

Best practices for Fireshield panels use

The aim of this document is to provide the User with guidance on how Fireshield panels should be handled & stored in order to help preserve their properties.



Storage:

- Panels should not be subjected to extreme conditions during storage, e.g. abrupt changes in moisture or temperature, direct sunlight, rain, high temperatures, etc.
- Avoid direct contact with any potentially harmful agents, e.g. water puddles, soil, moss, fungus etc.
- Avoid storing panels in circulation areas where they might be hit by vehicles.
- In order to achieve optimal storage conditions, panels should be kept at between 30% and 60% humidity and in their original packaging.
- This is particularly relevant if we consider that the treatment to improve material's fire characteristics affects to its hygroscopic capacity, making it capture moisture easier, which could help moss grow.
- Panels should be stored flat, levelling crates with suitable materials, if required.
- Avoid using mechanical handling systems, steel straps or other equipment harder than wood, as these may cause damage to the panels.
- Panels should be stacked in accordance with standard safety regulations.
- Panels should not be stacked more than four packs high.
- Brackets should be fitted in vertical alignment in order to achieve good weight distribution.



Usage and handling:

Any treatment, handling or re-processing of panels may modify the inner characteristics of the poplar plywood, resulting in potentially serious defects.

The following rules for correct use should therefore be followed:

- Never expose fire rated panels to temperatures over 80°C, as this would affect to its properties and prevent the formation of resulting products that could generate incompatibilities. Pay special attention during re-veneering or similar processes.
- Screws and metallic pieces used with fire rated panels should be rust-proof, as the treatment given to wood may rust metal pieces.
- Before use, the panels should be acclimatized to local environmental conditions whilst taking into account the aforementioned general conditions.
- When machining panels, always use suitable, high-quality tools, which allow the wood to be cut cleanly, without tearing, shredding, etc.
- Do not hit panels with elements harder than wood and avoid any object impact on the panels.
- The panel is not designed to decorative purposes, it is designed to use with some kind of opaque finish.
- The following information should be considered when using these panels:
 - An environmental humidity from 30 to 60% is considered to be good to avoid moss grow on the panels, as mentioned in the storage section.
 - The panel dilation rate is ($\Delta L = L \cdot \Delta T \cdot \alpha$; $\alpha (^\circ\text{C}^{-1}) = 10^{-6}$). A sufficient expansion joint should therefore be allowed when installing the panel.
 - The surfaces where panels are installed should be clean, stable, comply with humidity indications, flatness, etc.
- Our fire-retardant product has been developed and tested to withstand fire conditions in accordance with the relevant standards under EN 13501-1, verifying the declared classification.
- The adhesive used in the board ensures compliance with Bonding Class 2 according to EN 314-1, providing good adhesion in environments with limited exposure to moisture. However, prolonged or constant exposure to high humidity conditions should be avoided.
- Continuous presence of moisture may lead to a leaching process of the active components of the fire-retardant treatment, which could reduce its effectiveness in terms of fire resistance and also promote fungal growth. Therefore, when used as Service Class 2 (EN 636-2), the board must be protected by applying products with the same level of fire resistance as the board itself.
- For information purposes, the use conditions used in the reaction to fire characterization test are detailed:
 - Plasterboard or any final substrate with Euroclass classification A1 or A2-s1, d0 that is at least 12 mm thick with a density $\geq 525 \text{ kg/m}^3$.
 - Mechanical screw fixings.
 - Vertical joints
 - No air chamber.





Reusing panels at the end of their useful life:

When a panel is no longer suitable for its intended use, it can be reused for other purposes, such as packaging.

In addition, the panels can be recycled as a by-product to be used in other panels manufacturing, such as chipboard.

Energy recovery is also an alternative; panel waste can be recovered as biomass fuel.

Always check local environmental regulations for biomass characteristics and combustion plant requirements.



Health and Safety:

The user/recipient of the product is obliged to carry out risk assessments of the people who are going to process/transform it based on the local health and safety legal requirements, implementing the necessary controls in order to provide appropriate preventive measures: e.g. manual handling, dust extraction in case of cutting/sanding, use of personal protection equipment, etc.

For any queries or additional information, please contact your sales representative.

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