

THERMO-OAK

○ Oak is a high-quality hardwood that's valued for its exceptional properties.

○ Thermory's thermally modified oak features superior dimensional stability and has the highest available durability class, offering 25+ years of rot resistance.

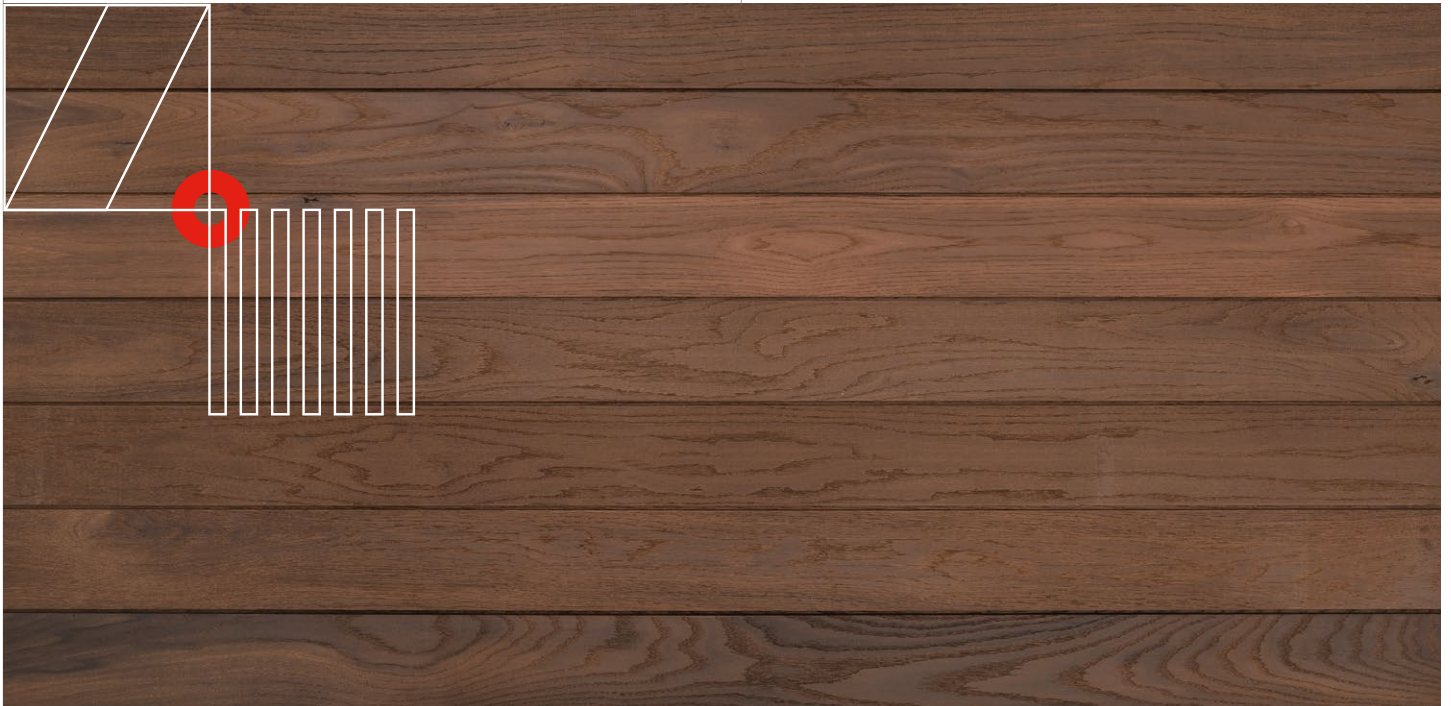
○ Distinctive, delicate rays on the wood's surface give thermo-oak a characteristic premium appearance.

An exclusive hardwood with inherent beauty and sophistication.

○ Our clear grade thermo-oak is characterized by its beautiful wood grain.

○ With its low moisture absorption, thermo-oak twists, cups and bends less than untreated wood, with less shrinkage and expansion.

○ Thermo-oak ages beautifully – if left untreated, it will eventually take on a silver-gray color without losing its impressive durability.




THERMAL MODIFICATION	Intense 215 °C	
STANDARD LENGTHS:	Cladding	0.9 - 4.8 m
	Decking	
	Lengths are subject to availability	
WOOD SPECIES	Red Oak (<i>Quercus rubra</i>)	
COMMONLY USED CUSTOMS CODE	44092999	



