SPECIFIER`S GUIDE

2025

Woodsafe Timber Protection AB
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WOOD SAFE®

ABOUT — WOODSAFE TIMBER PROTECTION AB

Woodsafe Timber Protection AB has been committed to preventive fire protection since its founding in 1990—as if lives depended on it. Because they do.

Woodsafe Timber Protection AB, established over 30 years ago, is Europe's largest intermediary between the wood industry and building owners, specializing in producing sustainable fire-retardant treated wood products.

Comprehensive Services:
Beyond manufacturing, Woodsafe offers extensive support, including documentation, guidance on fire requirements, and collaboration with architects, fire consultants, and building contractors. This holistic approach ensures that clients receive well-rounded assistance throughout their projects.

Sustainability Commitment:
Woodsafe is dedicated to contributing to a more sustainable society by producing fire-protected wood that harmoniously connects urban life with nature. Their focus on innovation and environmental responsibility underscores their commitment to sustainability.

Through these unique offerings and a steadfast commitment to quality and sustainability, Woodsafe Timber Protection stands out as a leader in the fire-retardant wood industry.

1002 CERTIFIERING KONTROLL RI. SE

SP CERTIFIED ISO 9001 ISO 14001 ISO 45001 Quality, environmental, ocuppational health and safety management systems RI. SE

Benchmark APPROVED TREATER WPA Certificate no: FR-201901

OUR FACTORY

At Woodsafe Timber Protection AB, nestled in the vibrant city of Västerås, Sweden, we take pride in our expertise in fire-retardant wood treatments for both indoor and outdoor applications.

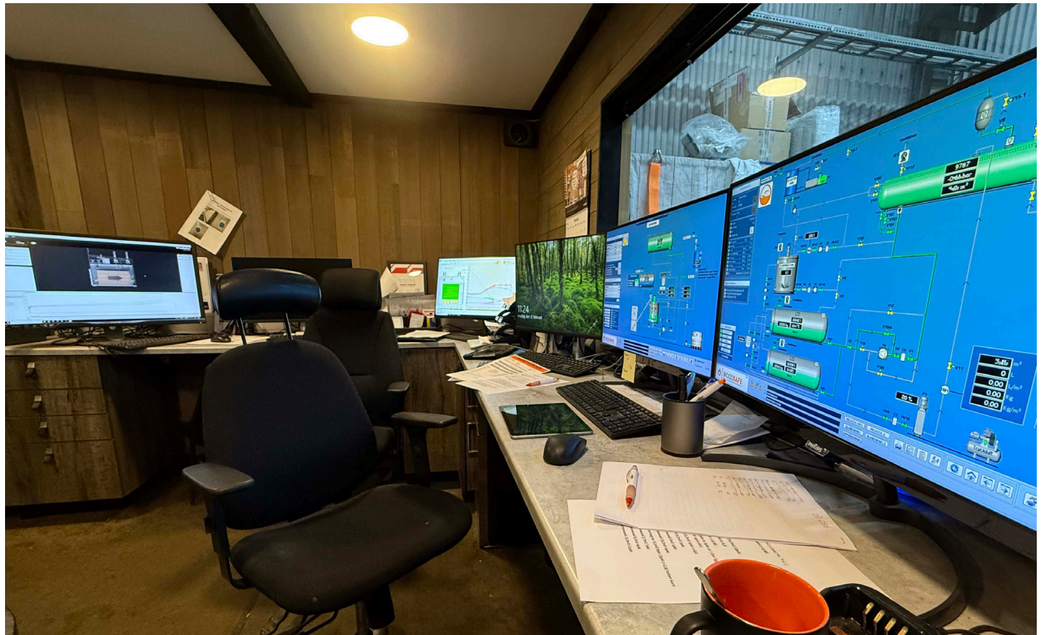
What makes our factory truly special isn't just our cutting-edge technology, but our unwavering commitment to safety and sustainability that drives everything we do.

