THERMORY®

Data sheet

Thermally modified spruce cladding and decking

THERMO-SPRUCE

A durable softwood with rustic charm.

Thermory's thermally modified spruce is a softwood solution that offers exceptional rot resistance and longevity.

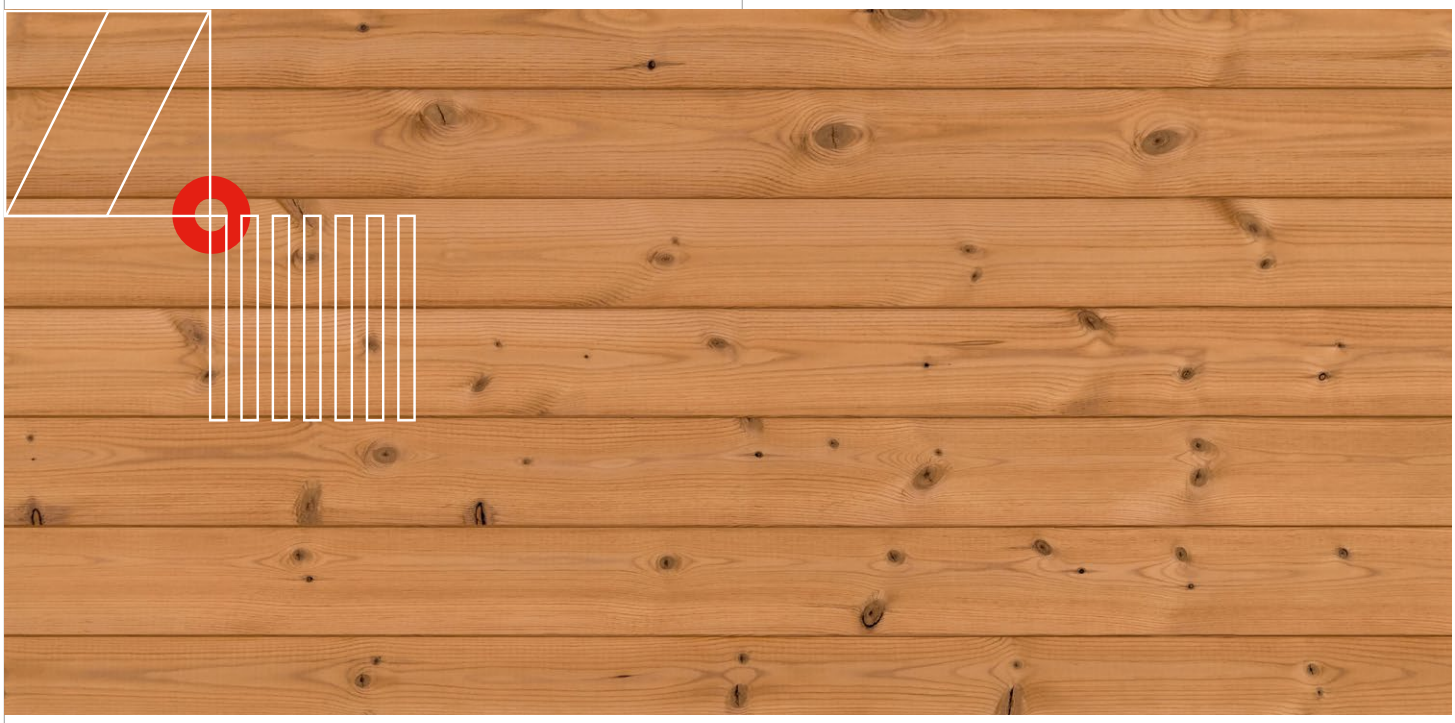
Our thermo-spruce cladding and decking range creates a naturally rustic appearance with beautiful visible knots.

The decking is available with extra-wide boards that showcase thermo-spruce's impressive stability and enable quick installation with fewer visible gaps.