CHARACTERISTICS OF THERMALLY MODIFIED OAK (SAWN, PLANED AND PROFILED):		CORRESPONDING STANDARD/TEST REPORT	
DURABILITY CLASS (CATAS)	1 - very durable	EN 350:2016	
USE CLASS	3.2 – exterior, above ground, exposed to the weather prolonged wetting condnions.	EN 335:2013	
REACTION TO FIRE CLASSIFICATION (CLADDING ONLY): - thickness: ≥18 mm - min thickness within profile: 9 mm - valid for profiled claddings and straight edged boards without air gap - without surface coating	D-s1, d0;	EN 13501-1:2018	
INITIAL MOISTURE CONTENT (%)*	5.2 ± 2	Internal factory test 01.10.2022	
OVEN-DRY DENSITY (KG/M³)*	628.8 ± 7.5	ISO 13061-2:2014	
EQUILIBRIUM MOISTURE CONTENT AT 21°C, (%)* AT:	RH 35%	3.3 ± 0.2	ISO 13061-1:2014
	RH 60%	6 ± 0.1	
	RH 90%	10 ± 0.1	
SWELLING FROM OVEN-DRY DIMENSIONS IN RADIAL FIBRE DIRECTION AT 21 °C (%)* AT:	RH 35%	0.7 ± 0.1	ISO 13061-15:2017
	RH 60%	1 ± 0.1	
	RH 90%	1.5 ± 0.5	
SWELLING FROM OVEN-DRY DIMENSIONS IN TANGENTIAL FIBRE DIRECTION AT 21 °C (%)* AT:	RH 35%	1.2 ± 0.1	
	RH 60%	1.9 ± 0.1	
	RH 90%	2.7 ± 0.1	
BENDING STRENGTH (N/MM²)*	61.8 ± 3.9	EN 408:2010	
MODULUS OF ELASTICITY (N/MM²)*	13161 ± 523.3	EN 408:2010	
COMPRESSIVE STRENGTH (N/MM²)*	82.7 ± 2.6	EN 408:2010	
SCREW TRACTION RESISTANCE (N/MM²)	32.6 ± 1.6	EN 1382:2016	
JANKA HARDNESS (N)*	4235 ± 261.6	ISO 13061-12:2017	
BRINELL HARDNESS (N/MM²)*	27.75	EN 1534:2010	
SCRATCH RESISTANCE (N)*	0.6	EN 15186:2012	
ACIDITY (PH)*	3.22	ISO 6588-2:2021	

*The values given are the mean results of testing, apply only in the aforementioned conditions and are not partially applicable.

CHARACTERISTICS OF THERMALLY MODIFIED OAK (SAWN, PLANED AND PROFILED):

COLOR	Exotic Brown. Colour variations in thermally modified wood are a result of variations in growth conditions of the tree and are fully acceptable. Wood will weather to grey unless a UV resistant coating is applied and maintained.	
COATING	Cladding Decking	Possible to Oil industrially with Thermory Dark brown Oil to keep the brown colour.
GRADING	Grade "Select" and "Character"	Grading rules, installation and maintenance manuals are at: 
SURFACE	Planed and brushed surface possible on Thermory Oak	
EPD (RTS)	THERMALLY MODIFIED HARDWOOD WITHOUT SURFACE COATING	GWP – BIOGENIC A1-A3: -5.66E1 kg CO ₂ e per 1 m ³
COUNTRY OF ORIGIN	Estonia	
HANDLING	Thermory® cladding and decking boards should be stored inside, out of the sun, rain and other elements. When this is not possible, boards need to be elevated off the ground, stacked uniformly and covered with a waterproof tarp. Leave the ends of the tarp open so moisture is not trapped inside, making certain the stored wood is not subjected to the elements or sun as UV rays will fade the material. Under no circumstances should Thermory® boards, even in original packaging, be subjected to rain or any moisture as they cannot dry properly when stacked and/or packaged.	
WASTE MANAGEMENT	Thermory naturally enhances wood using only heat and steam. Thermally modified wood does not need to be treated as hazardous waste.	
CHAIN OF CUSTODY CERTIFICATION	FSC® and PEFC certified products available - please contact our sales team for available profiles and dimensions.	
MANAGEMENT SYSTEM CERTIFICATIONS	ISO 9001, ISO 14001, ISO 45001	
NORDIC SWAN ECOLABELED PRODUCTS AVAILABLE	Licence no 4086 0010	

THERMORY® Oak is produced in a special computer-controlled kiln. The process uses only heat and steam, no chemicals are added.

During the modification process, chemical and structural changes occur within the timber which improve some of its basic characteristics. The resulting product is more durable and stable – an ideal material for use in exposed areas such as external facades.



Leave a lasting impact

THERMORY is a world leader in the thermal modification of wood. We offer high-quality, long-lasting solutions that benefit from environmentally friendly technology. We have spent the past two decades developing our expertise through close collaboration with architects, designers, builders and homeowners – constantly revising our product selection and refining our technology in the process.

THERMORY promotes a transparent and responsible corporate culture. We care about the environment and treat nature with deep respect. Our purchasing process is environmentally responsible, and we exercise high standards for quality and sustainability. Our timber is carefully inspected and harvested from sustainably managed forests. If desired, we can offer PEFC, FSC® or Nordic Swan Ecolabel-certified wood.



As a renewable resource that is both durable and an excellent insulator, wood is one of the most environmentally friendly choices for your construction pro-

jects. If you think it's important to protect our valuable resources long into the future, then we're on the same mission. We create lasting value, because we want to leave behind a more harmonious and sustainable world.

REAL WOOD PRODUCTS WITH BEAUTY AND STABILITY IN EVERY FIBER

- DECKING
- CLADDING
- INTERIOR
- SAUNA



Thermory's project 'Development of Resource-efficient Painted Thermally-modified Wood' is financed in cooperation with Enterprise Estonia (EAS) and the Norwegian Green ICT financing mechanism.

- Thermory
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All previous versions are null and void.