



THERMALLY MODIFIED WOOD

Heat-treatment involves heating wood material to a temperature of 180 - 220 °C while at the same time protecting it with steam. The steam protects the wood, but it also influences the chemical changes taking place in wood. The treatment involves using only heat and steam. Thermally modified wood is an environmentally friendly and fully recyclable product, the manufacture of which does not include any harmful chemicals.

Heat treatment has an impact on several wood properties changing them permanently. The dimensional stability, decay resistance and thermal insulation properties of thermally modified wood are better than those of untreated wood. In addition, the wood is coloured throughout into a beautiful shade of brown. Heat treatment can be successfully applied to several types of wood. However, it is particularly well suited for pine and spruce. Thermally modified wood can be disposed of by incineration.

Thermally modified wood is almost always good to surface treat. However, this must be done according to the intended use. Suitable treatment agents for outdoor use are, for example, oils, wood preservatives or different paints. Varnish or waxes can be used in interior premises. They also provide protection against dirt and UV radiation. Untreated thermally modified wood becomes lighter and grey due to the UV radiation from the sun.

IMPROVED WEATHER RESISTANCE

Thermal modification of wood improves the weather resistance properties of wood. Due to diminished equilibrium moisture content, the moisture content of thermally modified wood when subjected to various weather conditions also diminishes. Other significant advantages imparted by heat treatment on wood regarding its use in external applications are in improving dimensional stability and in the consequent reduced stress caused by air temperature, moisture in wood, sunlight, and other physical properties.

Surface mould can also occur on the surface of thermally modified wood. Due to the impurities spread by bacteria contained in air and by rain, mould colonies can form on untreated surfaces. However, these mould colonies are to be found only on the surface of wood and they do not weaken the wood structurally. Mould can be removed by washing, wiping or scraping.

In a similar manner, and as is the case with most natural materials, the UV radiation of sunlight makes thermally modified wood susceptible to colour changes. Direct exposure to sunlight causes colour changes with time in the original brown colour and at first leads to lightening of the colour and then turning grey within 2-3 years.

Five-year weather-stress trials have revealed that the moisture content of thermally modified wood is about 50% lower than that of untreated wood. Surface-treating substances not containing pigment or those composed of thin coats of stain wear off thermally modified wood in the same way as they wear off untreated wood.

Thermally modified wood behaves better than unmodified wood as a surface to be painted. Exposure trials lasting 5 years have revealed that the functionality of vulcanised and water-dilutable acrylic paints was better on thermally modified boards than on untreated boards. Boards treated with these paints demonstrated less peeling off of the paint.

THERMALLY MODIFIED TIMBER

Thermally modified timber, especially for various industries and timber companies. Our raw materials include domestic pine and spruce and radiata pine. The timber we use for raw material has healthy knots and is acquired from PEFC™ or FSC certified suppliers.

Thermally modified wood is an environmentally friendly and fully recyclable product, which is ideal for countless applications.



Thermo-S



Thermo-D

We manufacture thermally modified timber in the most common product categories

- Thermo-S
- Thermo-D

STANDARD DIMENSIONS AND LENGTHS OF ROUGH SAWN

Pine

25 x 100 - 125 - 150
32 x 75 - 100 - 125 - 150 - 200
38 x 100 - 125 - 150
50 x 100 - 125 - 150

Spruce

25 x 150
32 x 100 - 125 - 150
38 x 125 - 150
50 x 100 - 125 - 150

Orders are delivered in run-of-mill lengths from 2.7 to 5.7 m. The final moisture content of thermally modified wood is 4–7%, and shrinkage 1–10mm, depending on the specified dimension.

Availability of other dimensions will be checked upon receiving the order.

FACADE AND CLADDING

Thermally modified wood is a beautiful and durable material for façades. Finnish pine and spruce are well suited for façade material of buildings.

We deliver thermally modified wood for further processing and as finished products planed and processed to the profiles requested by the customer.

