

Kerto® LVL



Kerto® LVL surfaces can be further treated with standard paints, lacquers, vanishes and protection treatments suitable to wood products. Surface treatments improve the properties of Kerto LVL without affecting the strength and stiffness properties. Compatibility of the surface treatments should be confirmed from the treatment provider. Surface treatments provided by Metsä Wood are presented in Kerto LVL Manual - Further processing.

Surrounding weather conditions affect wood surfaces causing visual and physical changes. UV radiation causes the wood to become discoloured and grey on its surface. It may also cause deterioration of the surface. Changes in the surrounding moisture conditions lead to swelling and shrinking of the product and may cause cracking on the surface. Changes in the moisture content of the product affect also its mechanical properties.

Kerto LVL products are primarily designed for service class 1 and 2 conditions. In case of weather exposure, it is recommended to protect the products against UV radiation and moisture effects. If structural protection of the products is not possible, the products can be surface treated. The surface treatments are not usually permanent and therefore they require regular maintenance or replacement.

Kerto LVL products shall be stored under cover. Packages should be stored outside only temporarily. Longer-term storage is recommended under cover in dry conditions. If the products are stored on site for longer time, the packages shall be protected with an additional cover. Conditions of the products and protective cover must be monitored regularly during storage.

UV radiation

Fully weathered wood surfaces have a silver-grey appearance. This is caused by various photo-chemical, biological and physical reactions typical to the material. To protect the surface of the product, an adequately pigmented coating system or a coating containing special additives, like UV absorbers, should be used.

The protective effect of the coating system increases as the proportion of the pigments grows. The thickness of a coating layer should fulfil the minimum requirement throughout. More information is provided by coating manufacturers.

Moisture

The moisture content of wood product always adapts to the surrounding conditions. Moisture changes cause swelling and shrinking of the product which lead to physical changes in the product. Structures should be designed in such a way that they are not exposed to a long-term high moisture environment. Kerto LVL products and structures withstand temporary moisture exposure well without decay, provided that they are allowed to dry afterwards. Long-term moisture exposure increases the risk of biological attack.

To protect the product from the effects of moisture, different coating systems can be used. In order to provide an adequate protection, all the surfaces exposed to moisture should be treated. The coating system should form a thick enough layer so that it will prevent the unwanted absorption of moisture to the wood. The coating should be chosen so that it allows water vapour to permeate from the product.

WeatherGuard

Kerto LVL with WeatherGuard surface treatment is a product with hydrophobic coating. The surface rejects rainwater and therefore reduces the amount of water absorbed by the product during construction work. At the same time, the surface allows the product to breathe and water vapour to move freely. The reduced moisture absorption further improves the dimensional stability and reduces the swelling of the treated Kerto LVL product during the construction work. WeatherGuard treatment does not affect strength properties of the product.

Mould growth

Outdoor use or use in high relative humidity conditions may cause mould growth on the surface of Kerto LVL. If these conditions are expected, Kerto LVL products can be treated to reduce the risk of mould growth. If there is mould growth on the Kerto LVL surface it should be completely removed by sanding, and the surface should be treated against mould growth.

Local authorities may require Kerto LVL products to be treated against biological attack. Possible adverse effects of the treatment on the other product properties (e.g. mechanical properties) shall be clarified separately with the treatment provider.

Coating guidelines

- Add the coating system as soon as possible
- For selecting correct coating system and confirming the compatibility, the coating provider should be consulted. Before treating large areas, it is recommended to test with a small sample.
- The surface of Kerto LVL product should be clean and free of excess material prior to coating in order to ensure good coating result. Sanding is a common method to clean the surface.
- Use of primer is recommended. Choose primer which prevents the risk of blue stain and mould growth.
- Apply the coating with an adequate thickness according to the instructions of the coating provider.



WeatherGuard treated Kerto LVL

This document is property of Metsäliitto Cooperative (Metsä Wood) and is only applicable when used along with products produced by Metsä Wood. Use of the document for other manufacturer's product is prohibited. Metsäliitto Cooperative is not responsible for application of documents or possible faults in documents. This clause must not be removed. Metsä Wood and Kerto are registered trademarks of Metsäliitto Cooperative (Metsä Wood).