Prodema

NATURAL WOOD VENEERS
FOR INTERIOR SURFACES

Prodema®
Made to last wooden Products

interiors by Prodema®

Prodema

interiors by Prodema®

ProdIN

interiors by Prodema®

Warm, Beautiful, Elegant…

These are the words that spring to mind when people think of wood as a building and decoration material.

Wood, as a material widely available in nature, has been worked by man for thousands of years, and its applications have gradually been mastered over time.

At **Prodema** we have absorbed and concentrated all that age-old experience, we have upgraded it by adding a healthy dose of state-of-the-art technology, to create an original, cutting-edge range of natural wood products for the world of architecture and decoration, until recently unthinkable, thanks to its appearance, quality, range and, above all durability.

1 ProdIN Materials

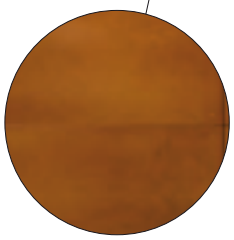
2 Mounting Systems

1. Prod IN Material

1.1. Natural wood characteristics

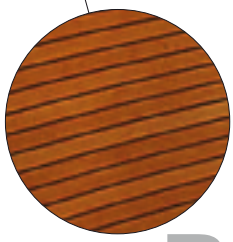
The main feature of **ProdIN** materials is their natural wood veneer which means that they possess special features of this material, such as the following:

Civic Centre
Architect. Ángel de Diego
Barakaldo (Spain)



Certain darker areas on the wood itself.

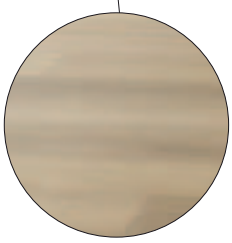
Maritime Museum
Architect. Juan Francisco Paz
Bilbao (Spain)



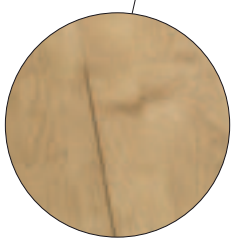
Transversal mirror images of the wood.

Hotel Astoria 7
Joaquín Zubiría
San Sebastián (Spain)

Variation In colour, shade and brightness on various panels made from the same type of wood.



Prodema Offices
José Manuel Ibargoyen
Legorreta (Spain)



Knots or holes from the branches of the tree.

1.2 Certificates and guarantees

Prodema, as part of its philosophy of continuous improvement, enlists the cooperation of companies of international renown to certify its products and processes.

Prodema, is registered under the following standards:

- ISO 9001 in Quality Management.
- ISO 14001 in Environmental Management.
- ISO 14006 in ECOdesign Management.
- Chain of Custody PEFC ST 2002: 2010 on request for **Neptuno**.

The excellent features of **ProdIN** have been tested in prestigious laboratories, meeting the EN-438 standard and EN 13501-1 on reaction to fire.

Prodema, conducts comprehensive quality control on **ProdIN** and offers a 20-year guarantee * for this product.

* The general conditions of the guarantee may be changed without prior notice.

PEFC
PEFC/14-35-00025

AENOR
Ecodiseño
UNE EN ISO 14006
ED-0009/2010

Mercury 3
Man - Shinar architects
Yahud (Israel)

ProdIN

interiors by Prodema®

Interior style

ProdIN (by **Prodema**), our new line of interior cladding, offers exciting possibilities to the world of architecture and interior decoration.

Because the range of collections IDP (by **Prodema**) is designed to meet every need, as every one of its products has a particular Internal core giving It unique technical features for every application.

All of which coupled with the advantages of a material as noble, beautiful and versatile as wood, and the guarantee of performance and durability offered by the protective formula patented by **Prodema**, based on paper and resins.

Because beauty is also inside.

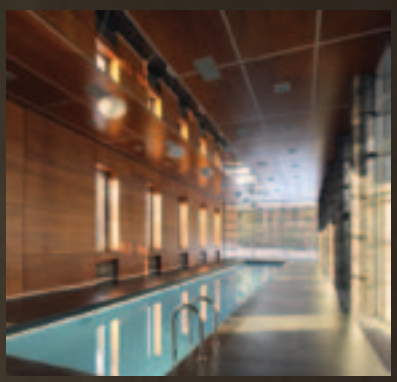
Collection

Neptuno

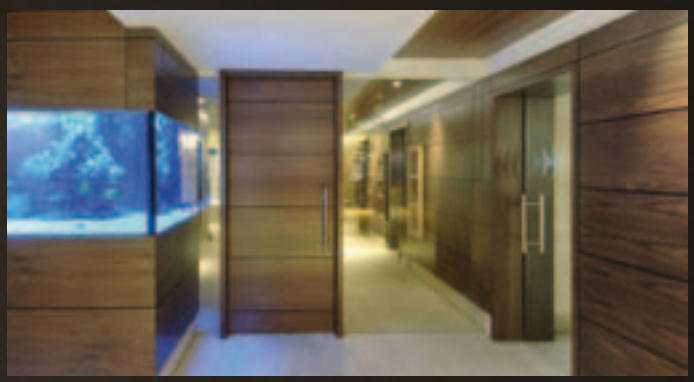
Humidity is not a problem

With Its Bakelite core for indoor cladding, specially designed for wet environments.

By the pool or spa we can also enjoy the beauty of a **ProdIN** product (by **Prodema**). Because thanks to the **Neptuno** range, wood is getting closer to water than ever without any problem, providing a touch of warmth to otherwise somewhat cold spaces (swimming pools, spas and even bathrooms).



Village Pavlolo
Tsimailo, Liashenko and Partners
Moscow (Russia)



Holstein Therme
Ziebel und Partner Lübeck
Bad Schwartau (Germany)

1.3 *Neptuno*

1.3.1 Composition

Neptuno panels are made up of a cellulose fibre core that has been impregnated with thermosetting phenolic resin and its natural wooden surface is specially treated to comply with the toughest requirements of humid environments.

1.3.2 Technical Characteristics

Prodema® Made to last wooden Products	TECHNICAL DATA SHEET	Doc.: FTNEPTUNO Rev.: 005 –Sept 2009 Page: 1/1
MATERIAL:	THICKNESS:	SURFACE FINISH:
NEPTUNO	6-22 mm	TEXTURE *

TESTS	RESULTS	PROPERTY OR ATTRIBUTE	UNIT OF MESURE	STANDARD
1. INSPECTION REQUIREMENTS				
Colour, pattern and surface finish	Due to the fact that wood is a natural product, each veneer may be considered as unique. Colour and structure differences are considered as normal. Singularities such as knots and resin inclusions are not considered as defects, but as a part of the décor. There are differences in light fastness performances depending on the wood species and the source of the wood.			EN 438-8 Part 5.2.2.3
2. DIMENSIONAL TOLERANCES				
Thickness (t)	± 0,40 ± 0,50 ± 0,60 ± 0,70 ± 0,80	6,0 ≤ t < 8,0 8,0 ≤ t < 12,0 12,0 ≤ t < 16,0 16,0 ≤ t < 20,0 20,0 ≤ t < 25,0	mm	EN 438-2 Part 5
Length and width	+ 10 / - 0	-----	mm	EN 438-2 Part 6
Edge straightness	1,5	-----	mm/m	EN 438-2 Part 7
Edge squareness	1,5	-----	mm/m	EN 438-2 Part 8
3. PHYSICAL PROPERTIES				
Dimensional stability at elevated temperatures	0,30 0,60	Longrain Crossgrain	% max.	EN 438-2 Part 17
Resistance to impact (large diameter ball)	≥ 1.800	Maximun height for which no visible surface craking or imprint greater than 10 mm (t ≥ 6 mm)	mm	EN 438-2 Part 21
Flexural strength	≥ 80 ≥ 80	Longrain Crossgrain	MPa	EN ISO 178
Flexural Modulus	≥ 9.000 ≥ 9.000	Longrain Crossgrain	MPa	EN ISO 178
Light fastness (Xenon arc)	≥ 4 < 4 (A)	Contrast	Grey scale rating	EN 438-2 Part 27
4. CE REQUIREMENTS				
Reaction to fire	C-s2,d0	Euroclass t ≥ 6 mm	Classification	EN 13.501-1
Water vapour permeability	110 250	Wet cup meted Dry cup method	μ	EN 438-7 Part 4.4
Resistance to fixings	> 2.000 > 3.000 > 4.000	Screw holding value for t = 6 mm Screw holding value for t = 8 mm Screw holding value for t ≥ 10 mm	N	EN 438-7 Part 4.5
Density	≥ 1,35	Density	g/cm³	EN ISO 1.183
Resistance to immersion in boiling water	≤ 2 ≤ 2 ≥ 4	Mass increase Moisture absorbed Appearance	% Rating	EN 438-2 Part 12
Tensile strength	≥ 60	Longrain Crossgrain	MPa	EN ISO 527-2
Release of formaldehyde	E1	Classification	Rating	EN 438-7 Part 4.11

