance with the quality requirements of the Planning and Building Act and the European Commission's Building Product Regulation CPR 305/2011. We are also the holder of the Benchmark Approved Treater Quality Scheme (WPA)

**Facts:** Thermowood-D pine, treated with Woodsafe Exterior WFX.

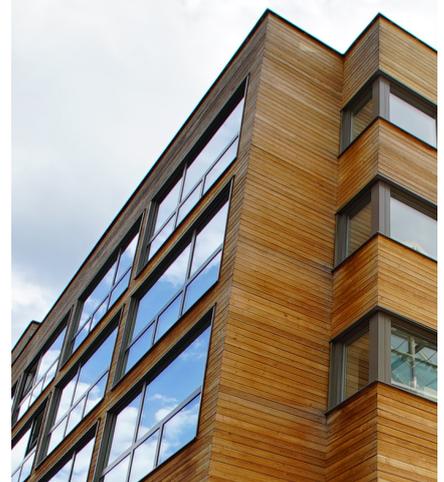


## Examples of installations

- Façade cladding.
- Packaging.
- Construction
- Framework.
- Underground
- And more



Cedar shingle, Exterior WFX



Siberian Larch, Exterior WFX

# Woodsafe Exterior WFX

*generation 4*

**Industrial fire protection impregnation in autoclave 2,5x8,0m, monitored by latest technology with associated measurement system, flowmeter, weight cell, flow management and more.**

### CE-MARKED WOODPANELS

Woodsafe Exterior WFX is available through partners with reaction to fire performance, B-s1, d0 (-s2), in woods such as spruce, pine, scotch pine, douglas fir, thermowood spruce, -pine, nobelwood, platowood poplar, -frake, spruce, accoya, western red cedar, larch, cedershingle and more. All types of wood are available as standard or special, most approved with further treatment eg. staining etc.

### CE-CERTIFICATE

Woodsafe Exterior WFX hold the Certificate of Constancy of Performance according to hEN14915:2013, CPR 305/2011, AVCP system 1. Type tested and classified according to EN13823, EN13501-1. Certificate No. 0402-CPR-SC0260-15

### DURABILITY

Woodsafe Exterior WFX is certified with durable properties SS-EN16755 INT1, INT2 and EXT. Certificate No: Typeapproval 0263-08. Certified according to Wood Protection Association (WPA) as EXT-LR (leach resistance).

### REACH

Woodsafe exterior wfx does not contain any substances listed on the Reach SVHC list. All substances are purchased and approved in Europe

### BEFORE USE

Use of Woodsafe Exterior WFX must always be linked to fact sheets, instructions and current certificates for use.

### WORTH KNOWING

The same fire class does not mean that the properties of the fire protection have equivalent properties. This is especially important to understand in the choice of Woodsafe Exterior WFX in comparison with another player's product with the same fire class. Woodsafe Exterior WFX is the only approved and certified fire-protected wood panel that can be used in an exterior environment without the need for surface treatment.

# QUICK FACTS

## Woodsafe PRO

### INSTALLATION MATERIAL

Woodsafe PRO™ does not set any special quality requirements on nails, screws, tin sheets etc. other than the industry's recommendations. However, materials such as copper, aluminium and the like should not be used.

A2 quality is recommended when Woodsafe PRO panels are intended to be used in damp conditions, and for exterior mounting the recommendation is to paint over nail heads or A2/A4 quality.

### STORAGE

Woodsafe PRO™ is to be stored above ground (> 100mm), and covered to protect from pollution, rain, dust. Avoid condensation forming under the plastic as it can arise regardless of hot or cold storage following temperature fluctuations that can generate mould growth and blight.

### ACCLIMATISATION

Materials to be used indoors must always be acclimatised prior to installation to ensure equilibrium in terms of moisture content. The recommended acclimatisation is  $\geq 2$  weeks prior to installation. Woodsafe PRO™ is supplied from the factory with a 12-14 % moisture ratio as standard, but this level can be adjusted depending on the weather and other conditions following delivery outside of our control.