Advanced Fire Protection Technology:
We utilize a unique, proprietary heat-curing polymeric system crafted specifically for fire protection. Alongside traditional fire retardant treatments, our advanced process includes vacuum pressure impregnation and high-temperature curing, creating a robust, water-insoluble resin. This innovative approach not only boosts the wood's fire resistance but also ensures long-lasting protection and durability that we stand by.

High Production Capacity:
Our state-of-the-art factory is designed to handle approximately 1 000 m^3 of wood each week, whether it's a large commercial order or a smaller, bespoke batch. Our flexibility allows us to cater to a variety of wood types, always with precision and care.

Environmental Commitment:
We believe in making a positive impact on our planet. By adopting renewable energy sources, upgrading to energy-efficient LED lighting, and enhancing our engines and ventilation systems, we strive for excellence in sustainability. We also diligently recycle materials such as steel, water, waste, and plastic.

At Woodsafe, every step we take reflects our dedication to creating a safer, greener future for everyone.



FACTS

At Woodsafe, our fire retardant treatment significantly boosts the fire resistance of wood by thoroughly treating all six sides of the surface. This meticulous process involves pressure impregnation, allowing fire-retardant chemicals to deeply penetrate the wood fibers on each exposed side. The result is a protective barrier that effectively inhibits combustion, dramatically increasing overall fire safety.

Factory-Controlled Impregnation:
We treat the wood under pressure, ensuring that the fire-retardant chemicals saturate all six sides and penetrate deeply into the wood's cellular structure. This comprehensive approach provides robust fire protection. We are proud to be certified under ISO 9001:2015, affirming our commitment to quality in all our production processes.

Enhanced Fire Safety Through Certified Standards:
Our treatments are designed to reduce the risk of fire spreading, significantly enhancing the safety of buildings. Quality is at the heart of what we do, which is why we proudly hold type approval certification. This certification offers reliable third-party verification, setting us apart from standard CE marking.

Durability:
Our fire retardant treatment is long-lasting and eliminates the need for frequent reapplication. We meet the stringent requirements of EN16755 INT1, INT2, and EXT certifications, reflecting our dedication to providing durable solutions.

Environmental Responsibility:
At Woodsafe, we are committed to promoting sustainability through eco-friendly processes and materials. Quality and environmental consciousness are fundamental values for us, which is why we hold ISO 14001 certification, showcasing our commitment to effective environmental management and health.

Together, we work towards a safer and more sustainable future.

Proven Fire Protection Worldwide:
At Woodsafe, we deliver reliable fire safety solutions that have been rigorously tested and validated on a global scale, ensuring peace of mind wherever our products are used.

Developed by Leading Manufacturers:
Our fire retardant treatment is produced by top industry leaders, guaranteeing the highest standards of quality and effectiveness. We trust only the best to protect you and your property.

Classified Fire Properties:
The fire resistance characteristics of our treatments are meticulously classified, providing you with clear assurance of performance in the event of a fire. Your safety is our priority.

Expert Transparency:
We believe in transparency, allowing our customers to fully understand the safety measures and materials used in our treatments. This openness fosters trust and confidence in our products' effectiveness.

Environmental Sustainability:
Our commitment to eco-friendly practices is unwavering. We prioritize renewable energy sources and actively work to minimize CO_2 emissions, playing a crucial role in promoting a healthier planet for future generations.

Health Protection:
Woodsafe's services are designed with human health in mind. We ensure that the materials we use in construction do not pose risks to occupants, creating safer living spaces for everyone.

Durability and Longevity:
The fire-retardant treatments we apply to wood enhance its durability, extending the lifespan of structures and reducing the need for frequent replacements. This not only saves resources but also adds value over time.

Through these dimensions, Woodsafe strives to create safer living environments by integrating fire safety, environmental responsibility, health considerations, and material longevity into everything we do. Together, we are building a safer and more sustainable future for all.