(A) Maple, Natural Beech, White Oak

* Except for the colours Light Brown, Rustik, Pale, Mocca, Cream, Deep Brown, Dark Brown, Ice Grey, which have the surface finish Smooth

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Neptuno Reaction to fire

NON-Fire-proof material (Neptuno)

Thickness ≥ 6 mm. | Class.: C-s2, d0 (according to EN 13.501-1)

Fire-proof material (Neptuno IGN)

Thickness ≥ 6 mm. | Class.: B-s2, d0 (according to EN 13.501-1)

1.3.3 Size and weight

Dimensions:

Length x Width

2.440 mm. x 1.220 mm. (tolerance approx ± 2 mm.)

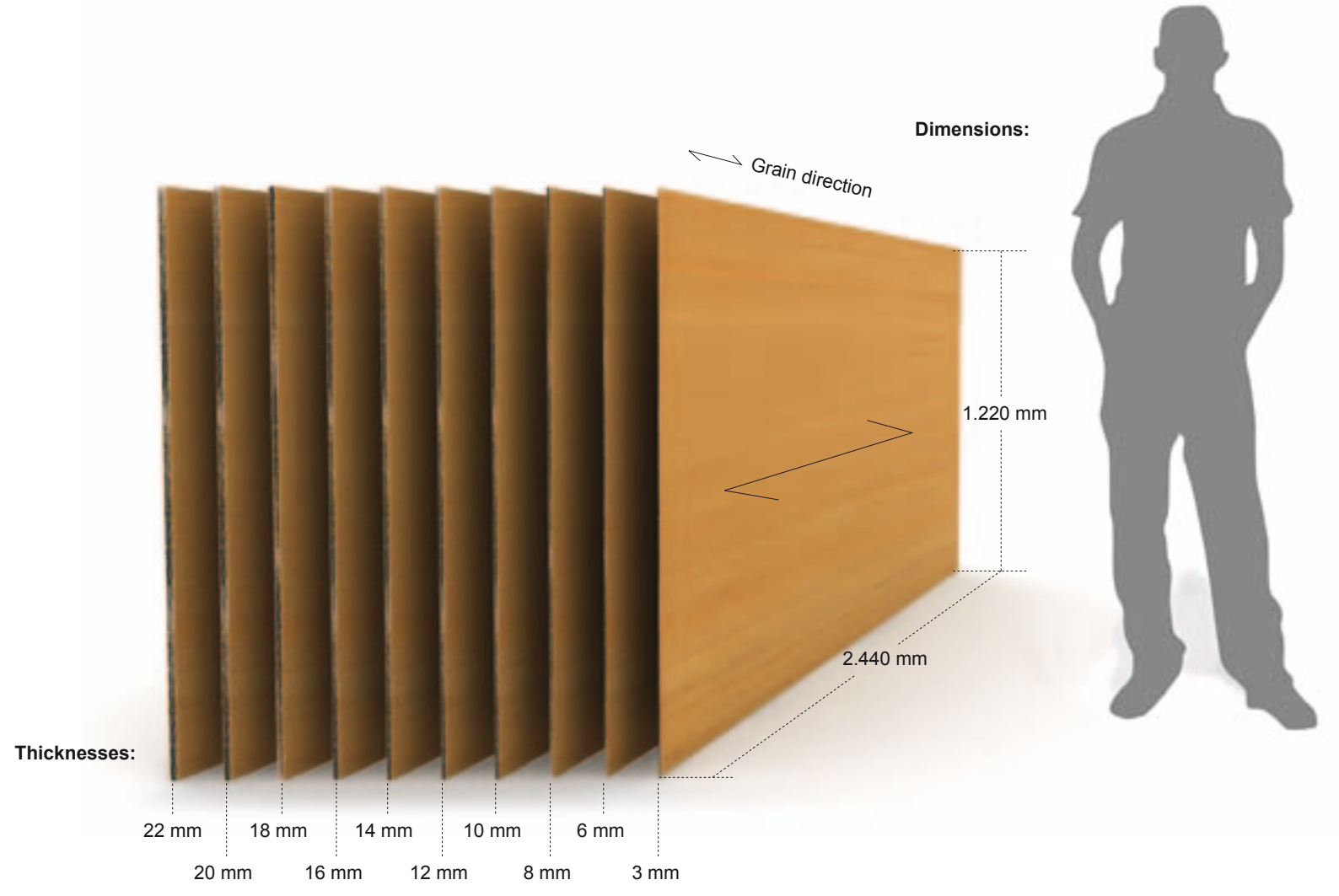
Thicknesses

3, 6, 8, 10, 12, 14, 16, 18, 20, 22 mm.

Other dimensions: please check.

Weight:

Thickness of board	3	6	8	10	12	14	16	18	20	22	(mm)
Weight / surface	4,05	8,10	10,80	13,50	16,20	18,90	21,60	24,30	27,00	29,70	(kg / m^2)



1.3.4 Colours

Prodema panel veneers are made with natural wood so the tone and graining of the samples are a mere guide. The surface composition of the **Prodema** panels may also vary depending on the application, so there may be differences in tone for the same colour in the different families of panels.

Flat cut wood


Maple*


Natural beech*


White oak*


Zebrano*


Cherry*


African cedar*


Sapelli*


Eucalyptus*


American walnut*


Teak*


Wenge*


White quercus*


Quercus*


Bamboo*


Stained zebrano*


Bamboo toffee*

Changes in tone and grain between strips is particularly marked in the cases Eucalyptus and Teak so it is advisable to consult with the factory.

Rotary cut wood

Ayous Veneer


Natural A*


Dark brown**


Light brown**


Pale**

Cream**


Mocca**


Black wood**


Mint**

Large Diamond Engraving:
Available in Light brown, Rustic, Pale, Mocca, Cream, Deep brown, Dark brown, Black wood, Mint and Ice grey ≥ 10 mm.

Okume Veneer


Deep brown**


Rustik**


Ice grey**

Would you like a sample of some of our products?

Simply send an email to:
prodema@prodema.com
and we will get it to you.

www.prodema.com

* **Neptuno** Texture finish (raised).
** **Neptuno** Smooth finish (smooth).

Village Pavlolo
Tsimailo, Liashenko and Partners
Moscow (Russia)

Collection

Proligna

Poducts with a core

The most extensive range of colours and interior cladding finishes for dry environments.

Deeply special.

