

# THERMO-RADIATA PINE

○ Radiata pine, also known as clear pine, is a knot-free pine-wood.

○ Thermal modification enhances radiata pine's smooth, elegant look by giving it a warm caramel-brown color.

○ Each and every board is unique, with the individual natural grains coming together to create a beautiful pattern.

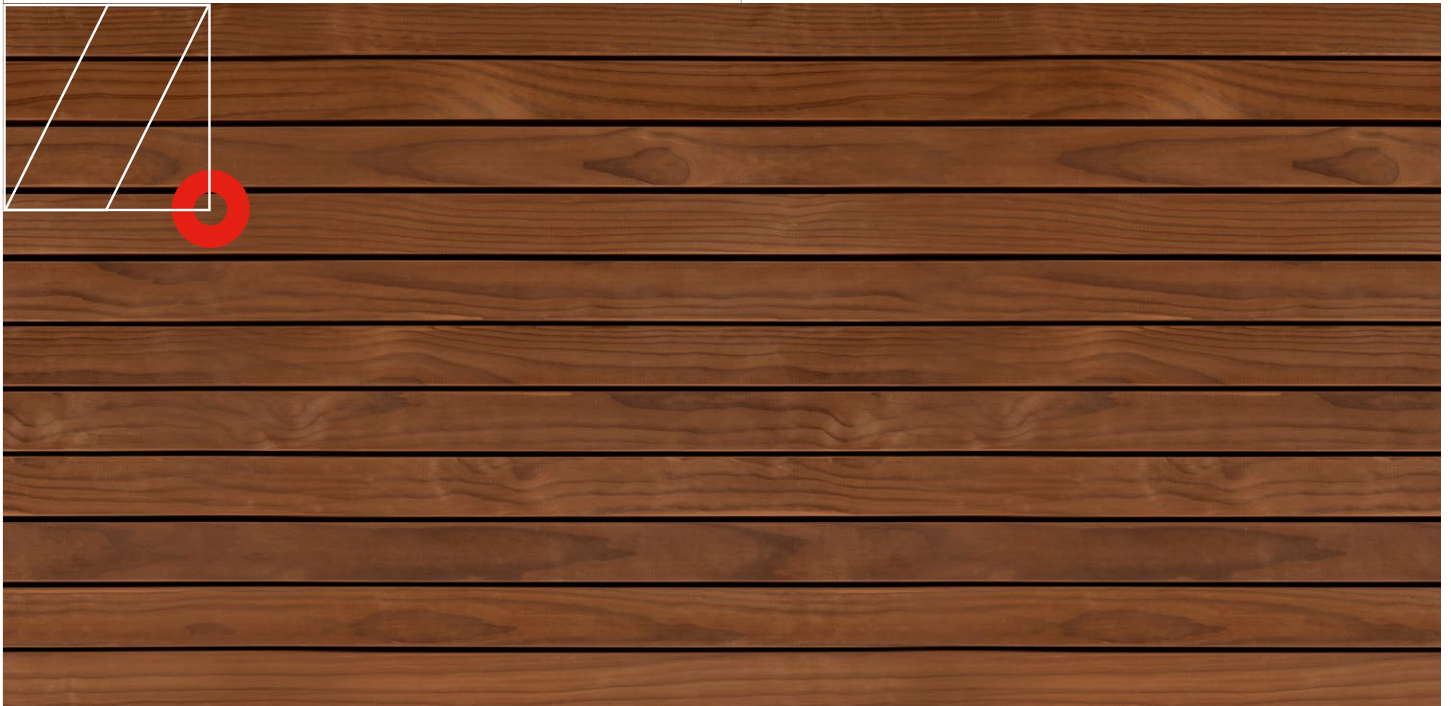
○ Thermal modification improves radiata pine's dimensional stability and makes the wood more durable.

An elegant, knot-free look in durable softwood.

○ To further protect the durability of the cladding boards, we recommend treating them on all four sides with oil or paint prior to installation.

○ With its low moisture absorption, thermally modified radiata pine twists, cups and bends less than untreated wood in outdoor use, with less shrinkage and expansion.

○ Thermory's thermo-radiata pine is chemical free, with no harmful waste generated.