### CONSTRUCTION WASTE

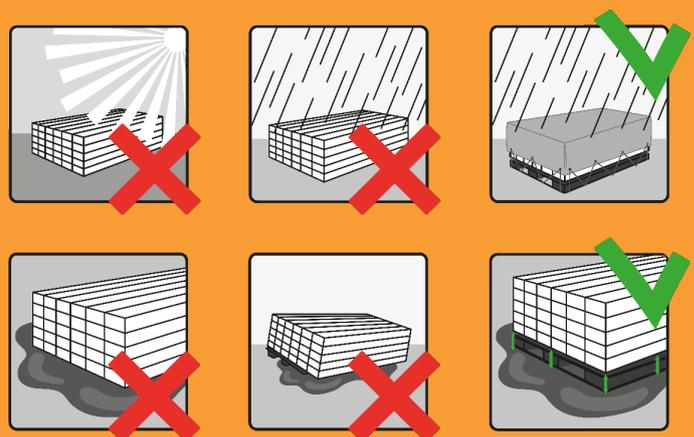
Woodsafe PRO™ treated material is sorted as combustible wood. Incineration must not take place in smaller bio-fuel plants or internal fireplaces due to deteriorating combustion properties that can form coke. Residual products must not be used for the production of animal litter or similar products.

### PERSONAL PROTECTION

Wear standard protective clothing such as safety goggles if there is a risk of splashing, respiratory protection if there is a risk of inhalation of dust, ensure good ventilation when machining and wear gloves as protection from splinters and chafing. In the event of an accident, seek medical advice and keep safety data sheets that are available for download from [www.woodsafese.se](http://www.woodsafese.se).

### RECYCLING

Woodsafe PRO can be recycled when dismantled to the extent that the wood product is considered to meet the quality requirements for other applications.



# QUICK FACTS

## Woodsafe Exterior WFX

### INSTALLATION MATERIAL

Woodsafe WFX is often used on woods that contain resin, acids and similar products including cedar, thermowood and oak. These types of wood emit substances that wear and corrode the attachment material. Stainless steel attachment material must therefore always be used that has A2 or A4 quality.

### STORAGE

Woodsafe WFX is to be stored above ground ( $\geq 100\text{mm}$ ), and covered to protect from pollution, and rain. Avoid condensation forming under the plastic as it can arise regardless of hot or cold storage following temperature fluctuations.

### DRAINAGE

Requirements for corrosion-protected materials such as drip plates, window sills etc. are set on the same grounds as for attachment material while material such as zinc plate, aluminium etc. in their original state without coating is not recommended.

Rainwater from the facade etc should be led from the concrete base and concrete floor. Read more in a separate fact sheet and the fact sheet "Worth thinking about".

### CONSTRUCTION WASTE

Woodsafe WFX treated material is sorted as combustible wood. Incineration must not take place in smaller bio-fuel plants or internal fireplaces due to deteriorating combustion properties that can form coke. Residual products must not be used for the production of animal litter or similar products.

### PERSONAL PROTECTION

Wear standard protective clothing such as safety goggles if there is a risk of splashing, respiratory protection if there is a risk of inhalation of dust, ensure good ventilation when machining and wear gloves as protection from splinters, chafing and possible residual products on the surface of the wood. In the event of an accident, seek medical advice and bring safety data sheets with you that are available for download from [www.woodsafese.se](http://www.woodsafese.se)

### ACCLIMATISATION

Material to be used outdoors must always be acclimatised in the environment in which panels are to be installed. Woodsafe WFX is supplied from the factory with a 15-18 % moisture ratio as standard, but this level can be adjusted depending on the weather and other conditions following delivery outside of our control.

### RECYCLING

Woodsafe WFX can be recycled when dismantled to the extent that the wood product is considered to meet the quality requirements for other applications.

*Always visit our website to  
download the applicable fact  
sheet and instructions.  
[www.woodsafese.se](http://www.woodsafese.se)*

# SUSTAINABILITY

## - in our everyday lives

What does the word sustainability really mean?

Think about it for a second. For us at Woodsafe, sustainability means that we assume responsibility for our consumption of our planet's resources within the framework of what we are able to influence and make decisions about. The word sustainability is often misused and more often appears in marketing contexts as a way of misleading regulatory actors and downstream users in order to give credence to product characteristics across a range of areas. Ask the question of how the product is produced and the resources that are consumed in the production line.

Let us tell you about our work on sustainability and our compliance with the sustainability requirements set by the Construction Product Regulation. Woodsafe is certified in line with ISO 14001 for sustainable and long-term environmental work. All chemicals used in daily operations like grease, spray, oil and fuels are carefully selected in line with our environmental profile, and all residual products from our operations are carefully sorted and recycled wherever possible.

The fire protection agents we use for the impregnation process are purchased in Europe and are EU approved substances that do not exceed the limit values for environmental, health and licensing requirements.

