SIVALBP ENVIRONMENTAL SPECIFICATIONS

external cladding / decking /
internal cladding

Dress up your projects,
wake up your homes

www.sivalbp.com

sivalbp®
wood, technology & design

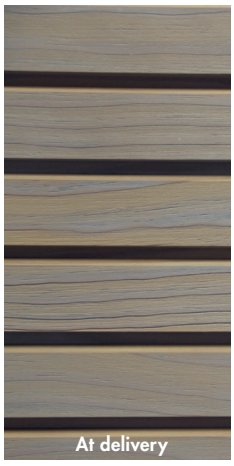
PRECURSOR AND TRENDY, a RECOGNIZED KNOW HOW for AESTHETICS, LONG LASTING AND ECO FRIENDLY SOLUTIONS

Solutions for facades, internal claddings and deckings

ECOTHERMO SOLUTIONS:

- Eco-friendly process
- Brings exceptional durability and stability
- Neutralizes resin drips
- Excellent weather resistance with factory applied saturator
- Contemporary profiles on long lasting species
- An EcoThermo external cladding, decking and internal cladding offer

Solutions Eco Thermo by Sivalbp®



Radiata pine, EcoThermo - gris 102

Finishing Solutions for facades:

- Protection of the façade with saturator, natural tone, timeless grey or trendy black on long lasting timber - Elegance/New Age/Vintage Sivalbp ranges
- Sivalbp Colors claddings - 21x150, Sivalbp exclusivity - 10 years guaranteed - kiln to 18%
- Solvent free, water based and mineral pigmentation, non-toxic
- Easy maintenance

Nordic pine, EcoThermo - terra 109

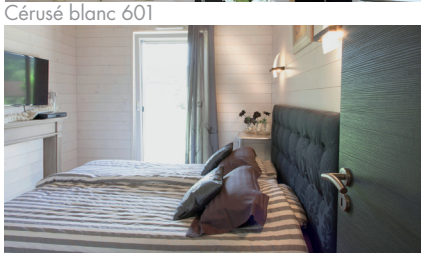
Radiata pine, EcoThermo - café 106

Nordic pine, EcoThermo - irisé 108

Finishing Solutions for internal claddings:

- Water-based, solvent-free hydrowax finish
- One timeless colors for indoor use

Cérusé blanc 601



Eco-certified Solutions :

- PEFC 10-31-1593 — Promoting Sustainable Forest Management — www.pefc.org

SIVALBP is committed to promoting the sustainable and responsible management of forests by exclusively supplying certified wood species PEFC™ ou FSC®

FSC www.fsc.org FSC® C118242 — The mark of responsible forestry

FABRICATION FRANÇAISE

All our boards are made in France

afcobois communication

Partner of the french wood construction union

Environmental specifications

A site 100% eco-friendly

100% of the energetic supply of Sivalbp production site comes from renewable energy

- Electricity 100% from renewable sources
- Rainwater collection
- Supply of our 4MW wood boiler by burning our own waste
- Natural air conditioning thanks to the optimal orientation of buildings

The ecological design of our production site offers an energy autonomy for the operation of thermal process and plant heating. This site respects the environment by using renewable origin resources.

100% responsible secondary wood process,
in harmony with the principles of sustainable development, to deliver our own ecological balance products.

Our skilful combination of wood specie and processing techniques enable us to offer a wide technical range of attractive boards which satisfy high quality standards.

Steaming

This consists in keeping the wood in an environment below 100°C and saturated in moisture for three weeks. This procedure gives it an even, brown colour all the way through, a conservation of its mechanical resistance and properties which are inherent to each species.

After steaming, woods are dried once again:

- steamed dried to 12% (+/-2%): internal uses
- steamed dried to 14% (+/-2%): external uses

Kiln drying

This first heat treatment is fundamental before any other processing. It consists in lowering the moisture content of the wood by keeping it in a ventilated environment under controlled humidity and temperature conditions for one to three weeks.

Here at Sivalbp we have mastered this delicate stage of the wood drying process perfectly. Lowering the moisture content of the wood to around 18% significantly reduces curving, resin flows and splitting in the profiled boards.

Limiting the exchange of moisture in the wood, kiln-drying ensures finishes adhere flawlessly and lastingly once the boards are installed.

EcoThermo

Solutions Eco Thermo by Sivalbp

Environmentally-friendly, it does not use any chemical adjuvants or petroleum products.

It consists in gradually heating the wood to approximately 200°C, alternating temperature rises with re-moisturising phases.

This high-temperature treatment is particularly suitable for wood species such as pine, spruce or larch.

This procedure gives the boards exceptional stability.

Dimensional variations are considerably reduced with a significant reduction in curving, resin and shrinkage.

The wood acquires an even, brown colour all the way through.

Internal thermo-stabilisation (184°C) for internal cladding gives wide boards exceptional stability.

External thermo-stabilisation (215°C) for outdoor cladding and decking boards naturally modifies the composition of the wood cells, significantly improving its resistance to decay and insects. This means it can be used for class 3 use applications.

Automating sorting line

After kiln-drying, all the wood is passed through the automated sorting line, which is equipped with a scanner to detect the main defects (cracks, knots, pockets of resin, etc.).

According to precise selection criteria established by Sivalbp, this ensures we achieve a regular level of quality.

Finger-jointing

Our finger-jointing line enables us to offer cladding boards of unrivalled technical and aesthetic quality.

The main singularities are eliminated from the wood (loose knots, large pockets of resin, cracks, etc.) thanks to a scanner and an automatic cutting system. The boards are then toothed at the end and glued end to end under pressure to form a perfect board of a fixed length.