THERMAL MODIFICATION	Intense 220 °C
STANDARD LENGTHS:	3.0 - 5.7 m; lengths are subject to availability
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WOOD SPECIES	Radiata pine ( <i>Pinus radiata</i> )
COMMONLY USED CUSTOMS CODE	44091018



CHARACTERISTICS OF THERMALLY MODIFIED RADIATA PINE (SAWN, PLANED AND PROFILED):		CORRESPONDING STANDARD/TEST REPORT	
<b>DURABILITY CLASS (CATAS)</b>	2 - durable	EN 350:2016	
<b>USE CLASS</b>	3.1 – exterior, above ground, exposed to the weather. Limited wetting conditions.	EN 335:2013	
<b>REACTION TO FIRE CLASSIFICATION :</b> - thickness: ≥18 mm - min thickness within profile: 9 mm - valid for profiled claddings and straight edged boards without air gap - without surface coating	D-s2, d0	EN 13501-1:2018	
<b>INITIAL MOISTURE CONTENT (%)*</b>	11.3 ± 2	Internal factory test 01.10.2022	
<b>OVEN-DRY DENSITY (KG/M³)*</b>	414.9 ± 9.2	ISO 13061-2:2014	
<b>EQUILIBRIUM MOISTURE CONTENT AT 21°C, (%)* AT:</b>	RH 35%	4.4 ± 0.3	ISO 13061-1:2014
	RH 60%	7.5 ± 0.2	
	RH 90%	12.5 ± 0.1	
<b>SWELLING FROM OVEN-DRY DIMENSIONS IN RADIAL FIBRE DIRECTION AT 21 °C (%)* AT:</b>	RH 35%	0.6 ± 0.1	ISO 13061-15:2017
	RH 60%	0.8 ± 0.1	
	RH 90%	1.3 ± 0.1	
<b>SWELLING FROM OVEN-DRY DIMENSIONS IN TANGENTIAL FIBRE DIRECTION AT 21 °C (%)* AT:</b>	RH 35%	1.3 ± 0.1	
	RH 60%	1.7 ± 0.1	
	RH 90%	2.4 ± 0.1	
<b>BENDING STRENGTH (N/MM²)*</b>	40 ± 4.6	EN 408:2010	
<b>MODULUS OF ELASTICITY (N/MM²)*</b>	10377 ± 703.7	EN 408:2010	
<b>COMPRESSIVE STRENGTH (N/MM²)*</b>	50.8 ± 2.6	EN 408:2010	
<b>SCREW TRACTION RESISTANCE (N/MM²)</b>	18.3 ± 0.8	EN 1382:2016	
<b>JANKA HARDNESS (N)*</b>	1763 ± 119.7	ISO 13061-12:2017	
<b>BRINELL HARDNESS (N/MM²)*</b>	15.39	EN 1534:2010	
<b>SCRATCH RESISTANCE (N)*</b>	0.2	EN 15186:2012	
<b>ACIDITY (PH)*</b>	3.74	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 RADIATA PINE (SAWN, PLANED AND PROFILED):**

<b>COLOR</b>	Golden Brown with a slight bronze glow. 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 an UV resistant coating is applied and maintained.	
<b>COATING</b>	Many colour options available. Please contact our sales team for further information.	
<b>GRADING</b>	Grades "Clear" and "Country"	Grading rules, installation and maintenance manuals are at: 
<b>SURFACE</b>	Planed and brushed surface possible on Thermory Radiata Pine Cladding.	
<b>EPD (RTS)</b>	THERMALLY MODIFIED SOFTWOOD WITHOUT SURFACE COATING	GWP – BIOGENIC A1-A3: -7.83E1 kg CO <sub>2</sub> e per 1 m <sup>3</sup>
	THERMALLY MODIFIED SOFTWOOD WITHOUT SURFACE COATING	GWP – BIOGENIC A1-A3: -7.71E1 kg CO <sub>2</sub> e per 1 m <sup>3</sup>
<b>COUNTRY OF ORIGIN</b>	Estonia	
<b>HANDLING</b>	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.	
<b>WASTE MANAGEMENT</b>	Thermory naturally enhances wood using only heat and steam. Thermally modified wood does not need to be treated as hazardous waste.	
<b>CHAIN OF CUSTODY CERTIFICATION</b>	FSC® and PEFC certified products available - please contact our sales team for available profiles and dimensions.	
<b>MANAGEMENT SYSTEM CERTIFICATIONS</b>	ISO 9001, ISO 14001, ISO 45001	
<b>NORDIC SWAN ECOLABELED PRODUCTS AVAILABLE</b>	Licence no 4086 0010	

THERMORY® Radiata Pine is produced at 220 °C 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 or decking.





# 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.

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All previous versions are null and void.