Best practice when using Ultralight panels

This document provides some general instructions on the proper use and storage of Ultralight sandwich panels so the material can be kept in the best possible condition.

Storage:

- Do not expose the material to extreme storage conditions, e.g. sudden temperature and/or humidity conditions, direct exposure to sunlight, rain, extreme temperatures, etc.
- These panels are best stored in a well ventilated environment with relative humidity of between 30% and 80%.
- Avoid contact with agents that might damage the panels (puddles, earth, mould or fungus, etc.). The extruded polystyrene core will begin to dissolve when it comes into contact with materials that contain volatile ingredients - such as solvents, petrol, tar and formic acid - or gases such as methane, ethane, propane or butane.
- To keep this material in the best possible condition, the panels should be stored in their original packaging, correctly strapped and covered with film to avoid damp getting into the panel edges.
- We recommend storing the material horizontally on flat surfaces, levelling it with the necessary supports as required.
- Any supports should be aligned vertically to guarantee suitable weight distribution.
- No more than four pallets should be stacked on top of each other to prevent damage to the panels.
- Stacks should always meet minimum safety requirements.
- Avoid placing panels near machinery transit areas.
- Avoid the use of mechanical handling equipment, metal slings or other items that are harder than the wood itself, as this may leave marks and/or damage the panels.
- When these storage instructions cannot be followed and the panel is exposed to extreme conditions, please contact our Quality Department.

Use and treatment:

Any handling, treatment or process applied to the panel may change its intrinsic characteristics, leading to serious defects. Generally speaking our recommendations are as follows:

- Taking the coefficient of expansion ($\Delta L = L * \Delta T * \alpha$; $\alpha(ºC^{-1}) = 10^{-6}$) of the material into consideration for any use, bearing in mind the need to respect expansion joints when installing the material.
- Ultralight panels contain an extruded polystyrene core. They should not be exposed to temperatures above 75°C, as this would affect their properties. This should be especially considered when subjecting the panel to any processes or handling operations.
- When using and treating these panels, the polystyrene core should never come into contact with materials that may cause it to dissolve (volatile ingredient and gases).
- Prolonged exposure to such substances as minerals and edible oils (paraffin, phenol and fats) may affect the characteristics of the panel.
- Panels should be acclimatised to environmental working conditions before use, while considering the environmental limitations indicated in the previous section.
- Suitable cutting tools that produce clean, tear-free cuts should be used when machining the panels. The use of unsuitable tools may lead to shredding, tearing, poor machining, etc.
- The panels should not be struck with any material that is harder than the wood itself or be subjected to impacts.
- The surface on which the final product is installed should be suitably clean, stable, damp-free, flat, etc.

Surface finish:

The general instructions for this type of panel in terms of finish are as follows:

- The panel surface should be clean before applying any product.
- Only apply the finish in favourable weather conditions (avoid rain, temperatures that are too high or too low, excessive solar radiation, etc.).
- We recommend applying protective products using a brush or roller rather than a spray gun, as this will lead to better impregnation.
- Although the product has demonstrated good performance when being mounted directly (no edge sealing), we recommend sealing the edges and mounting points, as this will extend the useful life of the product and improve its characteristics.
- The protection and sealing of edges and any altered area (panel edges, especially when cut) will preserve the characteristics of the product for longer.
- Use a suitable water-repellent product when sealing, e.g. varnish, sealants, paint, etc.

Maintenance:

- Proper maintenance of the surface finish is necessary for maintaining the properties of the panel and protecting it from sunlight, adverse weather conditions, etc. Always be mindful of the first treatment that was applied.
- Firstly, decide whether the initial treatment needs to be removed. If so, always use non-aggressive products. Then apply a new layer of the protective product or paint. Repeat the process periodically, following the manufacturer's instructions for the product applied.
- A lack of maintenance or excessive maintenance (applying too many layers of protective product) may reduce the degree of protection afforded to the panel.
- As stated above, we recommend sealing the edges. We also recommend checking sealed edges periodically to ensure they are kept in the best possible condition. Reapply the protection if signs of damage appear.

Reusing panels at the endo 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 whom 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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