UNDERSTANDING FIRE AND WOODSAFE® EXPERTISE

Fire requires three essential elements to ignite: fuel, heat, and oxygen.

By disrupting any one of these components, we can significantly minimize or even prevent the risk of fire. At Woodsafe, our fire impregnation process enhances the natural properties of wood by introducing fire-retardant chemicals that actively respond to heat. This response triggers an oxidation process that effectively disrupts the conditions necessary for a fire to ignite.

As a result, Woodsafe not only reduces the risk of fire affecting the wood but also offers enhanced protection and safety for your structures. With our innovative solutions, you can enjoy peace of mind knowing that your wood is better equipped to withstand potential fire hazards.

- Deep-penetrating and encapsulated fire protection
- Preserves the wood's natural character
- Maintains its color and texture
- Minimal impact on the wood's strength
- Fire protection on all six sides
- Impact-resistant and highly durable
- Flexible installation options
- Paintable surface
- Delivered as a ready-to-use final product

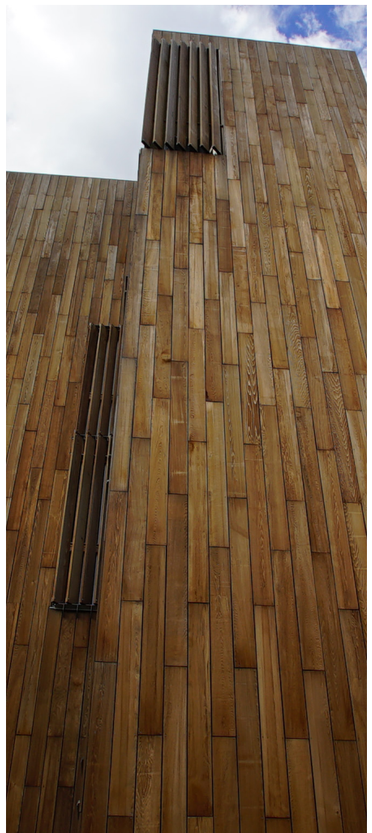
WHERE TO USE WOODSAFE® PRO™

Examples of installations:

- Multi-Storey Buildings
- Hospitals and Nursing Homes
- Schools and Universities
- Sports and Gym Halls
- Shopping Centers and Malls
- Concert Halls
- Auditoriums
- Hotels
- Conference Facilities
- Substations

Examples of areas of use:

- Facade Cladding
- Wall and Ceiling Cladding
- Loft Walkways
- Balconies
- Interior Design
- Construction
- Roof Construction
- Packaging
- Vehicle Interior
- Decoration
- Partitioning



WHERE TO USE WOODSAFE® WFX™

Examples of installations:

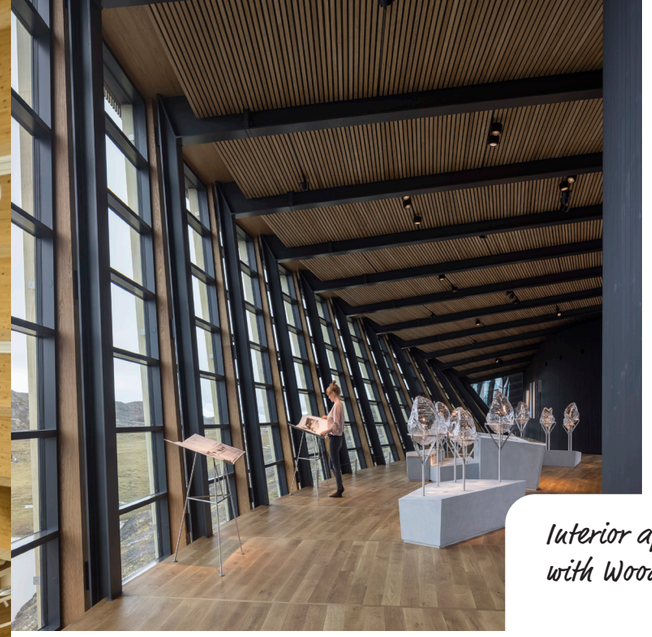
- Exterior Exposures
- High Humidity Exposures
- Multi-Storey Buildings
- Substations
- Offshore Operations
- Mining Industry
- Underground Structures