When making façade material, we recommend that either a fine-sawn surface or micro surface be used. Façade material can be either treated or the surface treatment can be omitted once the material is mounted. Untreated façades quickly become lighter in colour and turn grey due to the impact of UV radiation. The surface treatment is decided upon depending on the application. The aim in several applications has been to achieve the “new old” look for the façade with our products, which are characterised by their good weather and decay resistance. Please ask for more information about surface treatment products from the specialists in the field.

PROFILES

External cladding products Thermo-D



External cladding panel
18x92/118/140 mm
Lengths 1.8 - 5.4 m



Ship-lap panel
18x92/118/140 mm
Lengths 1.8 - 5.4 m



Half parallelogram laths
42 x 42/28 mm
Lengths 1.8 - 4.8 m



Parallelogram laths
26 x 68 mm



DECKING AND GARDEN PRODUCTS

The decking products are well suited for impressive yard and garden construction.

The end users of our products appreciate environmental friendliness, good decay resistance, improved dimensional stability and the warm colour of thermally modified wood. Thermally modified wood makes a professional constructor's work easier, especially in sites where environmental regulations limit the use of other raw materials.

Both pine and spruce products are well suited for outdoor use.

PROFILES

Decking products Thermo-D



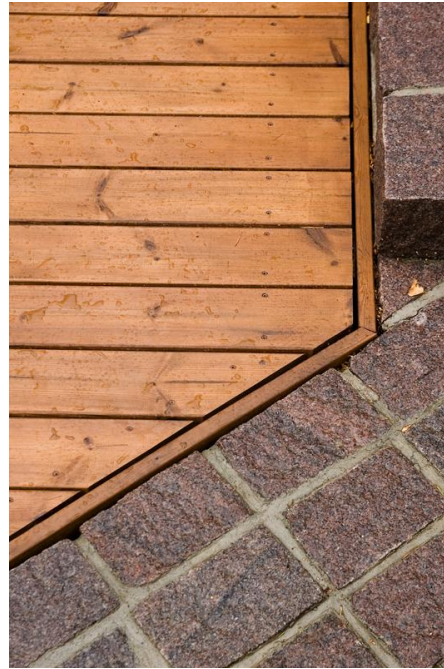
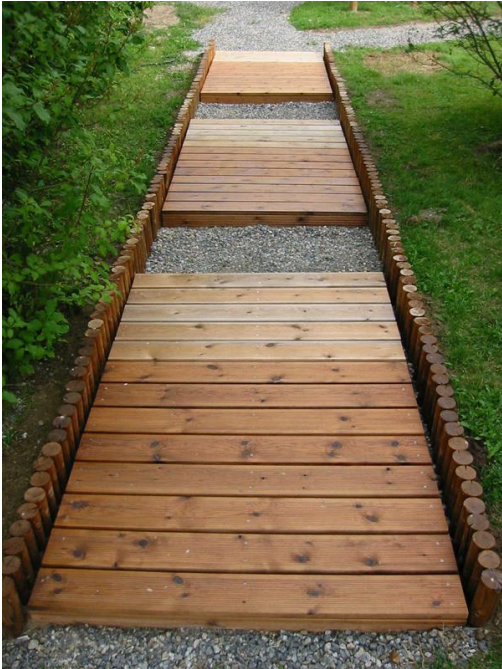
Decking board
26 x 92/118/137 mm
Lengths 1.8 - 5.4 m



Decking board
26 x 92/118/137 mm
Lengths 1.8 - 5.4 m



Structural wood
42 x 42/68/92/118/137 mm
Lengths 1.8 - 5.4 m



SAUNA AND INTERIOR DECORATION PRODUCTS

Thermally modified wood is well suited for saunas and decoration. The focal benefits of thermally modified wood in interior decoration include significantly improved dimensional stability, hygiene, moisture resistance, and a finished surface. The colour alteration caused by heat treatment creates a distinguished, hardwood-like appearance.

Interior cladding panels

The reduced moisture-related dimensional instability is also a benefit of heat-treated panels used in decoration. Thermally modified wood provides a good basis for various surface treatments.

PROFILES

Sauna and interior decoration products Thermo-D



Sauna bench board
28 x 92 / 140 mm
Lengths 0.6 - 4.8 m



Sauna panel
15 x 80 /130 and 18 x 140 mm
Lengths 1.2 - 4.8 m

