

Thermowood by Stora Enso

Fact sheet



Dimensions

(See next page)

Thermowood out of pine and spruce is available as standard:

25 x100 / x125 / x150

32 x100 / x125 / x150

50 x100 / x125 / x150

Planned sizes are often 19, 26, 42 mm thick and 92, 117 and 140 mm wide.

Other sizes available on request.

Ecological & safe

ThermoWood is produced using high temperature and steam. Since no chemicals are added during the process ThermoWood contains only renewable substances. Disposal of off-cuts can be burned or given into the normal waste system.

Heat treatment classes

Stora Enso is producing two standard thermal modification classes:

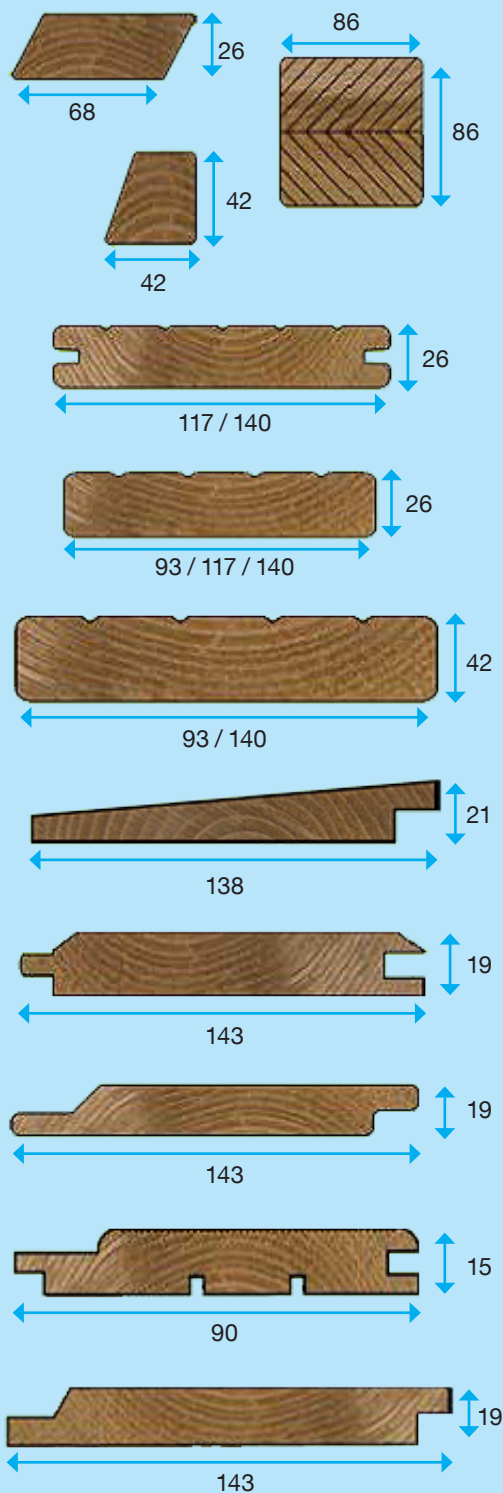
Thermo-D: The wood is thermally modified at 212°C. Because of this modification the durability and stability is improved and products are suitable for external applications. The wood has a dark brown tone.

Thermo-S: The wood is thermally modified at 190°C. This treatment improves the stability compared to untreated wood. Those products have a light brown color and are suitable for internal applications.

Certification for quality and environment



Examples of ready planed products



Use Class

Stora Enso ThermoWood with Thermo-D treatment is suitable for use class 3 (EN 335). Use class 3 is defined as "Situation in which the wood-based product is above ground and exposed to the weather (particularly rain)".

Therefore ThermoWood is suitable for external applications like facades and decking but is not recommended for use in direct ground contact.

Durable and resistant to natural rot

The thermal modification of wood (Thermo-D) significantly improves its resistance to rot and fungal decay. The process ensures that all the material is treated and not just the surfaces.

Thermo-D is falling into durability class 2 (EN 350). Without additional treatments ThermoWood by Stora Enso is not resistant to termites.

Dimensional stability:

The thermal treatment process greatly reduces wood's tendencies to warp, swell or shrink in different humidity conditions. The wood's equilibrium moisture balance may be decreased to less than 40–50 % compared to untreated timber.

Thermal properties

Tests have shown that the thermal conductivity of ThermoWood is reduced by 20–25 % compared with normal kiln dried softwoods.

Appearance and weathering

ThermoWood cladding without any surface coating will start to grey and weather in quite a short period of time, as can be expected with all natural wood products which are exposed to the weather effects (ultra violet radiation and rain). Regular maintenance is recommended to maintain original appearance and prevent small surface cracks.

Fire resistance

When testing ThermoWood in accordance with the SBI (single burning item) test, the results found that it can reach fire class D. As with typical cladding materials such as Western Red Cedar or Larch it is possible to treat ThermoWood with commercially available fire retardant to obtain a higher fire rating.

Leaching

As no substances are added during the ThermoWood process, no chemical leaching will occur. In addition as the resin is removed during the process, the problem of resin leakage through the knots or pitch pockets is removed.