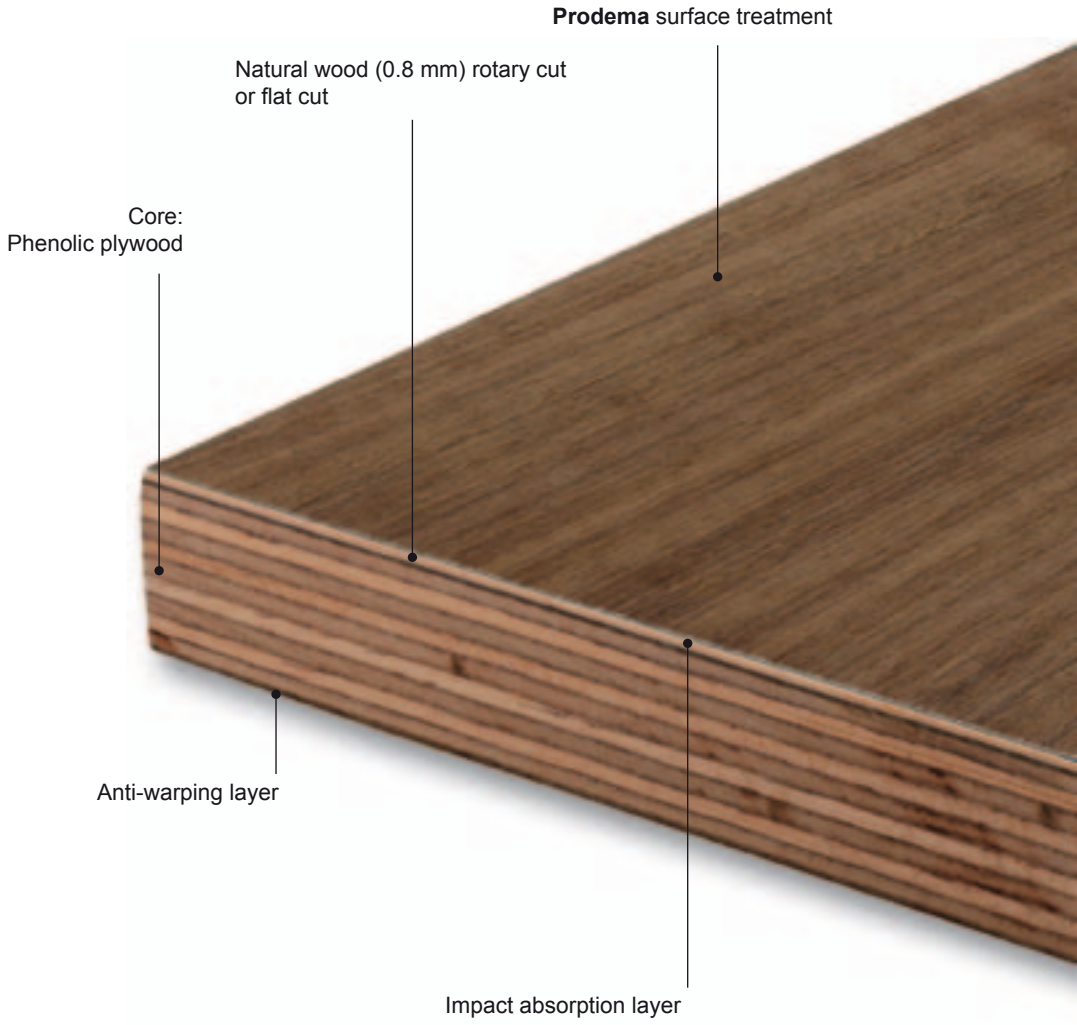
Interior wooden cladding contributes Immense features to any given space: warmth, beauty, comfort, style and even light and joy, making it a vibrant place where people feel more comfortable.

BEC
Idom Engineering Studio, Sener
Barakaldo (Spain)

1.4 *Proligna*

1.4.1 Composition

Proligna panels have a plywood core that has been impregnated with thermosetting phenolic resins and the natural wood surface is protected by a proprietary wear-resistant film or coat.



1.4.2 Technical characteristics

Prodema® Made to last wooden Products	**TECHNICAL DATA SHEET**	**Doc.: FTPROLIGNA** **Rev.: 009 – Oct 2011** **Page: 1/1**

MATERIAL:	**THICKNESS :**	**SURFACE FINISH :**
PROLIGNA	**8-20 mm**	**TEXTURE**

TESTS	RESULTS	PROPERTY OR ATTRIBUTE	MESURE UNIT	STANDARD
1. INSPECTION REQUIREMENTS				
Colour, pattern and surface finish	**Due to the fact that wood is a natural product, each veneer may be considered as unique. Colour and structure differences are considered as normal. Singularities such as knots and resin inclusions are not considered as defects, but as a part of the décor. There are differences in light fastness performances depending on the wood species and the source of the wood.**			EN 438-8 Part 5.2.2.3
2. DIMENSIONAL TOLERANCES				
Thickness (t)	**7,0 – 9,6** **9,9 – 12,4** **12,9 – 15,6** **15,7 – 18,3** **18,9 – 21,3**	t = 8,0 t = 11,0 t = 14,0 t = 17,0 t = 20,0	mm	EN 438-2 Part 5
Length and width	**+ 10 / - 0**	-----	mm	EN 438-2 Part 6
Edge straightness	**1,5**	-----	mm/m	EN 438-2 Part 7
Edge squareness	**1,5**	-----	mm/m	EN 438-2 Part 8
3. GENERAL				
Flexural strength	**≥ 70** **≥ 60**	Longitudinal direction Transversal direction	MPa	EN 310
Flexural Modulus	**≥ 7.000** **≥ 6.000**	Longitudinal direction Transversal direction	MPa	EN 310
Resistance to surface wear	**≥ 50** **≥ 150**	Resistance to surface wear	Revolutions Initial wear point Wear resistance	EN 438-2 Part 10
Resistance to immersion in boiling water	**≥ 4**	Aspect	Rating	EN 438-2 Part 12
Resistance to scratching	**3**	Force	Rating	EN 438-2 Part 25
Lightfastness (Xenon arc)	**≥ 4** **< 4** (A)	Contrast	Grey scale rating	EN 438-2 Part 27
Perpendicular tensile strength	**≥ 2**	Adhesion force	MPa	ASTM C 297
4. CE REQUIREMENTS				
Reaction to fire	**D-s2,d0**	Euroclass t ≥ 8 mm	Classification	EN 13.501-1
Resistance to fixings	**e < 15 mm: ≥ 150**	Force	N/mm	EN 438-7 Part 4.5
	e ≥ 15 mm: ≥ 2.000		N	
Density	**≥ 0,75**	Density	g/cm□	-
Content of pentachlorophenol	**≤ 5**	Concentration	ppm	EN 438-7 Part 4.10
Release of formaldehyde	**E1**	Release of formaldehyde	Class	EN 717-2
Bonding strength	**≥ 1**	Bond strength	MPa	EN 438-7 Part 4.7
Flexural tensile strength	**≥ 1**	Bond strength	MPa	EN 438-7 Part 4.8
Glue-line quality	**5**	Expression of results	Rating	EN 438-7 Part 4.13.3
Resistance to elevated temperature	**No damage**	Aspect	Result	EN 438-7 Part 4.13.3
Water resistance	**≤ 7**	Thickness increase	%	EN 438-7 Part 4.13.3

(A) Maple, Natural Beech, White Oak

Proligna Reaction to fire

NON-Fire-proof material (Proligna)

Thickness ≥ 8 mm. | Class.: D-s2, d0 (according to EN 13.501-1)

1.4.3 Size and weight

Dimensions:

Length x Width

2.440 mm. x 1.220 mm. (tolerance approx ± 2 mm.)