This finger-jointing system allows us to develop cladding ranges with unrivalled technical qualities, offering numerous advantages:

- perfectly straight boards with excellent stability after installation.
- more attractive appearance,
- fixed standard length of 4.40m or to order according to the scale of the project between 2.50 and 5.50m,
- more durable finishes

Profiling

This is what gives the board its final shape according to use.

This highly flexible, effective tool ensures regular planing and minute accuracy in the final profile.

Sivalbp has selected a range of few complete, technical profiles adapted to the required constraints and aesthetic appearance. Other bespoke profiles can also be offered according to the project.

Machining a tongue and groove at the ends of our boards means they are easy to fit.

Preparation of the surface

All our boards come in a range of possible surfaces (planed, brushed, sanded, smooth-sawn brushed or rustic) according to their use.

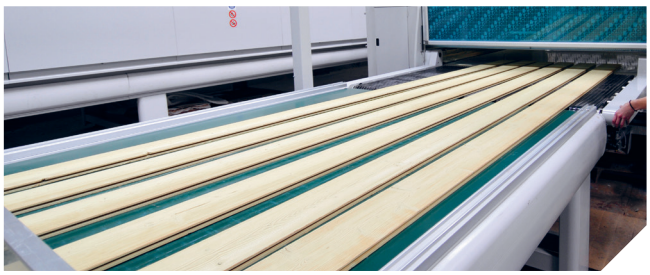
Brushing or sanding the board is an essential step before a finish is applied. This ensures the finish adheres perfectly to the wood and thus provides long-lasting durability.

Slow-speed brushing eliminates any soft parts thus bringing out the hard grain in relief on the surface, which will create a play with the contrasts with the various finishes.

Industrial sanding gives the surface a smooth appearance.

It is absolutely necessary to prepare the wood to receive the various finishes.

Finishing line



Offering the best you can get in industrial finishes, Sivalbp has invested in a high-performance industrial facility opening the way for a new generation of indoor or outdoor cladding boards with finish.

Over 200m long, flexible and effective, the finishing line is composed of a succession of robots and hot-air, UV and IR drying systems for optimum application. Its environmentally friendly operation only uses water-based, solvent-free finishes.

When combined with the different types of wood, it offers a subtle panel of finishes according to the desired applications and advantages.

The specific characteristics of wood

Wood: a living material

E.g;

A board 150mm wide delivered with a moisture content of 18% will vary as follows:

in Lyon (France):
Equilibrium moisture of the wood in summer **= 11%**
Equilibrium moisture in winter **= 20%**

- **In summer:** the board will have a width of 150 - 0.25% *150 * (18-11) = 147.4mm
- **In winter:** the board will have a width of 150 + 0.25% *150 * (20-18) = 150.8mm

Properties inherent to wood:

Wood is a natural, heterogeneous material which, depending on the species, the exposure and the weather, may present variations in colour and characteristics specific to each species.

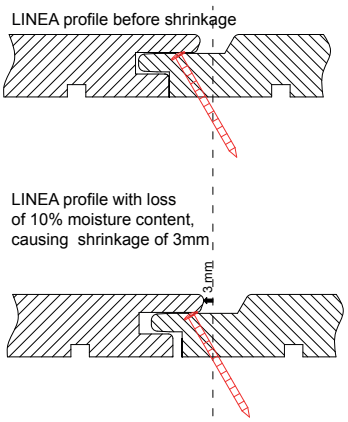
Wood may have sound knots, sometimes star shakes, fissures, small cracks, pith, cross-grain, fluffy fibres and resin exudation. These are natural phenomena.

The acceptance of these characteristics in our finished products is defined in standard NF EN 14519.

Over time, if no finish is applied, the wood will naturally turn into an heterogeneous shade of grey depending on the species, the exposure to UV light, rainwater and the design of the house.

These characteristics are inherent to wood; they are in no way a quality defect and cannot be attributed to Sivalbp.

Summer/winter dimensional variation phenomenon (example using the Linéa profile)



A hygroscopic material:

As a reminder, wood is a hygroscopic material. This means that it is likely to lose or take up moisture according to the temperature and especially depending on the relative humidity of the ambient air.

In a given environment, according to the temperature and humidity of the ambient air, the wood stabilises at an equilibrium moisture content, termed the hygroscopic equilibrium, which is independent of the species of wood.

The hygroscopic equilibrium of the wood varies according to the place it is installed and depending on the time of year (winter or summer).

Dimensional variations in wood:

Changes in the moisture content of the wood naturally lead to variations in the dimensions of the wood.

Variation in the length of the boards is deemed to be non-existent.

However, according to the standard NF EN 14519, ***"the thickness and width of a board may increase or decrease in 0.25% steps for every 1.0% increase or decrease in the moisture content of reference."***

