

The fire regulations for wooden facade cladding

Navigating the rules and regulations



Your project with wood cladding is: a single-family home or an industrial building?

- **Yes** → There are no specific fire class requirements
- **No** → Your building is categorised as:
  - **Low building** h < 10 m → The building is intended for:
    - **Self-reliant users.** Required D-s3,d1 → How to achieve D-s3,d1?
      - **Without fire-retardant treatment by Lemahieu Fire Protection®** → Since 20/08/2024 — Has the wood been treated via impregnation, chemical or thermal modification (LDCwood® ThermoWood®) and/or surface treatment (oil, paint, varnish, etc.)?
        - **No** → SOLUTION WITHOUT TREATMENT
        - **Yes** → Is any surface treatment used (oil, paint, varnish, etc.)?
          - **No** → The facade profiles are made of LDCwood® ThermoWood®?
            - **Yes** → SOLUTION WITHOUT TREATMENT AND WITHOUT ADDITIONAL TESTING
            - **No** → SOLUTION
          - **Yes** → SOLUTION
      - **With fire-retardant treatment by Lemahieu Fire Protection®** → SOLUTION
    - **Non-self-reliant users.** Required C-s3,d1 → SOLUTION
  - **Medium-high building** 10 m ≤ h ≤ 25 m Required B-s3,d1 → SOLUTION
  - **High building** h > 25 m Required A2-s3,d0 → Large-scale test required. Advice on request.

SOLUTION WITHOUT TREATMENT

Choose a solid, untreated wood species and comply with the conditions specified in the CWFT table:

- Closed timber cladding
- Flat profile: min. thickness of 18 mm.
- Ribbed profile: min. thickness of 18 mm and a min. thickness of 12 mm at the thinnest section (max. 25% of the profile surface area).
- Average density: min. 390 kg/m³.
- Installation on a substrate with a reaction-to-fire classification of A2-s1,d0 (minimum density of 10 kg/m³, e.g. mineral wool).

Please note:
PIR and PUR do not have a reaction-to-fire classification of A. Add a board with a reaction-to-fire classification of A2-s1,d0.

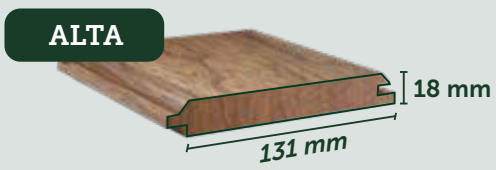
SOLUTION WITHOUT TREATMENT AND WITHOUT ADDITIONAL TESTING

Classification report WFRGent, 22238 and short version no. 21409A

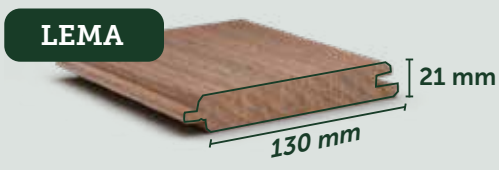
Choose from these profiles, among others, in LDCwood® ThermoWood®:

- ThermoWood® spruce
- ThermoWood® pine
- ThermoWood® fraké
- ThermoWood® ash
- ThermoWood® red oak
- ThermoWood® radiata pine

ALTA



LEMA



Or choose a flat, planed profile for closed timber cladding:

- Tongue and groove (T&G) or overlapping.
- In ThermoWood® with an average density between 380 and 1,000 kg/m³.
- Minimum thickness of 18 mm and effective cover width of min. 130 mm

Installation requirements

- Vertically or horizontally placed and mechanically attached on wooden battens (pine or spruce, with a density of 450 kg/m³, preservative-treated timber is permitted).
- A ventilated air cavity with a min. thickness of 40 mm.
- The substrate behind the air cavity consists of:
  > Wood-based panels (class D-s2,d0 or better, min. thickness 10 mm, min. density of 510 kg/m³) or
  > Non-combustible panels or substrates (class A2-s1,d0 or better, min. thickness 10 mm, min. density 510 kg/m³).
- A rain screen (<1 mm) has no significant impact on the reaction to fire class of closed cladding.

SOLUTION

With fire-retardant treatment

Lemahieu Fire Protection®

with Burnblock®

Up to B-s1,d0

- ✓ Various wood species, profiles and finishes available.
- ✓ The supporting battens do not require treatment.
- ✓ CE-certified.
- ✓ Compatible with pre-greying and colour coatings.

Scan the QR code to access the full brochure or contact us for advice.

The importance of DoP

Every finished construction product must have a Declaration of Performance (DoP) specifying its reaction-to-fire classification.