Examples of areas of use:

- Facade Cladding
- Loft Walkways
- Balconies
- Roof Paneling (e.g., Shingles)
- Packaging
- Vehicle Interiors
- Decoration
- Partitioning
- Roof Cladding
- Scaffold Boards

"Woodsafe PRO,
Pine and Birch plywood"

WOOD SAFE®



Interior application with Woodsafe PRO

WOOD SAFE®



WOODSAFE® PRO™

WOOD**SAFE**® PRO™ is the superior choice for environmentally conscious projects that demand reliable fire protection

WOODSAFE® PRO™ is an advanced fire-retardant wood treatment system specifically designed to enhance the fire resistance of a variety of wood types, including pine, spruce, oak, cedar, ash, douglas fir, core pine, birch, maple, larch, and more. Our innovative treatment process impregnates the wood with a fire-retardant compound that avoids hygroscopic substances.

Sustainability:
Our PRO™production process is committed to environmental responsibility, utilizing sustainably produced electricity from our in-house solar power plant, CO_2-neutral heat energy, and fossil-free fuel handling. This makes WOODSAFE® PRO™ an eco-friendly choice for conscientious consumers.

BENEFITS

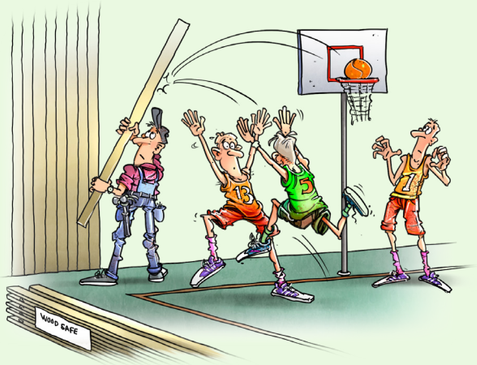
Versatility:
WOODSAFE® PRO™ is suitable for both interior and exterior applications, making it ideal for diverse environments such as schools, hospitals, sports halls, congress centers, and vehicles. It is also available in various forms, including 3-layer boards, LVL, Kerto Q, Kerto S, and different plywood types, ensuring flexibility for various projects.

GOLD 2022 ecovadis Sustainability Rating

INTERIOR INSTALLATIONS:

- **Public Buildings:**
Perfect for schools, hospitals, libraries, and government buildings, WOODSAFE® PRO™ meets strict fire safety regulations while enhancing aesthetic appeal.

- **Sports & Event Facilities:**
An excellent choice for sports halls, arenas, concert venues, and conference centers, this treatment provides fire-resistant wood for walls, ceilings, and furnishings, ensuring safety during high-capacity events.



- **Commercial Spaces:**
Ideal for hotels, shopping malls, office buildings, and restaurants, WOODSAFE® PRO™ offers a blend of aesthetics and fire protection, creating inviting environments that prioritize safety.

- **Transportation & Marine Use:**
Essential for train stations, airports, cruise ships, and ferry interiors, our fire-rated materials provide peace of mind in spaces where safety is critical.

- **Cultural & Religious Buildings:**
Suitable for museums, churches, theaters, and auditoriums, WOODSAFE® PRO™ ensures that fire-retardant wood is available for paneling and decorative elements, preserving both safety and heritage.

EXTERIOR INSTALLATIONS

WOODSAFE® PRO™ is perfect for exterior cladding of both commercial and residential buildings. It guarantees fire safety and longevity, even in harsh weather conditions.