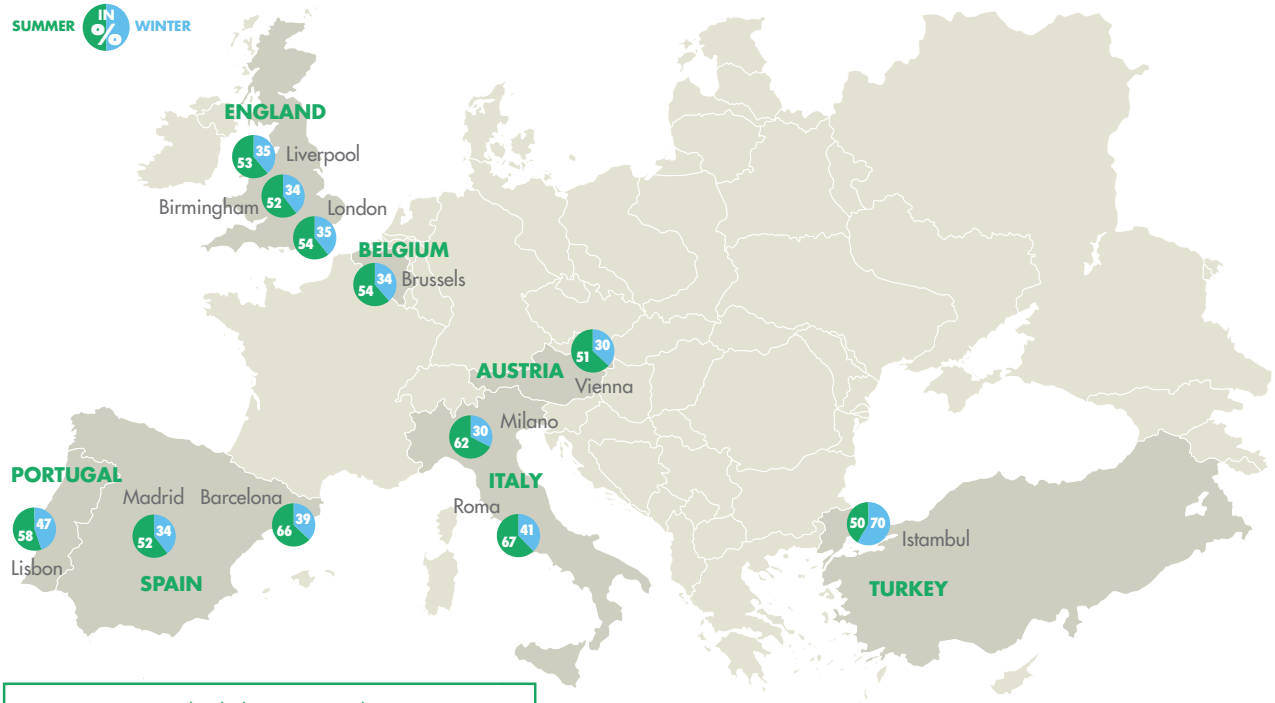
To avoid increasing these natural variations in moisture content, you are advised to observe the following conditions:

- **Transport:**
  Wood boards should be protected from the elements during transport. The use of sheeted lorries is recommended.
- **Storage:**
  The wood must be stored in its undamaged packaging. According to French DTU 41.2 and DTU 51.4, sheltered storage on the construction site in an open stack raised off the ground and protected from splashing is recommended.
- **Installation**:
  During installation of cladding and decking boards, the maximum moisture content of a batch of boards must never exceed 19% (softwood). The use of a moisture meter is recommended.

In addition to this general rule, this moisture level must be systematically adapted to the climatic conditions in the region. Ideally the wood to be installed should have a moisture content as close as possible to the equilibrium moisture of the site. To do so, the installer should allow the cladding boards to stabilise before installation.

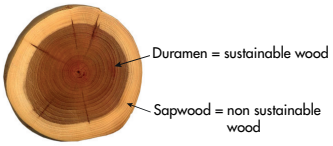
It is essential to follow our advice for installation and to ensure that the D.T.U. (French codes of practice) currently in force are observed.

Winter and summer moisture levels for some european cities
(Source Europa-Planet.com)



We invite you to check the winter and summer moisture levels map for the concerned area

Class of employment and natural sustainability for Sivalbp claddings and deckings
(Classes governed by French regulations)



Wood specie	Sivalbp Ranges	**Sustainability class:** natural durability of wood without sapwood	**Longevity of wood:** longevity «L1» : between 10 and 50 years	**Use class:** cladding and decking use
		according to NF EN 350-2 and FD P 20-651 documentation		according to NF EN 335
Western red cedar	ELEGANCE - NEW AGE - AUTHENTIC	3	L1	3.2
Radiata pine clear II Ext EcoThermo	ELEGANCE - NEW AGE - VINTAGE	3*	L1	3.1
Radiata pine clear II Ext EcoThermo	ATLANTIC	3*	L1	3
Siberian larch	ELEGANCE - NEW AGE - VINTAGE - PROTECH - AUTHENTIC	3	L1	3.2
Siberian larch	ATLANTIC	3	L1	3.2
Siberian larch Ext EcoThermo	NEW AGE - MOUNT. AUTHENTIC - MOUNT. ELEGANCE	3	L1	3.2
Mountain larch	MOUNT. AUTHENTIC - MOUNT. ELEGANCE - MOUNT. NEW AGE	3	L1	3.2
Nordic pine Ext EcoThermo	ELEGANCE - NEW AGE - VINTAGE	3*	L1	3.1
Nordic pine Ext EcoThermo	AUTHENTIC	3*	L1	3
Red douglas fir	AUTHENTIC	3	L1	3.2
Red douglas fir	ATLANTIC	3	L1	3.2
Douglas fir	ELEGANCE - NEW AGE - VINTAGE	3	L1	3.1
Nordic spruce	COLORS	3**	L1	3.1
Nordic spruce Ext EcoThermo	MOUNT. ELEGANCE	3*	L1	3.1

** According to FCBA report n° 401/16/021Z/1 to 5 - 12/19/2016* *** sustainability provided*

A rigorous selection

Sivalbp selects high-quality wood according to an eco-responsible approach. We ensure that our wood is from sustainably managed forests which are PEFC™ or FSC® certified.

We select our suppliers extremely rigorously, taking into account their forestry and industrial methods and with the aim of optimising the flow.

Western Red Cedar
(THUJA PLICATA)

Canadian timber, lasting-up to 50 years, rot-proof and naturally 3.2 class.

Wood with contrasting hues, pink to brown.

Knot-free, particularly suited to contemporary architecture.