Woodsafe Timber Protection energy consumption is generated from locally produced bio-fuel for heating and processing, while our consumption of electricity is derived from 100 % wind and hydro, our water consumption consists of recycled and filtered process water. Our process is carried out in a safe leak proof zone and wastewater from the cleaning of work premises, equipment and more, and is managed through its destruction by a licensed company.

Our approach to sustainability also covers our staff that work according to Swedish occupational safety regulations, as opposed to eastern European working conditions that are not comparable to our working environment.

## WHAT IS REACH ?

REACH stands for registration, evaluation, authorisation and restriction of chemicals and is an EU regulation that came into force in 2007 and contains legislation concerning chemicals. The REACH regulation applies to all Member States without being incorporated into national rules and therefore serves as common legislation throughout the EU.

REACH means that all chemicals in the EU must be identified and well-defined, in order to guarantee a high level of protection for human health and the environment. The burden of proof lies on the companies that trade in chemicals and who therefore have an obligation to identify the risks that a chemical might have, handle them correctly and provide information on them correctly.

# ENVIRONMENT & HEALTH ASSESSMENT

Woodsafe PRO and Woodsafe Exterior WFX products are declared and evaluated in line with multiple systems, for example, it has the associated certification from the green building council.

- E-BVD declaration
- Byggvarubedömningen assessment
- Sunda Hus
- VOC report
- Environment Product Declaration EPD
- Sweden Green Building Council, Ind 13, 14, 15
- Breeam, Mat07, 08

**BYGGVARUBEDÖMNINGEN**<sup>TM</sup>

WOODSAFE EXTERIOR WFX

BVB ID: 55509



**BYGGVARUBEDÖMNINGEN**<sup>TM</sup>

WOODSAFE PRO

BVB ID: 103343



Chemicals listed on the SVHC candidate list indicate that the substance contains properties that are tested for limit values, but this does not mean that they are “toxic” which is often implied in misleading marketing. Everything is related to limit values and there is no restriction on our services within the limit value.

## Woodsafe PRO

– has content with boric acid that is listed on SVHC, however, the content of boric acid is less than 1 % which means that Woodsafe PRO is not subject to special labelling or permit requirements. According to CPR and REACH, the content is notified to downstream users via a performance declaration for the product in question.

## Woodsafe Exterior WFX

– contains no substances on the SVHC list.

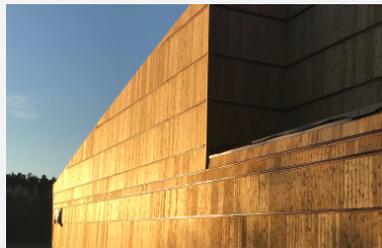


CERTIFIED  
ISO 14001  
Environmental  
management systems



# PORTFOLIO

## Woodsafe WFX (EXT-LR)



Credits to:  
NORDIC Office of Architecture AS

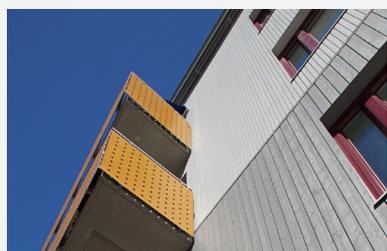
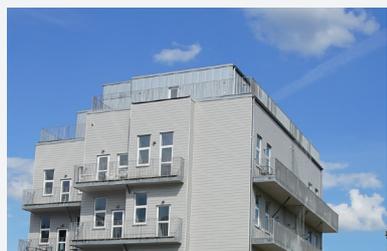
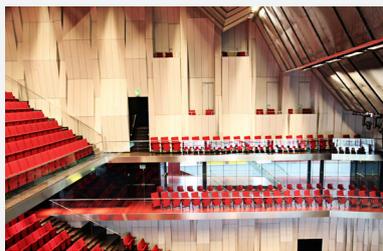
# PORTFOLIO

An ordinary day at Woodsafe



# PORTFOLIO

## Woodsafe PRO (EXT-HR)





## In the next issue

- How should non-third party verified documentation be evaluated by the client?
- Five myths about fire protected wood.
- Sustainability. What does the choice of different products and the different properties of fire protection for durability mean?
- Woodsafe celebrates 30 years in the industry. This is our story.

*“Team Woodsafe is a collaboration between the industry’s best competences in wood, sawmill, planing, painting and consulting.”*

– Thomas Bengtsson. CEO and founder of Woodsafe

## Let's keep in touch

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