Here are some examples of installations:
- Façade cladding
- Roof structure
- Partition wall
- Noise barrier
- Balcony
- Access walkways

Here are some examples wood species:
- Spruce, Pine, Larch
- Oak, Maple, Birch, Poplar, Ash
- Western Red Cedar
- Plywood e.q Birch, Pine, Spruce, Poplar

Exterior application with Woodsafe PRO

WOOD SAFE®

REACH

WOODSAFE® PRO™ is a substance according to the REACH regulation, which is subject to notification duties for substances listed as SVHC when present at >0.1 weight percent. The content of boron compounds exceeds >0.1 weight percent but is professionally assessed as not harmful to the environment and health, as the substance is encapsulated in cell structure and is stable. To achieve a conceivable reasonable harm, the consumption of 40 kg of treated wood is calculated, which is not realistic. Boron is a naturally occurring element found in drinking water and vegetables, among other sources.

The superior benefits of WOODSAFE® PRO™ include:

- Fire protection that's invisible
- Fire protection on all six sides
- Does not alter the structure of the wood
- Retains the wood's natural feel and texture
- Contains no banned chemical substances
- Not sensitive to wear and impact
- Non-film forming
- Approved VOC values
- Good protection against mold growth
- Sorted as regular wood waste
- Recyclable

Classified fire properties from world-leading testing bodies

- Euroclass B-s1,d0 (-s2)
- $K_2$10/B-s1,d0
- $K_1$10/B-s1,d0
- SP-Fire 105
- EN16755 INT1 INT2
- EN16755 EXT with film-forming paint

Documented properties from world-leading institutes

- CE certified since 2009
- AVCP system 1
- Type approval certificate since 2008
- Third-party manufacturing control
- Certification body: RISE
- Testing body: RISE
- WQS monitoring

"Woodsafe WFX, Thermally modified Pine"

WOOD SAFE®

"Woodsafe WFX, Thermally modified Ash"

WOOD SAFE®

WOODSAFE® WFX™

WOOD**SAFE**® WFX™ is not like any other fire protection and is unique in all its properties, creating entirely new possibilities for sustainable wood construction

Designed for Exterior Moisture Environments
WOODSAFE® WFX™ is specifically engineered for exterior applications where fire safety, durability, and resistance to moisture are crucial. Unlike standard fire-retardant treatments, WOODSAFE® WFX™ is leach-resistant and requires no additional surface treatment, making it ideal for harsh outdoor conditions.

Durability:
This unique treatment provides leach-resistant fire protection, making it suitable for extreme exterior conditions, including environments near lakes, seas, and underground areas.

KEY BENEFITS:
Durability of Fire Performance
WOODSAFE® WFX™ is the only fire-retardant system in Europe approved for outdoor use without the need for surface treatment, complying with:

- EN16755 EXT
- ASTM D2898
- WPA LR-Resistance *“the only LR-system approved and listed by Wood Protection Association, UK”*

This unique treatment provides leach-resistant fire protection, making it suitable for extreme exterior conditions, including environments near lakes, seas, and underground areas.

Great opportunities for use in both exterior and interior damp environments, such as:

- Damp interior
- Exterior above ground
- Exterior facade cladding
- Exterior siding
- Exterior balconies
- Exterior roof e.q. shingle
- Exterior decks
- Exerior stairways
- Exterior Scaffold plank
- Plywood roof sheating

Variety of wood species:

- Thermowood Pine
- Thermowood Spruce
- Thermowood Radiata Pine
- Thermowood Ash
- Thermally modified “as above”
- Thermally modified Poplar
- Western Red Cedar
- Yellow Cedar
- Shingles
- Accoya
- Nobelwood
- Larch
- Oak
- Douglas Fir
- Core Pine
- Spruce
- Wood-based panels

GOOD TO KNOW
Fastening materials:

When using WFX-treated wood, fastening materials of stainless quality should be utilized. The same requirement applies to drainage materials, such as window sills, gutters, and any other materials that come into direct contact with water runoff, as low pH levels can occur from both the treated wood species and the WFX treatment itself. If corrosion-protected materials are not used, etching can occur in such materials. More information is available in the accompanying documents.