- **Provenance:** Canada
- **Quality:** Clear II quality, sorted out by Sivalbp, 98% of boards are knot-free
- **Use class:** 3.2 according to FD P 20-651
- **Certification:** PEFC™

Larches
(LARIX)

These are the only conifers which lose their needles in the winter. They are conditioned by an exceptional climate leading to their slow growth rate. They are references in terms of durability thanks to their hard, dense wood. A specie offering the possibility of large widths.

Siberian larch (Larix sibirica)

A wood lasting-up to 50 years, rot-proof and naturally 3.2 class. Timber from sustainably managed forests.

Thanks to its very slow growth, it has a more homogeneous grain which is slightly brighter.

- **Provenance:** Siberia
- **Quality:** A Choice or A/B Choice
- **Use class:** 3.2 (excluding sapwood) according to FD P 20-651
- **Certification:** FSC®

Mountain larch (Larix decidua)

From the Alps, lasting-up to 50 years, rot-proof and naturally 3.2 class. Recognised by its marked pinkish grain. More rustic in appearance, it is more suited to authentic architecture.

- **Provenance:** Alps
- **Quality:** I/III re-sorted by Sivalbp
- **Use class:** 3.2 (excluding sapwood) according to FD P 20-651
- **Certification:** PEFC™

Nordic spruce
(PICEA ABIES)

Light fine grained wood, with slow growth, it reveals small knots which are well integrated into the board. Scandinavian timber, PEFC™ certified.

- **Provenance:** Scandinavia
- **Quality:** US+Vth re-sorted by Sivalbp
- **Certification:** PEFC™

Kiln-dried Nordic spruce

This is the material of reference for kiln wood and coloured finishes. Kiln to 18% (+/- 2%) for an external use, kiln to 12% (+/- 2%) for an internal use.

- **Use class:** 3.1 with Sivalbp CTB B+ preservation (outdoor installation)

Steamed Nordic spruce

This is the material of reference for steamed wood, for an internal use.

Douglas fir
(PSEUDOTSUGA)

This is a fast-growing specie, characterised by a marked grain, a pink colour and the presence of tight, sound knots.

A real reference for cladding, the Douglas fir is offering very good value for money.

Wood specie sourced in France, PEFC™ certified, its specific property is its excellent durability over time.

- **Provenance:** France
- **Quality:** I/III re-sorted by Sivalbp
- **Certification:** PEFC™

Red Douglas fir (Pseudotsuga menziesii)

Red Douglas fir: wood without sapwood* on the surface,

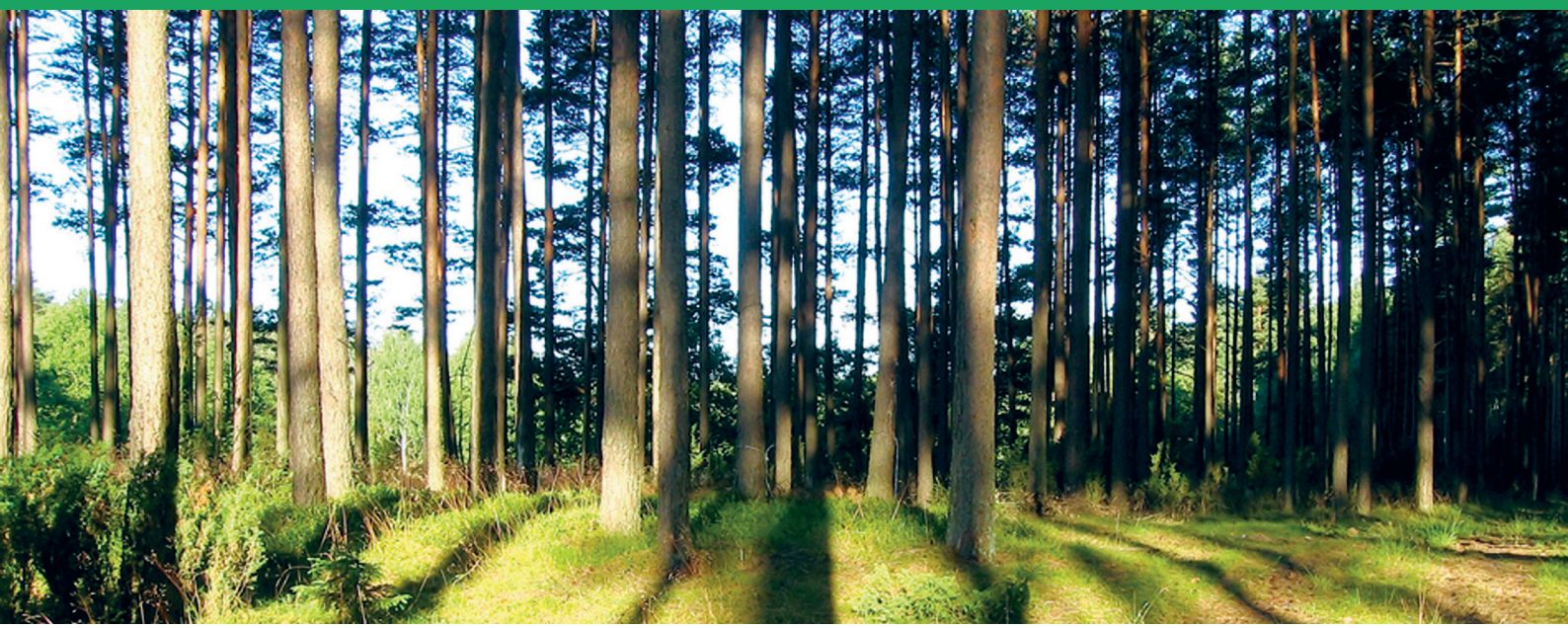
- **Use class:** 3.2 (without sapwood*) according to FD P 20-651

Douglas fir (Pseudotsuga menziesii)

Douglas fir: with sapwood* on the surface

- **Use class:** 3.1 with CTB B+ preservation and the application of a Sivalbp finish

** Sapwood: the part of the tree just below the bark, generally soft and white, unsustainable.*



- Thermo-stabilisation is an environmentally friendly process which preserves wood and is chemical free.
- This process brings timber exceptional durability and stability and better resistance to the weather (no shrinkage, no curving, neutralizes resin pockets).
- EcoThermo species become excellent material for external use.