With its low moisture absorption, thermo-spruce twists, cups and bends less than untreated wood in outdoor use, with less shrinkage and expansion.

Thermo-spruce is an affordable material that's perfect for demanding climatic conditions and is suitable for a variety of surface treatments and finishes.

We offer thermo-spruce cladding and decking with the Nordic Swan Ecolabel.



THERMAL MODIFICATION	Intense 215 °C	
STANDARD LENGTHS:	Cladding	3.0 - 5.7 m
	Decking	3.0 - 5.4 m
	Lengths are subject to availability	
WOOD SPECIES	Norway spruce (*Picea abies*)	
COMMONLY USED CUSTOMS CODE	44091018	

CHARACTERISTICS OF THERMALLY MODIFIED SPRUCE (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 condtions.	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		B-s1, d0; B-s2, d0 and B-s3, d0 with EN 16755 non-leaching compliancy available upon request	EN 13501-1:2018
INITIAL MOISTURE CONTENT (%)*		7 ± 2	Internal factory test 01.10.2022
OVEN-DRY DENSITY (KG/M³)*		400.6 ± 8.9	ISO 13061-2:2014
EQUILIBRIUM MOISTURE CONTENT AT 21°C, (%)* AT:	RH 35%	4.6 ± 0.3	ISO 13061-1:2014
	RH 60%	7.8 ± 0.2	
	RH 90%	13.5 ± 0.4	
SWELLING FROM OVEN-DRY DIMENSIONS IN RADIAL FIBRE DIRECTION AT 21 °C (%)* AT:	RH 35%	0.5 ± 0.1	ISO 13061-15:2017
	RH 60%	0.8 ± 0.1	
	RH 90%	1.1 ± 0.1	
SWELLING FROM OVEN-DRY DIMENSIONS IN TANGENTIAL FIBRE DIRECTION AT 21 °C (%)* AT:	RH 35%	1.5 ± 0.1	
	RH 60%	2.2 ± 0.1	
	RH 90%	3.1 ± 0.1	
BENDING STRENGTH (N/MM²)*		43.3 ± 1.8	EN 408:2010
MODULUS OF ELASTICITY (N/MM²)*		10269 ± 270.4	EN 408:2010
COMPRESSIVE STRENGTH (N/MM²)*		41.8 ± 1.8	EN 408:2010
SCREW TRACTION RESISTANCE (N/MM²)		10.6 ± 0.6	EN 1382:2016
JANKA HARDNESS (N)*		1129 ± 52.8	ISO 13061-12:2017
BRINELL HARDNESS (N/MM²)*		12,16	EN 1534:2010
SCRATCH RESISTANCE (N)*		0.2	EN 15186:2012
ACIDITY (PH)*		3.62	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 SPRUCE (SAWN, PLANED AND PROFILED):

COLOR	Golden 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 an UV resistant coating is applied and maintained.	
COATING	Cladding	Many colour options available. Please contact our sales team for further information.
	Decking	Possible to Oil industrially with Thermory Dark or Light brown Oil to keep the brown colour.
GRADING	Grades A and B	Grading rules, installation and maintenance manuals are at:
SURFACE	Planed, brushed and embossed (cladding only) surface possible on Thermory Spruce.	
EPD (RTS)	THERMALLY MODIFIED SOFTWOOD WITHOUT SURFACE COATING	GWP – BIOGENIC A1-A3: -7.83E1 kg CO_2e per 1 m^3
	THERMALLY MODIFIED SOFTWOOD WITH SURFACE COATING	GWP – BIOGENIC A1-A3: -7.71E1 kg CO_2e 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® Spruce is produced at 215°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.

PEFC
PEFC/19-31-11

FSC
www.fsc.org
FSC® C074560
The mark of responsible forestry

NORDIC SWAN ECOLABEL
4086 0010
Durable wood for outdoor use

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

Norway grants

EAS Enterprise Estonia

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.