For both Woodsafe fire protection treatments (PRO & WFX), materials should always be stored elevated from the ground and protected against contamination and direct sunlight. During handling, standard safety procedures should be followed to ensure personal safety, such as using gloves and safety goggles, and maintaining good ventilation, especially when there is a risk of dust, such as during sanding.

REACH

WOODSAFE® WFX™, as a finished product, features encapsulated fire protection in the form of long polymer chains. This construction ensures that it is not subject to restrictions under the SVHC (Substances of Very High Concern) list.

The superior benefits of WOODSAFE® WFX™ include:

- Fire protection that's invisible
- Fire protection on all six sides
- Does not alter the structure of the wood
- Retains the wood's natural feel and texture
- Contains no banned chemical substances
- Not sensitive to wear and impact
- Non-film forming
- Approved VOC values
- Good protection against mold growth
- Sorted as regular wood waste
- Recyclable

Classified fire properties from world-leading testing bodies

- Euroclass B-s1,d0 (-s2)
- $K_2$10/B-s1,d0
- $K_1$10/B-s1,d0
- SP-Fire 105
- EN16755 INT1 INT2
- EN16755 EXT (without film-forming paint)

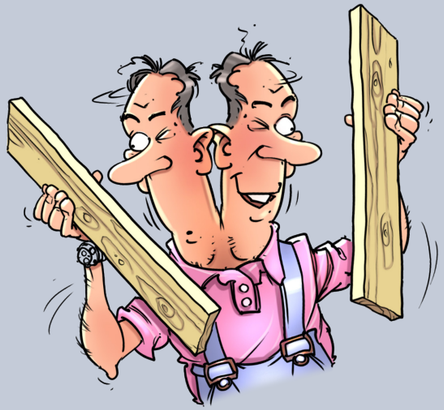
Documented properties from world-leading institutes

- CE certified since 2015
- AVCP system 1
- Type approval certificate since 2015
- Third-party manufacturing control
- Certification body: RISE
- Testing body: RISE
- WQS monitoring

Exterior application with Woodsafe WFX

WOOD SAFE®

IS THE SAME FIRE RATING THE WHOLE STORY, OR JUST A SMOKE SCREEN?



Just like there are different types of fires depending on the fuel that's burning, there's also a big difference in methods for fire protection of wood, based on the type of fire-retardant treatment used, even if the fire rating looks the same. In the following description, we'll mainly focus on the differences between WOODSAFE® WFX and traditional ammonium-based fire retardants, known as "simple salt solutions."

The Difference Between WOODSAFE® WFX and Simple Ammonium Fire Retardants.

When it comes to fire protection for wood, it's essential to understand that not all products are created equal. WOODSAFE® WFX is an advanced technology that uses polymer chains to provide effective and long-lasting fire protection.

On the other hand, many traditional fire retardants, known as simple ammonium solutions, consist of hygroscopic substances. This means they absorb moisture from the environment.

Clear Difference Between Various Fire Retardants. Let's simplify the explanation.

WFX™ Advanced Polymer Chain Resin vs. Basic Ammonium-Based Fire Retardants.
Most traditional fire-retardant treatments depend on hygroscopic, ammonium-based compounds that absorb moisture from the environment. Over time, this can lead to leaching, reducing the effectiveness of fire protection and increasing the risk of mold growth, wood degradation, and surface damage.

Leach Resistance, why is this important?
WOODSAFE® WFX offers leach-resistant protection, meaning its effectiveness does not diminish over time. Ammonium-based agents can leach out when they come into contact with moisture, reducing their fire-protective capabilities.

Moisture Resistance:
Because WOODSAFE® WFX is non-hygroscopic, it does not absorb moisture, reducing the risk of mold growth and wood damage. Ammonium fire retardants, on the other hand, can release moisture, which can lead to mold problems and wood degradation.