Radiata pine
(PINUS RADIATA)

New Zealand timber, lasting-up to 50 years, (3 class with heat treatment), from sustainably managed forests.

- **Provenance:** New-Zealand, from sustainably managed forests.
- **Quality:** clear II
- **Use class:** 3 class
- **Certification:** FSC®

Nordic pine
(PINUS SYLVESTRIS)

Scandinavian timber, lasting-up to 50 years, (3 class with heat treatment), from sustainably managed forests.

- **Provenance:** Scandinavia
- **Quality:** saw-falling
- **Use class:** 3 class
- **Certification:** PEFC™

Larch
(LARIX SIBIRICA)

A wood lasting-up to 50 years, rot-proof and naturally 3.2 class. Timber from sustainably managed forests.

Thermo-stabilisation brings to the wood a dark appearance and an exceptional stability.

- **Provenance:** Siberia
- **Quality:** A Choice
- **Use class:** 3.2 (excluding sapwood) according to FD P 20-651
- **Certification:** FSC®

Nordic spruce
(PICEA ABIES)

Scandinavian timber, **PEFC™** certified, lasting-up to 50 years 3 class equivalent with heat treatment.

- **Provenance:** Scandinavia, from sustainably managed forests.
- **Quality:** US+Vth re-sorted by Sivalbp
- **Use class:** 3.1 with Sivalbp CTB B+ preservation (outdoor installation)
- **Certification:** PEFC™

Sivalbp holds PEFC™ and FSC® certifications

- Nordic spruce
- Mountain larch
- Western Red Cedar
- Douglas fir
- Nordic pine

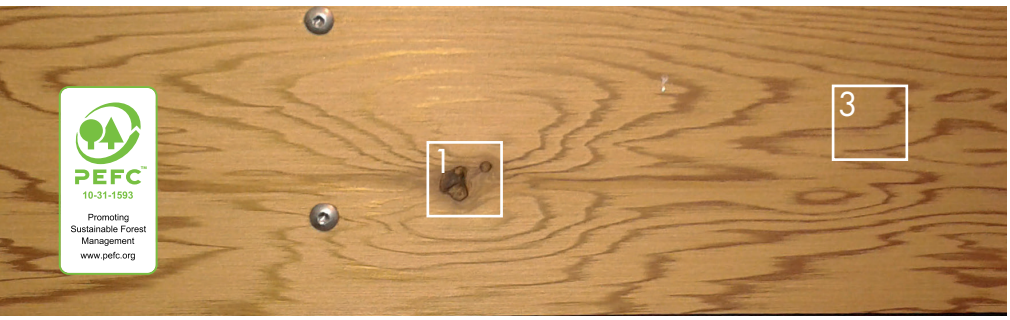
- Siberian larch
- Radiata pine clear II

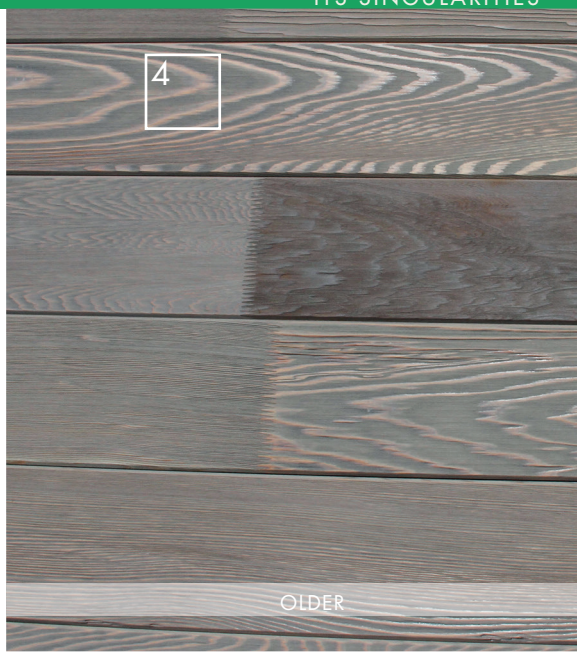
sivalbp® ENVIRONMENTAL SPECIFICATIONS

WESTERN RED CEDAR

THUJA PLICATA

ITS SINGULARITIES





Canadian timber, lasting-up to 50 years, rot-proof and naturally 3.2 class. Western red cedar is a very light, stable and soft wood that is easy to machine.

This wood species has contrasting aspects and hues. Knot-free, particularly suited to contemporary architecture.

Knots

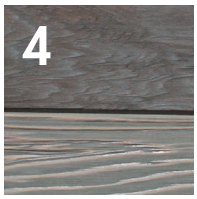
Clear II quality, the tolerance is about 1 knot of 20 mm per board.
However, Sivalbp is committed to filtering its boards to offer globally 98% without knots.

Contrasting hues

Wood is a natural material that can present differences in heterogeneous hues. The particularity of western red cedar is that it presents very contrasting shades ranging from beige brown to pinkish brown, sometimes even dark brown to black.

The grain aspect

The wood grain is usually straight and regular, however it can show on some pieces of flamed aspects



Ageing

Western red cedar is a naturally sustainable wood. If it is not finished, with time and depending on its exposure, its shades appear silver gray.