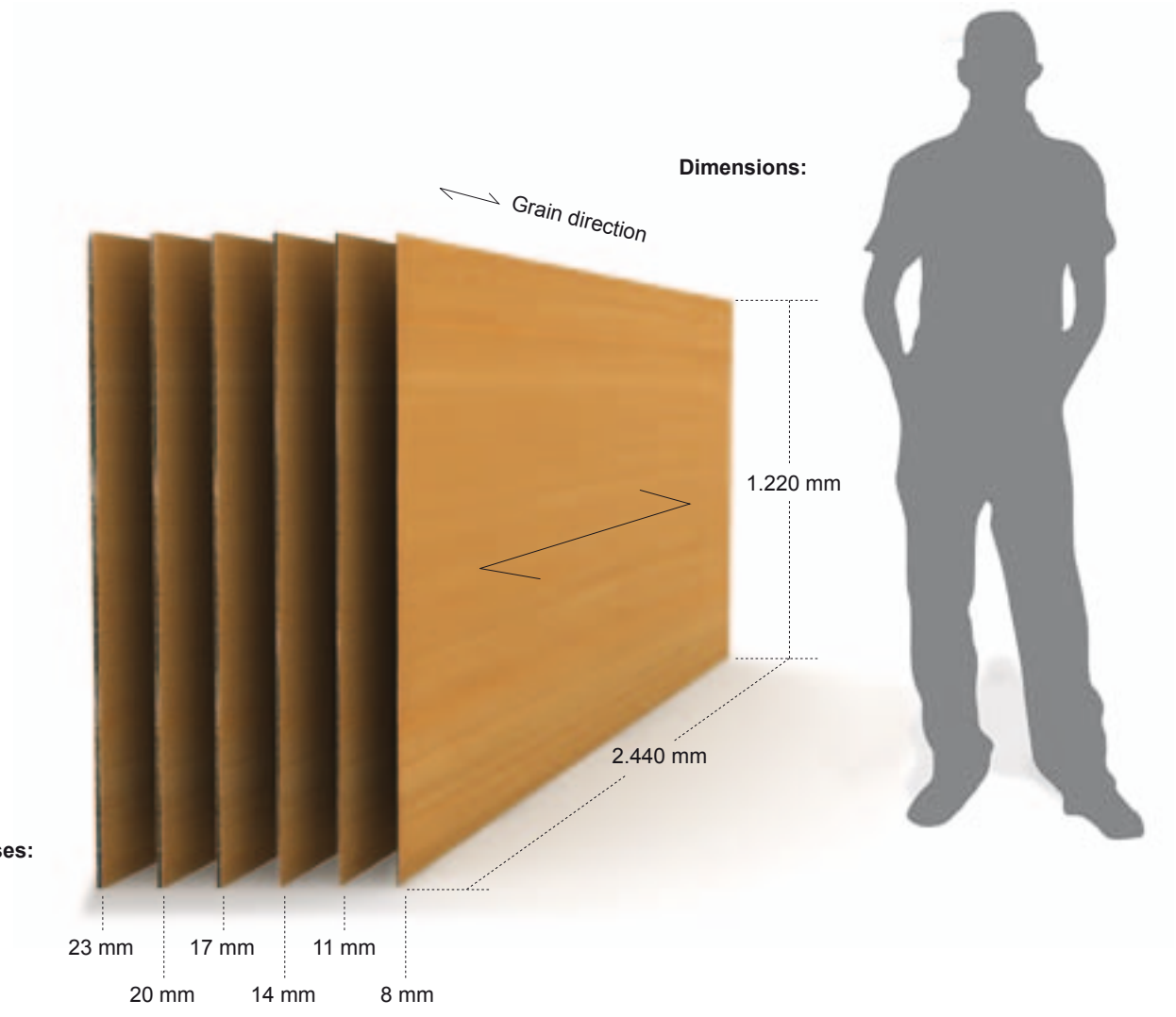
Thicknesses

8, 11, 14, 17, 20, 23 mm.

Other dimensions: please check.

Weight:

Thickness of board	8	11	14	17	20	23	(mm)
Weight / surface	6,40	8,80	11,20	13,60	16,00	18,40	(kg / m^2)



1.4.4 Colours

Prodema panels veneers are made with natural wood so the tone and grain of the samples are a mere guide. The surface composition of the **Prodema** panels may also vary depending on the application, so there may be differences in tone for the same colour in the different families of panels.

Flat cut wood

Changes in tone and grain between strips is particularly marked in the cases Eucalyptus and Teak so it is advisable to consult with the factory.

Rotary cut wood

Ayous Veneer


Dark brown


Light brown


Mocca


Black wood

Cream


Honey


Natural A

Okume Veneer


Deep brown


Almond


Ice grey

All **Proligna** finishes are Texture (raised)

Would you like a sample of some of our products?

Simply send an email to:
prodema@prodema.com
and we will get it to you.

www.prodema.com

Civic Centre
Architect . Ángel de Diego
Barakaldo (Spain)

Collection

Auditorium

Listen to the silence

Drilled panels and with a core composed of a wood and resin isotropic mass for projects with acoustic needs.

In a world increasingly polluted acoustically, more and more spaces demand proper conditioning. For them, at **ProdIN** (by **Prodema**) we have developed the **Auditorium** line.

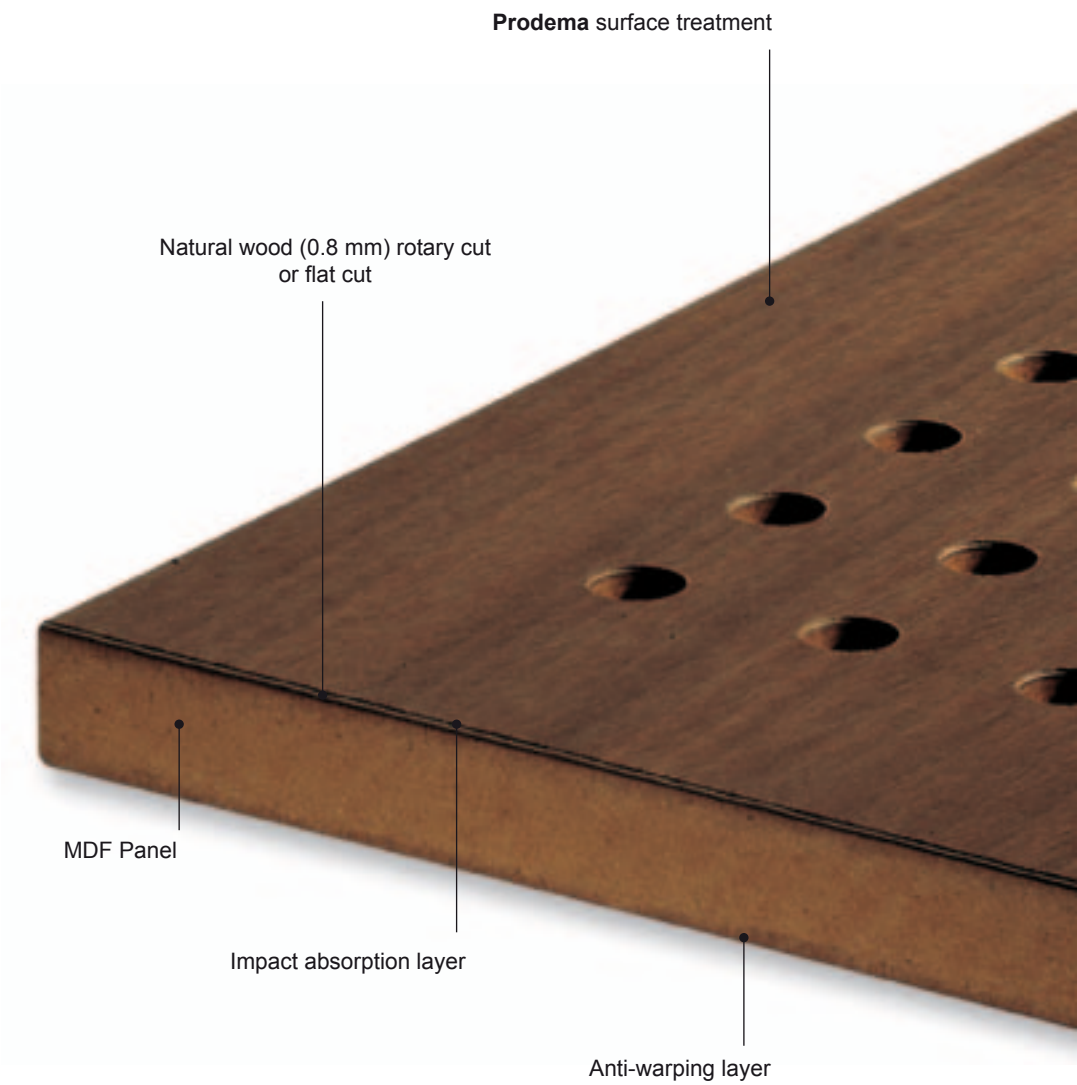
Both for hotel conference rooms or offices, and restaurants or entertainment venues, etc., the **Auditorium** line offers a unique combination of acoustics and aesthetics, with its natural wood finish and wide range of colours.