Durability:
The chemical properties of the products play a significant role. The polymer chains in WOODSAFE® WFX create a stable structure that protects the wood for a long time, while ammonium-based solutions are more prone to break down over time, affecting their effectiveness.

Simple ammonium phosphate solutions, which are used as fire retardants, have hygroscopic properties, meaning they absorb moisture from the air. This can lead to several issues:

Mold Growth: When the ammonium phosphate solution absorbs moisture, it creates a damp environment that is ideal for mold and fungi to grow. This can lead to health problems for those occupying these spaces and negatively impact the appearance and durability of the wood.

Reduced Strength: Continuous moisture absorption from hygroscopic substances can weaken the wood. As moisture penetrates the wood, it can cause cracking and degradation of the fibers, compromising the structural integrity and strength of the wood over time.

For these reasons, it is crucial to consider these factors when selecting fire retardants and to opt for alternatives like WOODSAFE® WFX, which do not present these issues.

WOODSAFE® WFX™ stands out with its advanced polymer chain technology, providing a leach-resistant, non-hygroscopic fire protection system.

CHECKLIST

	WOODSAFE WFX		The alternative	
Third-party verified properties	YES ✓	NO	YES	NO
Classificationreport EN16755 INT2	YES ✓	NO	YES	NO
Classificationreport EN16755 EXT	YES ✓	NO	YES	NO
Classificationreport EN16755 UV, SBI	YES ✓	NO	YES	NO
Classificationreport with natural surface	YES ✓	NO	YES	NO
Classificationreport with filmbildning surface	YES N/A	NO N/A	YES	NO

LEADING THE INDUSTRY WITH UNMATCHED EXPERTISE

At WOODSAFE, we have consistently set the standard in fire protection since 2008. Our position as an industry leader is reinforced by extensive fire testing conducted by top institutes worldwide, including Sweden, Denmark, Great Britain, and the USA.

These tests have demonstrated that wood treated with WOODSAFE® PRO™ and WOODSAFE® Exterior WFX™ achieves exceptionally high classifications, such as SP-FIRE 105, EN13501-1, EN13501-2, and EN16755 EXT among others.

All type tests are performed by accredited organizations, including RISE (formerly Sweden's Testing and Research Institute), which conducts rigorous type testing, classification (RISE 0402), and certification (RISE 1002) while ensuring continuous monitoring of the manufacturing process and quality management systems.

Woodsafe Research & Development offers several unique advantages for product development, efficiency, and fire testing of wood products and system solutions

Expertise in Fire Safety: With a specialized focus on fire safety, Woodsafe R&D provides in-depth knowledge and advanced testing methodologies to ensure that wood products meet the highest safety standards.

State-of-the-Art Facilities: The research center is equipped with the latest technology and testing equipment, enabling precise evaluation and analysis of fire performance in wood materials.

Innovative Solutions: Woodsafe fosters innovation by developing new materials and treatments that enhance the fire resistance of wood, paving the way for groundbreaking products in the market.

Customized Testing Protocols: The facility offers tailored testing programs that cater to specific product requirements and industry standards, allowing for more relevant and applicable results.

Efficiency in Development: By streamlining the testing and certification processes, Woodsafe helps companies bring their products to market faster while ensuring quality and compliance with regulations.

Collaboration Opportunities: Woodsafe R&D encourages partnerships with industry stakeholders, providing access to a network of experts and resources that enhance collaborative research efforts.

Sustainability Focus: By improving the fire performance of wood products, Woodsafe contributes to sustainable building practices, allowing for the use of renewable resources without compromising safety.

These advantages make Woodsafe Research & Development a vital partner for companies looking to advance their product offerings and ensure safety in wood-based applications.

SAFER LIVING™

WOODSAFE TIMBER PROTECTION AB

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