Other singularities

Shards of planing

Western red cedar is a soft wood, easy to machine.
However, it marks easily and can sometimes present shard of planing.

The presence of these singularities does not compromise neither the stability and strength of the boards, nor the durability of the external cladding.

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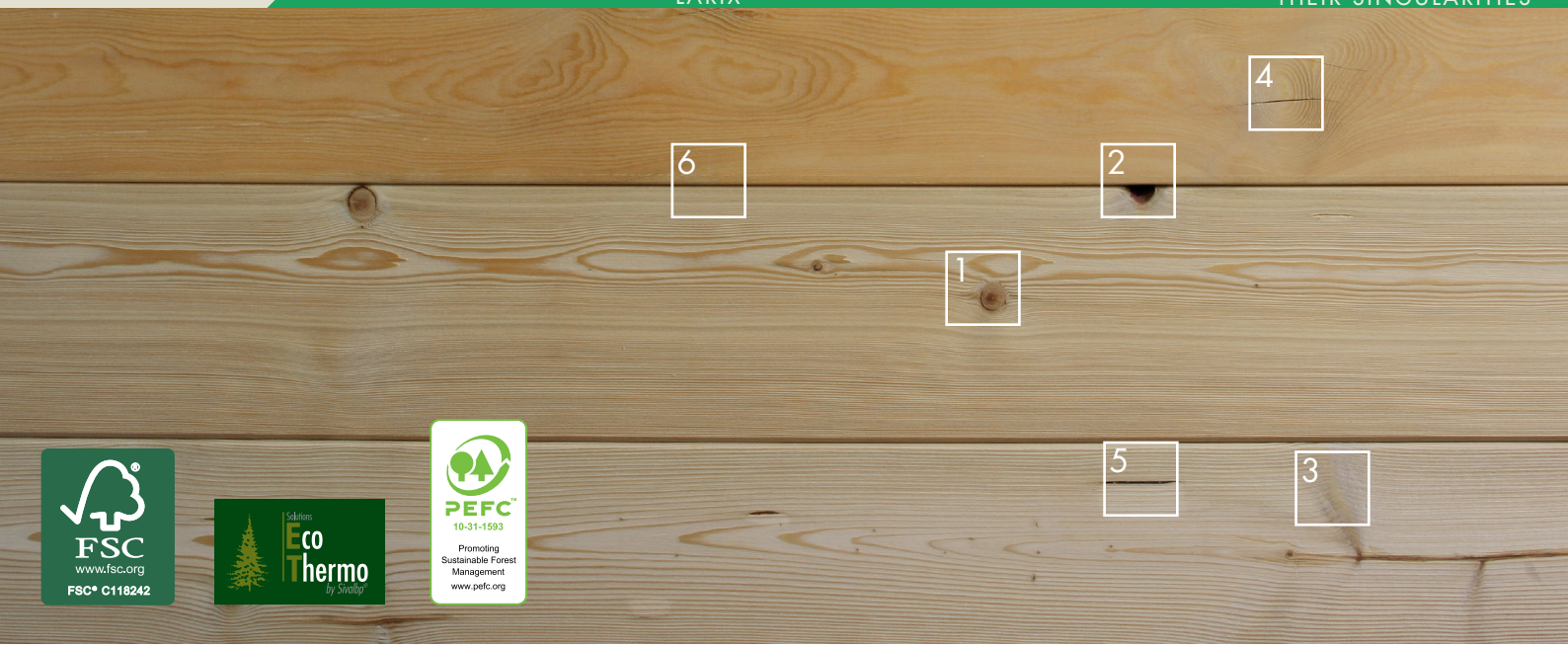
LARCHES

LARIX

THEIR SINGULARITIES



FSC
www.fsc.org
FSC® C118242

Solutions Eco Thermo by Sivalbp

PEFC
10-31-1593
Promoting Sustainable Forest Management
www.pefc.org

These are the only conifers which lose their needles in the winter. They are conditioned by an exceptional climate leading to their slow growth rate. Larches are hardwoods, dense and nervous, and they are references in terms of durability. The drying process is deciding. The control of the moisture content makes it possible to limit the risks of structural deformation (curving). Larches can be dried or thermostabilized, for external use.

Knots

Knot finds its origin in a branch. Healthy, sticky and starred knots do not compromise the durability of the cladding.
Are not allowed jumped knots (assimilated to holes).

Hole on the edge

This singularity has its origin in the profiling, by the shard of a knot ringed or dead located on the edge. With a maximum allowed diameter of 15mm, the covering with the bottom board is enough to insure the waterproofness of the cladding.

Cross-grained

Singularity revealed during the machining, it can be assimilated to the detachment of fibers near the knots.

Surface cracks

They appear as narrow surface crack oriented along the length of the board. They appear mainly throughout drying or dry weather. They close partially during wet or rainy periods.

Resin drips

They are common and are due to the exposure and the architecture of the building which can favor pull resin up. (except EcoThermo).