Caja Duero auditorium
Architect. Manuel de Lara y Jorge Miró
Salamanca (Spain)

1.5 *Auditorium*

1.5.1 Composition

Auditorium panels have a MDF panel core and a natural wood surface, protected by **Prodema´s** own formula. Different types of holes can be offered depending on the desired sound absorption.



1.5.2 Technical characteristics

Prodema® Made to last wooden Products	**TECHNICAL DATA SHEET**	**Doc.: FTAUDITORIUMIGN** **Rev.: 007 – Oct 2010** **Page: 1/1**
MATERIAL:	**THICKNESS:**	**SURFACE FINISH :**
AUDITORIUM IGN	**12- 18 mm**	**TEXTURE**

TESTS	RESULTS	PROPERTY OR ATTRIBUTE	MESURE UNIT	STANDARD
1. INSPECTION REQUIREMENTS				
Colour, pattern and surface finish	**Due to the fact that wood is a natural product, each veneer may be considered as unique. Colour and structure differences are considered as normal. Singularities such as knots and resin inclusions are not considered as defects, but as a part of the décor. There are differences in light fastness performances depending on the wood species and the source of the wood**.			EN 438-8 Part 5.2.2.3
2. DIMENSIONAL TOLERANCES				
Thickness (t)	**+ 1,2 / - 0,8** **+ 1,3 / - 0,9**	t = 12,0 t = 18,0	mm	EN 438-2 Part 5
Length and width	**+ 10 / - 0**	-----	mm	EN 438-2 Part 6
Edge straightness	**1,5**	-----	mm/m	EN 438-2 Part 7
Edge squareness	**1,5**	-----	mm/m	EN 438-2 Part 8
3. GENERAL				
Flexural strength	**≥ 70** **≥ 50**	Longitudinal direction Transversal direction	MPa	EN 310
Flexural Modulus	**≥ 7.000** **≥ 5.000**	Longitudinal direction Transversal direction	MPa	EN 310
Resistance to surface wear	**≥ 50** **≥ 150**	Resistance to surface wear	Revolutions Initial wear point Wear resistance	EN 438-2 Part 10
Resistance to scratching	**3**	Force	Rating	EN 438-2 Part 25
Lightfastness (Xenon arc)	**≥ 4** **< 4** (A)	Contrast	Grey scale rating	EN 438-2 Part 27
Perpendicular tensile strength	**≥ 1**	Adhesion force	MPa	ASTM C 297
4. CE REQUIREMENTS				
Reaction to fire	**C-s2,d0**	Euroclass t ≥ 12 mm	Classification	EN 13.501-1
Resistance to fixings	**e < 15 mm: ≥ 100**	Force	N/mm	EN 438-7 Part 4.5
	e ≥ 15 mm: ≥ 1.300		N	
Density	**≥ 0,80**	Density	g/cm□	-
Content of pentachlorophenol	**≤ 5**	Concentration	ppm	EN 438-7 Part 4.10
Release of formaldehyde	**E1**	Release of formaldehyde	Class	EN 717-2
Bonding strength	**≥ 1**	Bond strength	MPa	EN 438-7 Part 4.7
Perpendicular tensile strength	**≥ 1**	Bond strength	MPa	EN 438-7 Part 4.8
Glue-line quality	**3**	Expression of results	Rating	EN 438-7 Part 4.13.3
Resistance to elevated temperature	**No damage**	Aspect	Result	EN 438-7 Part 4.13.3
Water resistance	**≤ 5**	Thickness increase	%	EN 438-7 Part 4.13.3

(A) Maple, Natural Beech, White Oak

Auditorium Reaction to fire

Fire-proof material (Auditorium IGN)

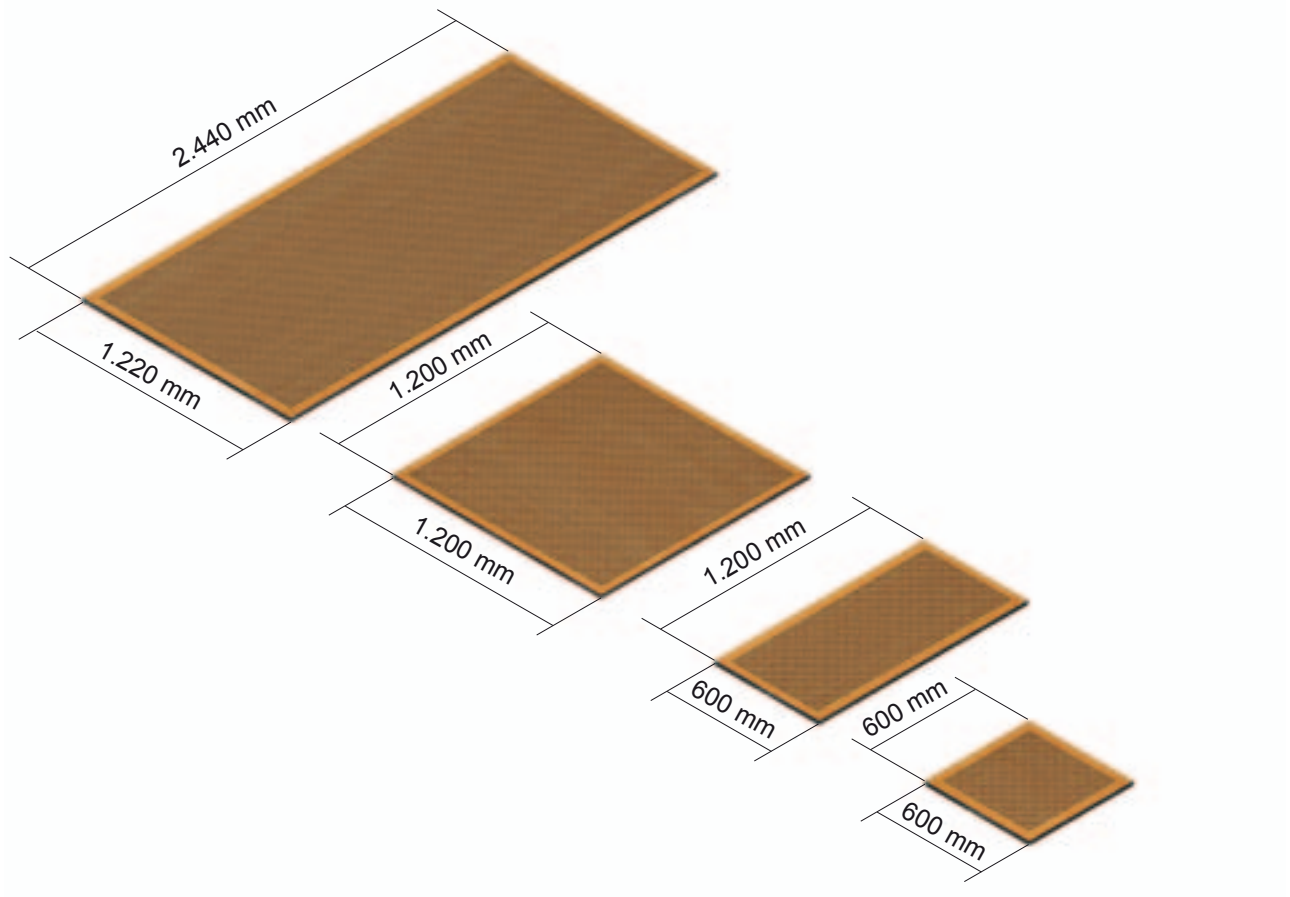
Thickness ≥ 12 mm. | Class.: C-s2, d0 (according to EN 13.501-1)