If you plane raw timber or ThermoWood® yourself to produce a finished product, you are responsible for drawing up the DoP.

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CERTIFIED **PRODUCT RANGE**
WITH FIRE-RETARDANT TREATMENT

SOLID WOOD

Type of wood	Density	Min. thickness	Reaction to fire class
Spruce	355-536	15-42 mm	B-s1,d0
Pine	450-600	15-42 mm	B-s1,d0
Western Red Cedar	316-494	15-42 mm	B-s1,d0
Larch	550-630	15-42 mm	B-s1,d0
Ayous	330-530	15-42 mm	B-s1,d0
Western Red Cedar	350-450	12,5 mm	B-s2,d0
Ash	650-850	15-42 mm	B-s1,d0
Fraké	430-730	15-42 mm	B-s1,d0
Douglas Fir	480-580	15-50 mm	B-s1,d0

According to classification: EN 13501-1:2018 and EN 13501-1:2020. According to test: EN 13823 (SBI) and EN 14135:2004
With a ventilated or non-ventilated cavity between the product and the substrate, or without a cavity.

THERMOWOOD®

Type of wood	Density	Min. thickness	Reaction to fire class
ThermoWood® spruce	314-434	15-42 mm	B-s1,d0
ThermoWood® ash	590-680	15-42 mm	B-s1,d0
ThermoWood® pine	450-500	15-42 mm	B-s1,d0
ThermoWood® ayous	269-374	15-42 mm	B-s1,d0
ThermoWood® ayous	305-470	15 mm	B-s2,d0 / B-s3,d0
ThermoWood® fraké	410-730	15-42 mm	B-s1,d0
ThermoWood® poplar	350-500	15-42 mm	B-s2,d0
ThermoWood® radiata pine	400-500	15-42 mm	B-s1,d0

According to classification: EN 13501-1:2018 and EN 13501-1:2020. According to test: EN 13823 (SBI)
With a ventilated or non-ventilated cavity between the product and the substrate, or without a cavity.

HARDWOOD

Type of wood	Density	Min. thickness	Reaction to fire class
Oak	500-750	20 mm	B-s1,d0
Sapele	325-690	15 mm	B-s1,d0

According to classification: EN 13501-1:2018 and EN 13501-1:2020. According to test: EN 13823 (SBI) and EN 14135:2004
With a ventilated or non-ventilated cavity between the product and the substrate, or without a cavity.

MODIFIED WOOD

Type of wood	Density	Min. thickness	Reaction to fire class
Accoya naturel	400-600	19 mm	B-s1,d0

According to classification: EN 13501-1:2018 and EN 13501-1:2020. According to test: EN 13823 (SBI)
With a ventilated or non-ventilated cavity between the product and the substrate, or without a cavity.

More products are available and we are constantly expanding our certifications.
Contact us for more information.

CERTIFIED **COLOUR TREATMENT**
WITH FIRE-RETARDANT TREATMENT

Instead of waiting for the natural patina of wood to appear, it is possible to give the wood a vintage look that "ages" the surface. The vintage finish creates a transparent or semi-transparent film. With colour coatings, you give the wood the look that matches your project.

PRE-GREYING AND COLOUR COATING WITH SHERWIN WILLIAMS

Type of wood	Min. thickness	Reaction to fire class
Solid wood	19 mm	B-s2,d0
ThermoWood®	19 mm	B-s2,d0

Sherwin Williams SC1420 + EG1570 on wood treated with Burnblock®, certified B-s2,d0

COLOUR COATING WITH REMMERS

Type of wood	Min. thickness	Ventilated air cavity	Reaction to fire class
Solid wood	19 mm	40 mm	B-s2,d0
ThermoWood®	19 mm	40 mm	B-s2,d0

Remmers Induline DW-618 and LW-718 on Burnblock® B-s2,d0 certified wood. Remmers is the owner of this documentation. Please contact Remmers for advice on an industrial partner offering a CE-certified solution. https://en.remmers.com/en_IN

Quality and tailored advice

Our wide-ranging knowledge, innovative techniques, and sustainable materials combine to guarantee ecologically sound applications for indoors and outdoors.

We can guarantee the highest quality and tailored advice based on our know-how and product knowledge. We create tailored solutions for the specialised timber trade with precision and passion.

Do you want more information about our products or already know exactly what you want to put in our capable hands? You are welcome to contact us.

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Created by nature
Redefined by Lemahieu Group

LEMAHIEU
TIMBER

LEMPAN
PANELS

LDC WOOD
THERMOWOOD®

JENO WOOD
Passion for wood

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