Hue differences

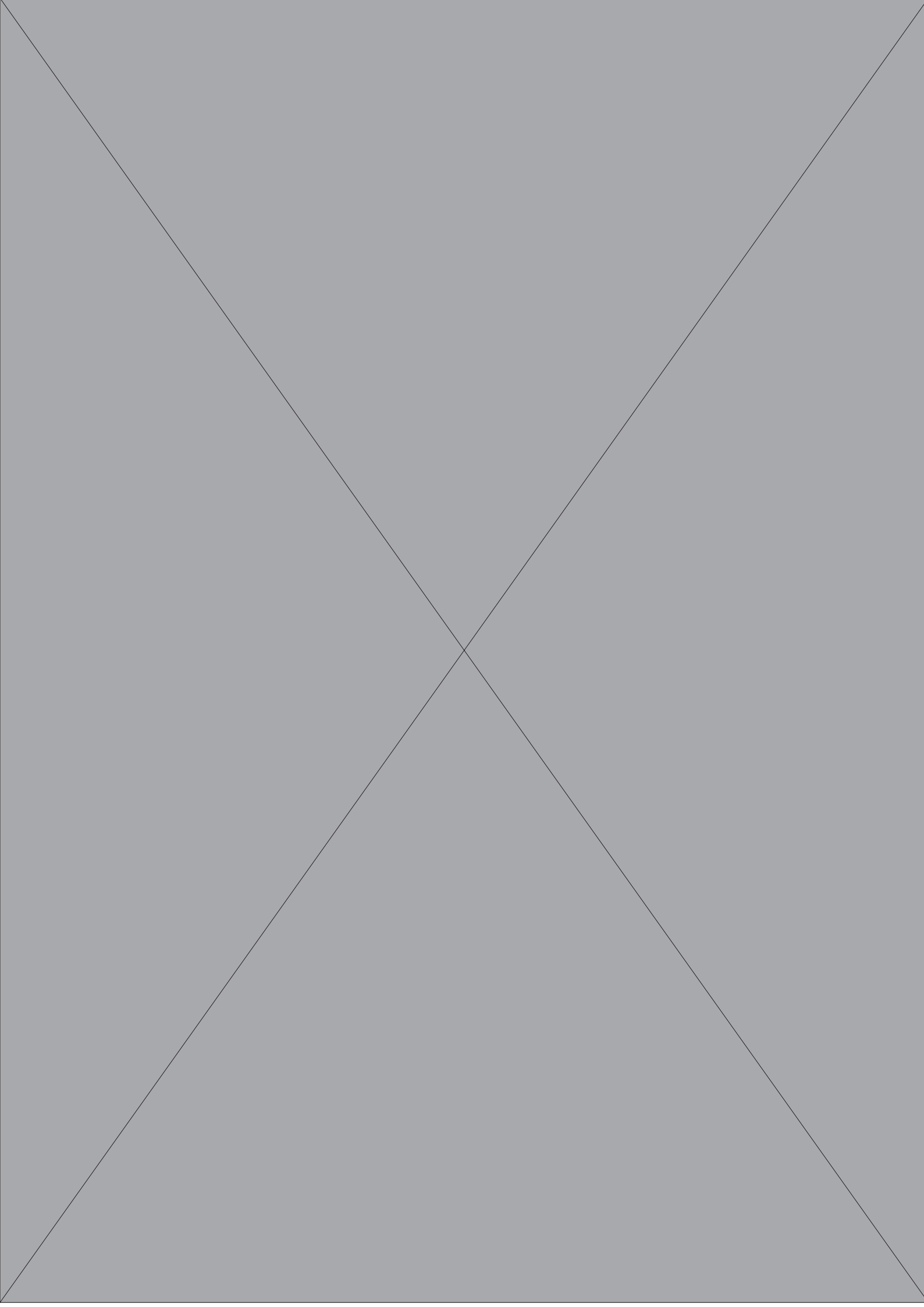
Wood is a natural material that can present heterogeneous tints. These differences of hues will harmonize with time. Larches colors are going from pale yellow to pale brown red and orange.