1.5.3 Dimensions and types of holes and grooves

Length (mm.)	Width (mm.)
2.440	1.220
1.200	1.200
1.200	600
600	600

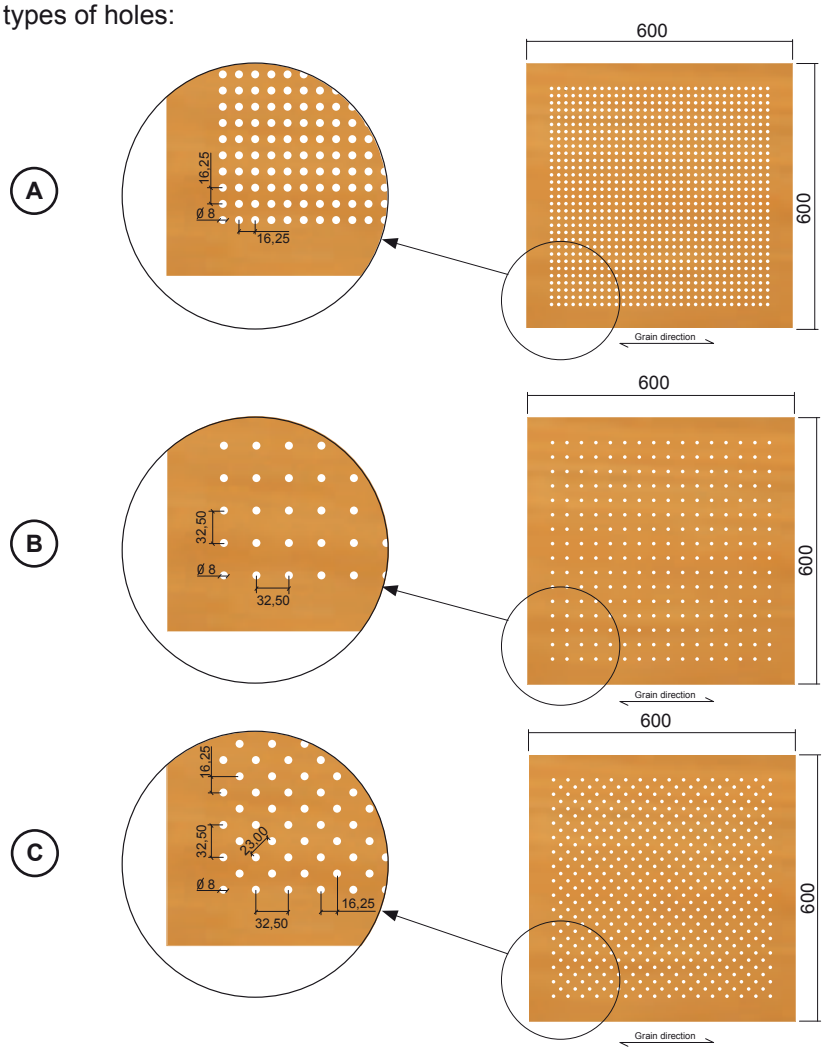
(tolerance approx ± 2 mm.)

Thicknesses (mm.)
12, 18 mm.

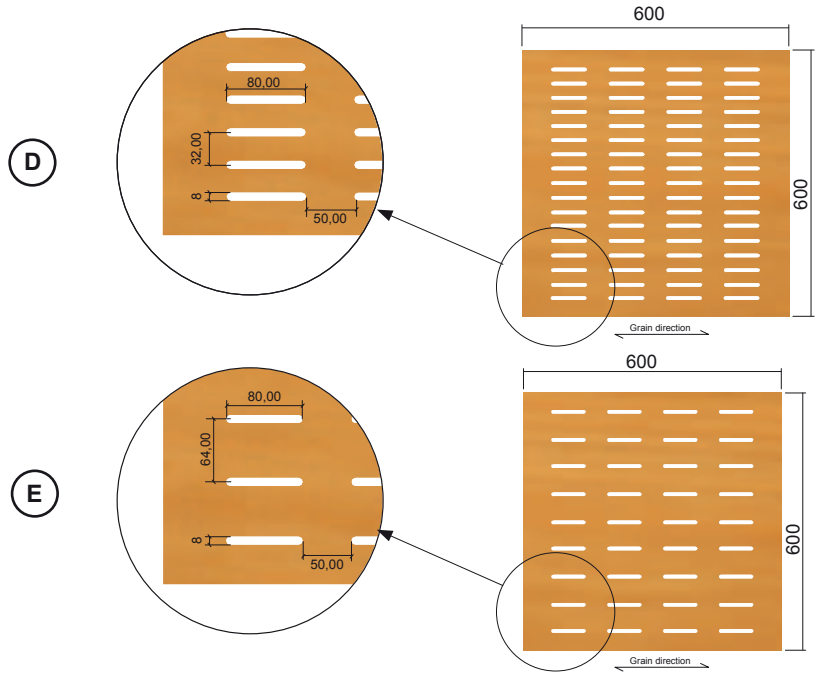


Holes and grooves:

- Three types of holes:



- Two types of grooves:



All dimensions
are rounded off and in mm.

Acoustic veil can be attached to the back part of the machined boards. (See chapter 4.5.2)

1.5.4 Colours

Prodema panel veneers are made with natural wood so the tone and graining of the samples is a mere guide. The surface composition of the **Prodema** panels may also vary depending on the application, so there may be differences in tone for the same colour in the different families of panels.

Flat cut wood

Changes in tone and grain between strips are particularly marked in the cases Eucalyptus and Teak so it is advisable to consult with the factory.

Rotary cut wood

Ayous Veneer


Dark brown


Light brown


Mocca


Black wood

Cream


Honey


Natural A

Okume Veneer


Deep brown


Almond


Ice grey

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Simply send an email to:
prodema@prodema.com
and we will get it to you.

www.prodema.com

All **Auditorium** finishes are Texture (raised).

Collection

Supra

The Suprasolution for commerical areas

Plywood core panel impregnated with thermosetting phenolic resins for heavy duty flooring

One of the great rules of Marketing states that the environment has a crucial influence on the customer´s purchasing decisions. It is also a well known fact that wood gives the public that cosy feel good factor.

That's why many large commercial brands worldwide have relied on the **Supra** collection to decorate their establishments. Because they have discovered that a comfortable customer is a more profitable customer.

