

# Lunawood Guideline for professionals

## TREATMENT CLASS

LunaThermo-D, where D stands for durability, has a darker brown tone. Its durability and stability are improved significantly. LunaThermo-D is thermally modified at 212°C and is suitable for internal and external applications without the need for chemical preservative treatment. LunaThermo-D is also suitable for humid spaces like spa and sauna.



*LunaThermo-D*

## DIMENSIONS

The dimensions of planed Lunawood Thermowood are 19, 26, 32 and 42 mm thick and 92, 117, 140, 165 and 185 mm wide. The minimum thickness in facade profiles is 19 mm. In decking profiles the minimum thickness is 26 mm. Lunawood Thermotimber is available as standard in thicknesses 25, 32, 38, 50 mm. Standard widths 100, 125, 150, 175, 200 mm.

## DIMENSIONAL STABILITY

Lowered equilibrium moisture content of Lunawood Thermowood makes it dimensionally stable and the material retains its shape far better than untreated wood. The outstanding dimensional stability allows Lunawood to be successfully used in all climates and even in hot and humid weather conditions indoors and outdoors.

## USE CLASS

LunaThermo-D is suitable for Use class 3 (BS EN 335) applications, “situations in which the wood is above ground and exposed to the weather (particularly rain)” It is suitable for use as cladding facades, rainscreen, decking and many other external applications. Lunawood is not recommended for use in direct contact with the ground.

## DURABILITY

LunaThermo-D is classified as durability class 2 (BS EN 350) “durable” and carries a Building Research Establishment (BRE) endorsement stating an expected service life of 30 years when used as cladding and decking. Durability and colour is consistent throughout the piece.

## TERMITE RESISTANCY

Lunawood is not termite resistant. Lunawood can be treated with specialist termite chemical treatments.

## LEACHING

Luna Thermo-D will not leach colour. Minor release of the color pigment is possible during the first rains and in humid spaces like sauna and spa.

## FIRE RATING

Lunawood has D-s2,d0 rating which means it same as any natural timber. Lunawood will accept standard fire retardant treatments in the same way as un-modified timber.

Lunawood provides its tongue&groove products also fire protected to (EN3501) Euroclass B-s1,d0 or B-s2,d0 depending on the profiles. Lunawood Battens can also be fire protected, but the structure needs to be fire tested on case by case basis.

## MACHINEABILITY

Processing does not affect the unique performance properties of Lunawood, as it is modified throughout. Planing Lunawood gives its surface a superior quality. The planing machine should be adjusted as if machining a hardwood and the planing speed is less than with un-modified softwoods. Care should be taken with the feed roller set up and pressures to avoid cracking the boards. Sanding may not be needed with Lunawood as quality of the planed surface is so good. Sawing Lunawood is just as easy as sawing ordinary wood. Wear dust mask and eye protection when machining the Lunawood.

## USING SIDE

Our pine products have heart side as using side due to its better durability (Figure 1). Pine's heartwood grain properties reducing de-lamination. Pine's visual outlook is more clear because of knot spacing. Due to straight grain structure of spruce it reduces de-lamination and thus it used as SAP (sapwood) as using side (Figure 2). The long live-knotted section of the stem enables wider dimensions.



Picture 1: Heart side as using side



Picture 2: SAP side as using side

## INSTALLATION

Always use stainless steel fastenings when installing Lunawood. Always leave enough space around Lunawood to secure sufficient air ventilation.

For detailed information on fixings please refer to the Lunawood installation guide:

<https://lunawood.com/download-centre>

The joist spacings for 26 mm decking should be a maximum of 450 mm centres, and 600 mm centres for 40mm thick decking. For facade application the batten spacings should be 600 mm centres.

Pre-drill the screw holes when the mounting is less than 70 mm from the end of the profile. This avoids the risk of cracks during installation.

All profiles are suitable for vertical and horizontal installation. However there are few limitations on vertical installation. For example overlapping and bevelled profiles are only suitable for horizontal installation. Check more specific installation guidelines from our website LUNAWOOD.COM

## GLUING

Gluing of Lunawood Thermowood is possible. However, the gluing and compression time may be 4–6 times longer compared to un-modified wood. Good results can be achieved with most common adhesives, but PUR glue gives the best performance according to test results.

## WEARING OVER TIME

Like all timber products LunaThermo-D will go grey upon exposure to UV, and in time may show some fine cracks or splits on the surface. The graying effect will be visible in a relatively short period of time, 3 to 6 months after installation (see examples below). It is recommended to apply an oil or approved wood coating to help preserve and maintain the original appearance.

## PHASES OF GRAYING PROCESS



*The year of construction 2020, South Africa. The graying process has begun. The boards most exposed to UV radiation start first to fade. Part of them very uneven. This is due to the inherent properties of wood and their variation.*



The year of construction 2020, photo 2022, the Netherlands. The compass point also affects the progress of the graying process. The color can sometimes be partially or completely black. Momentary humidity conditions also affect the prevailing tone of shades. The installation direction also affects the speed of the process.



*The year of construction 2015, photo 2019, Portugal. The surface has taken on a beautiful silver-gray hue. The part of the wall in the shady area has still retained its original, albeit faded tone.*



*The year of construction 2009, photo 2019, Italy. Although the graying process has reached its end point, there are still shade variations in the surface according to the variation in the natural properties of the wood.*

## SURFACE COATINGS

Lunawood will accept most good quality proprietary surface coatings that are suitable for un-modified wood. Lunawood can be treated with tinted or pigmented wood oil, wax, wood-protecting stain, varnish or paint – which contains a UV-filter – which helps retain the surface color. However, linseed oil is not suitable for ThermoWood® because it enables fungal growth. The surface treatment can be applied either before or immediately after installation using only a thin coat. When coating, Lunawood ThermoWood doesn't require four side treatment. Only weather exposed surfaces might be coated.

## MAINTENANCE

Lunawood is durable and does not require maintenance to withstand time. However, regular maintenance is recommended to keep the original appearance and avoid small cracks and splits over time. The surface treatment should be renewed as necessary. The need for re-treating varies depending on the climate, amount of usage and the degree of exposure to UV-light. To refresh the surface completely it is possible to wash the surface of discolored timber, allow to dry thoroughly and re-coat. Care should be taken to apply only sufficient water pressure to remove the discoloured surface and not to raise the grain of the timber.

## TRANSPORTATION AND STORAGE

Lunawood ThermoWood should be carefully transported and stored horizontally in a manner consistent with other high-quality decorative wood materials. Store Lunawood ThermoWood horizontally on bearers at least 75 mm off the ground.

Lunawood ThermoWood profiles and accessories must be kept clean dry, under cover and out of the weather. Avoid exposure to UV-light as Lunawood ThermoWood will turn to silver grey if exposure. Store Lunawood in its original packaging or completely and tightly covered under a UV-protective wrap during installation phase to avoid graying of the surface and the formation of shade differences.

## HANDLING

Extra care must be taken during handling and installation so as not to damage the factory finish of the boards. Therefore, sorting of the boards should be done with support from both ends or the middle. The same care must be taken during transfer. Lunawood has a uniform color throughout the profile. Even small dents and scratches are not visible, and the surface can be sanded if necessary – and the product still has a beautiful original shade.

## WASTE DISPOSAL

Dispose off-cuts in the same manner as untreated wood. Lunawood ThermoWood can be burned like untreated wood.

## RAW MATERIAL CERTIFICATION

Lunawood is PEFC certified and uses only trees from well managed and re-planted Forest areas of Northern Finland.



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