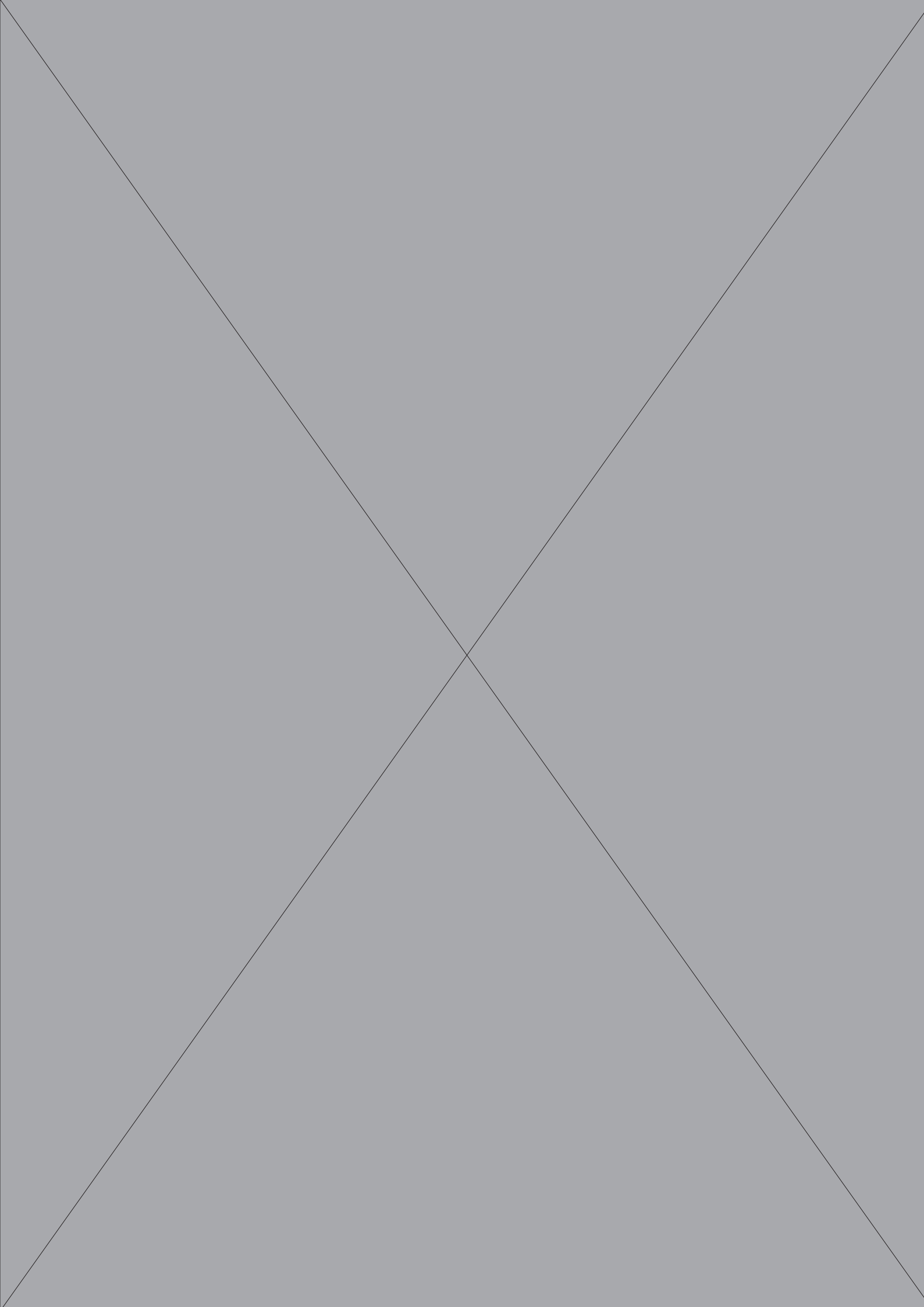
Other singularities

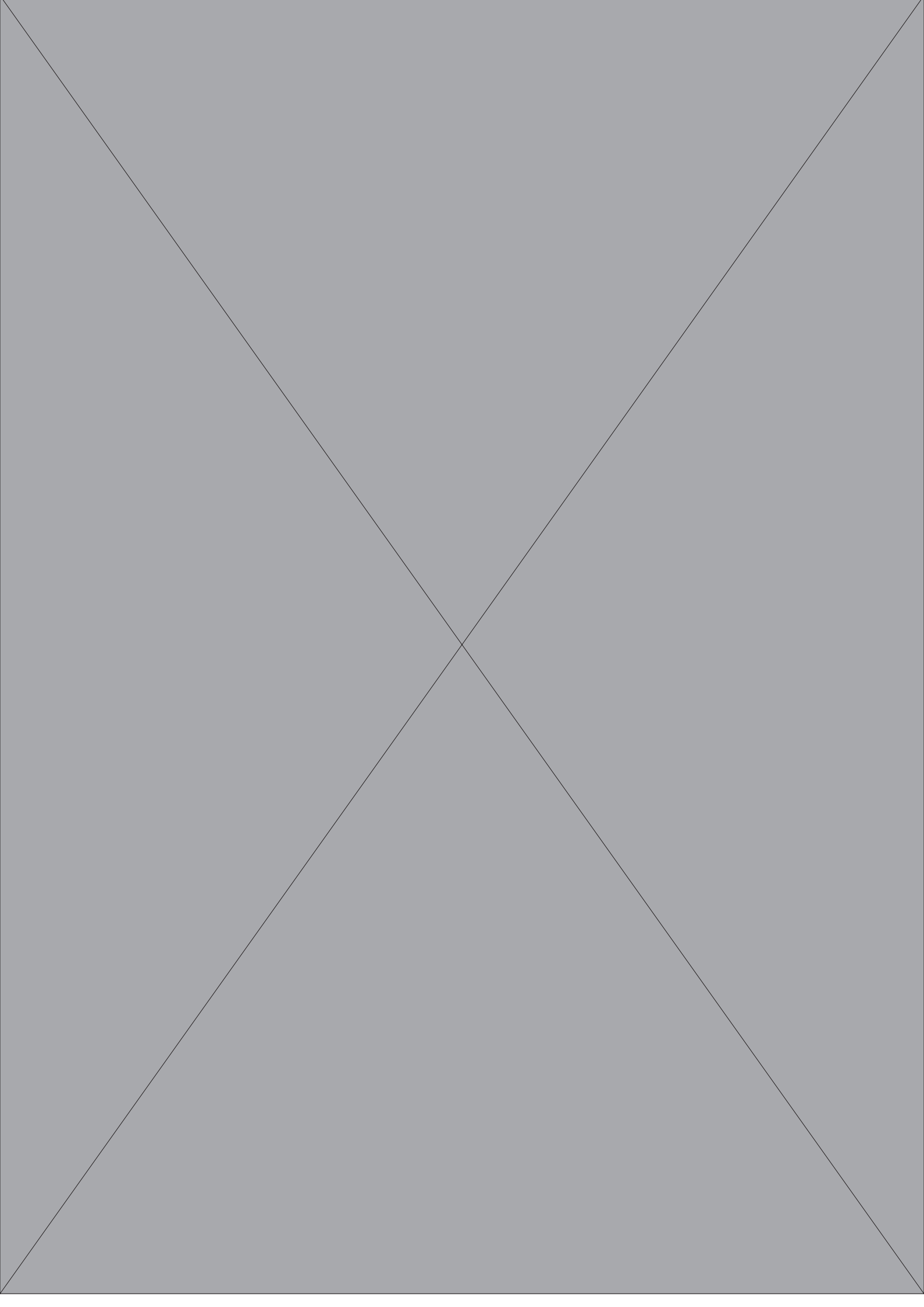
End cracks

They come from to the natural drying of wood. They are aproved if the length are less than 5 cm.

The presence of these singularities does not compromise neither the stability and strength of the boards, nor the durability of the external cladding.







sivalbp®
wood, technology & design

Serving you better also means helping you to carry out your projects with:

- resale support
- technical advice
- training
- quotes within 48 hours
- our top products in short delivery time
- collaboration for your specific projects

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