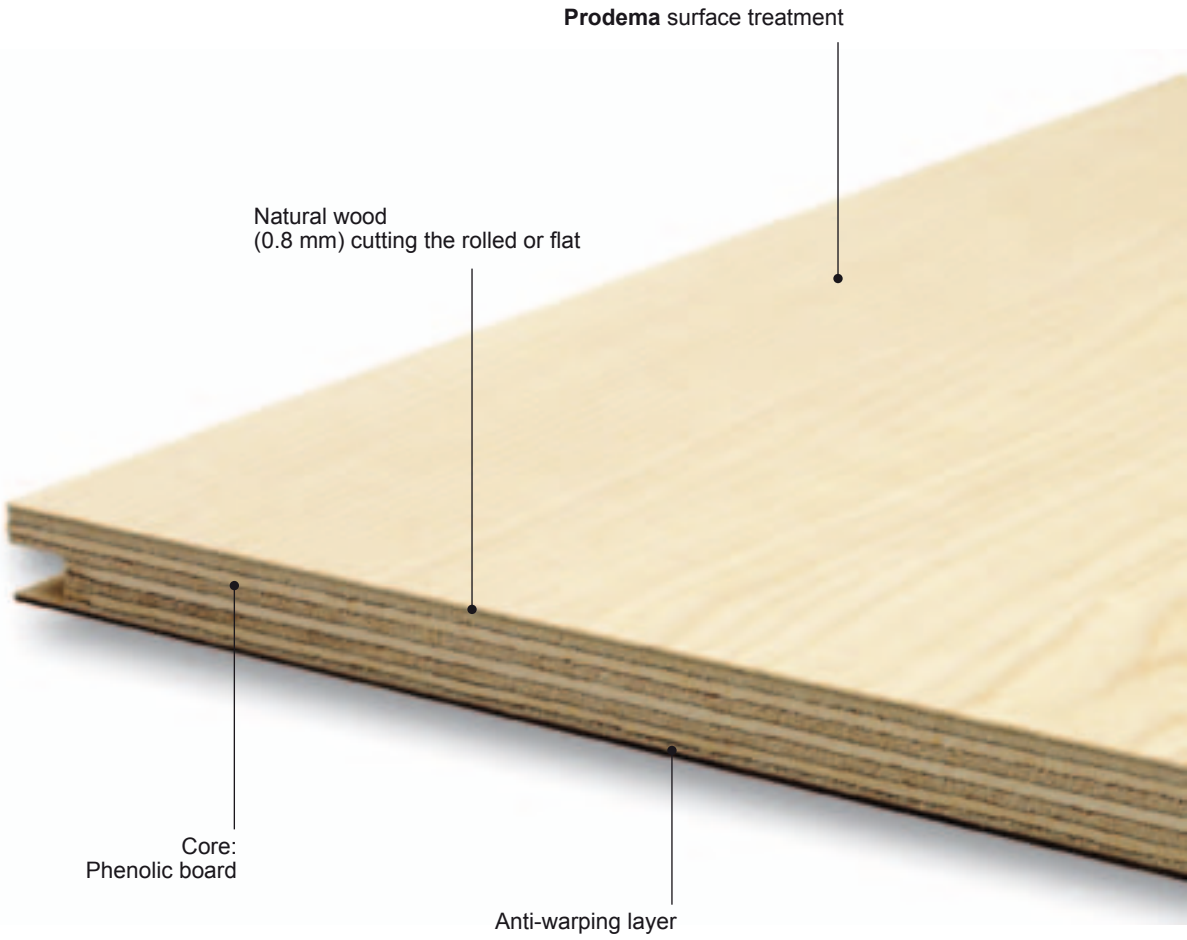
Women' Secret
Spain

Viva Inmobiliarias
Arquea Studio
San Sebastián (Spain)

1.6 *Supra*

1.6.1 Composition

Supra panels are composed of a plywood core impregnated with thermosetting phenolic resins, and a natural wood veneer protected by a proprietary coat, rendering **Supra** previously unimaginable performance characteristics.



1.6.2 Technical characteristics

Supra provides all the warmth of natural wood beauty without forging the best mechanical properties such as resistance to wear and tear, impact and natural light, the result of **Prodema´s** experience in manufacturing high pressure laminates (HPL) for exteriors.

WEAR AND TEAR PROTECTION
Supra comes with **Prodema's** own exclusive protective surface, which gives it exceptional resistance to wear and tear, meeting the requirements of the class greater than or equal to AC4 (general commercial use) in accordance with EN 438-2. This makes **Supra** a highly durable floor that needs no maintenance whatsoever, in contrast with traditional parquets.

SCRATCH RESISTANT
The exclusive **Prodema** protective layer also provides **Supra** exceptional resistance to scratching that meets the requirements of grade 3 (random scratches or slight surface marks, or marks not visible under a force of 2Nw) according to the EN 438 -- 2 standard.

RESISTANCE TO IMPACT
The exclusive **Prodema** protective layer together with the 0.5 mm BAKELITE sub-layer as a result of **Prodema´s** HPL technology provide outstanding resistance to impacts over10 Nw under EN 438-2.

RESISTANCE TO MOISTURE
Supra provides the best moisture resistance in its class. The phenolic board core that forms **Supra** nucleous is an excellent protection guarantee that meets the requirements of the EN 13,553, awarding **Supra** with the category "WATERTIGHT."

RESISTANCE TO STAINS

The vast majority of commonly used products leave no stain on **Supra** flooring. Spillage of products such as acetone, citric acid, bleach (Group 1), hydrogen peroxide, coffee, vinegar (Group 2), caustic soda (Group 3), are eliminated within the first hours with a simple cloth and leave no mark on the floor.

Supra meets the grade 5 requirements (no visible change) for the products in Group 1 and 2 of the EN 438-2 and grade 4 (slight change in shine and / or colour is only visible at certain angles) for those in Group 3.

RESISTANCE TO NATURAL LIGHT

Despite its natural wood base and while **Supra** is designed for indoor use, the exclusive **Prodema** protective layer gives **Supra** the highest level of resistance in its category. **Supra** meets grade 4* at least (according to grey scale) of light fastness according to EN 438 in the vast majority of its finishes.

* Except colours shown on the data sheet.

NOISE REDUCTION

The **Prodema** noise reduction solution involves the incorporation of a layer of foam under the **Supra** covering at the time of installation. Unlike other solutions on the market that incorporate similar foam glued to the underside of the flooring, thus creating potential unprotected grooves beneath the flooring, **Prodema** has chosen to provide an independent layer for those locations where additional sound reduction is required.

REACTION TO FIRE

Supra complies all the requirements for floors in relation to reaction to fire and complies with the Bfl - s1 grade in accordance with EN 13.501-1.

Prodema® Made to last wooden Products	TECHNICAL SHEET	Doc.: FTSUPRA
		Rev.: 009 – Dec 2010
		Page: 1/1

MATERIAL:	THICKNESS:	SURFACE FINISH:
SUPRA	11- 14 mm	SUPER MATT

TESTS	RESULTS	PROPERTY OR ATTRIBUTE	MESURE UNIT	STANDARD
1. INSPECTION REQUIREMENTS				
Colour, pattern and surface finish	**Due to the fact that wood is a natural product, each veneer may be considered as unique. Colour and structure differences are considered as normal. Singularities such as knots and resin inclusions are not considered as defects, but as a part of the décor. There are differences in light fastness performances depending on the wood species and the source of the wood.**			EN 438-8 Part 5.2.2.3
2. DIMENSIONAL TOLERANCES				
Gap between pieces	**≤ 0,20**	-----	mm	EN 13.329
Leap between pieces	**≤ 0,15**	-----	mm	EN 13.329
3. GENERAL				
Impact resistance (small diameter ball)	**≥ 10**	Force Resort	N	EN 438-2 Part 20
Impact resistance (big diameter ball)	**≤ 10**	Minimum height. 1.600 mm Diameter of the kerf	mm	EN 438-2 Part 22
Resistance to immersion in boiling water	**≥ 4**	Aspect	Rating	EN 438-2 Part 12
Resistance to scratching	**3**	Force	Rating	EN 438-2 Part 25
Light fastness (xenon arc)	**≥ 4** **< 4 (A)**	Aspect	Grey scale rating	EN 438-2 Part 27
Resistance to surface wear	**≥ AC4** **≥ 4.000**	Initial point (IP)	Revolutions	EN 438-2 Part 11
Resistance to stain	**≥ 5** **≥ 4**	Aspect	Rating Groups 1 and 2 Group 3	EN 438-2 Part 26
Resistance to cigarettes burns	**≥ 4**	Aspect	Rating	EN 438-2 Part 30
Resistance to sliding	**Class 1**	Resistance to sliding	USRV (Rd)	UNE-ENV 12633:2003 ANNEX A
Flexural strength	**≥ 70** **≥ 60**	Longitudinal direction Transversal direction	MPa	EN 310
Flexural Modulus	**≥ 7.000** **≥ 6.000**	Longitudinal direction Transversal direction	MPa	EN 310
4. CE SAFETY REQUIREMENTS				
Reaction to fire	**B_{fl}-s1**	Euroclass t ≥ 11 mm	Classification	EN 13.501-1
Thermal conductivity	**0,17**	Conductivity	W/ (m K)	EN 12.524
Density	**≥ 0,75**	Density	g/cm□	-
Pentachlorophenol content	**≤ 5**	Concentration	ppm	EN 438-7 Part 4.10
Formaldehyde release	**E1**	Release of formaldehyde	Class	EN 717-2
Electric resistance	**825**	Vertical resistance	MΩ	EN 1.081
Tendency to accumulation electrostatic charges	**< 2**	Potential difference	kV	EN 1.815
Water tightness	**Watertight**	Water penetration	Classification	EN 13.553
Slide	**0,73**	Dynamic coefficient of friction	μ	EN 13.893

(A) Maple, Natural Beech, White Oak, Dark Brown

Supra Reaction to fire

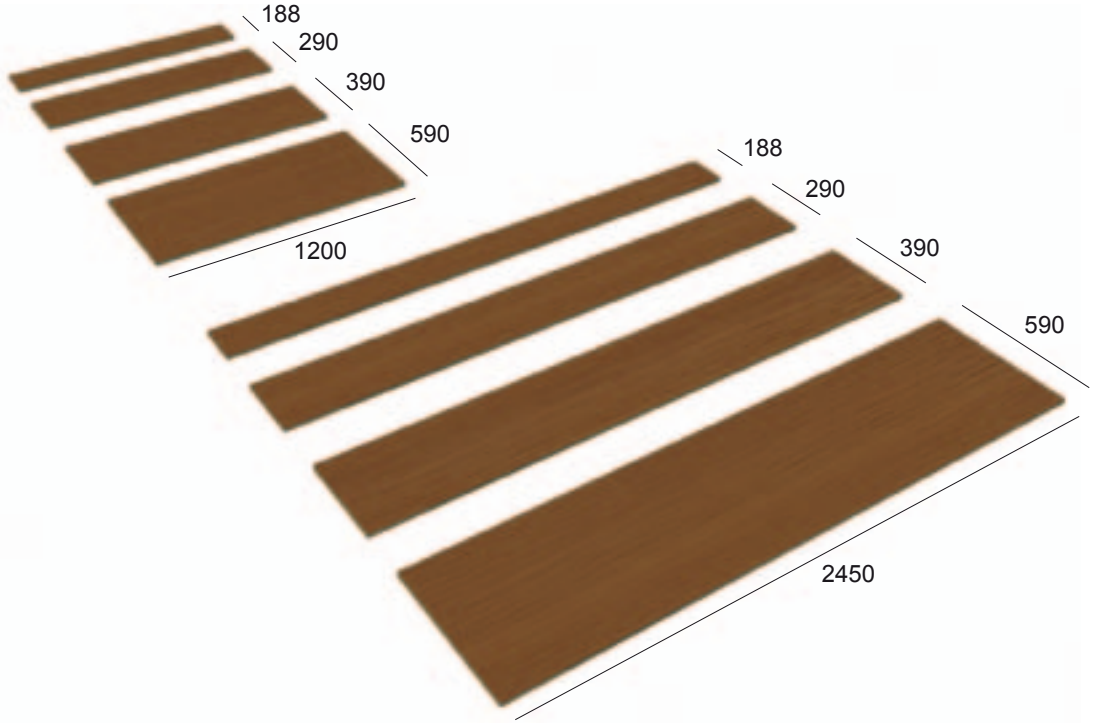
Fire-proof material (Supra IGN)

Thickness ≥ 11 mm. | Class.: Bfl-s1 (according to EN 13.501-1)

1.6.3 Dimensions

Length
1.220 mm., 2.450 mm. (tolerance approx ± 2 mm.)
Width
188, 290, 390, 590 mm. (tolerance approx ± 2 mm.)
Thicknesses
11 mm. (standard), 14 mm. (to order)

Other dimensions: please check.



1.6.4 Colours

Prodema panel veneers are made with natural wood so the tone and graining of the samples is a mere guide. The surface composition of the **Prodema** panels may also vary depending on the application, so there may be differences in tone for the same colour in the different families of panels.

Flat cut wood

Changes in tone and grain between strips is particularly marked in the cases Eucalyptus and Teak, so it is advisable to consult with the factory.

Rotary cut wood

Ayous veneer

Dark brown

Light brown

Mocca

Black wood

Cream

Honey

Natural A

Okume Veneer

Deep brown

Almond

Ice grey

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prodema@prodema.com
and we will get it to you.

www.prodema.com

All **Supra** finishes are Super Matt (smooth matte)

Hotel Astoria 7
Joaquín Zubiría
San Sebastián (Spain)

Collection

Laminium

The best solution

The Romans were great architects, and so they were able to construct roads, such as the Via **Laminium** linking the cities of Valencia and Zaragoza, and that still stands to this day.

Laminium, a natural wood laminate, like all other **Prodema** products, offers a long-lasting solution ideal for technical floors, and door cladding, etc.

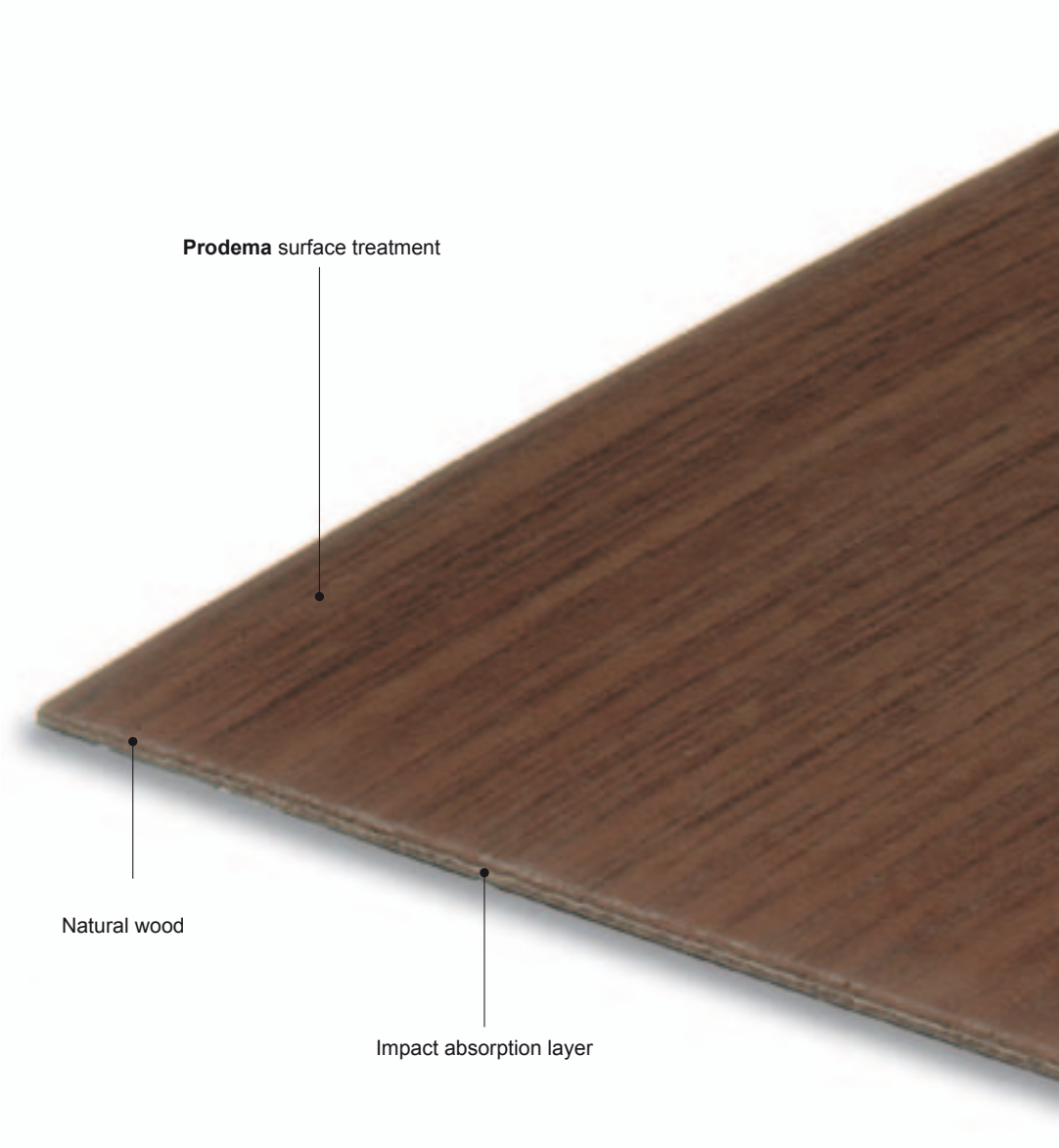
Bank Vizavi
A. Levinson & Partners
Moscow (Russia)

La General de Granada
Spain

1.7 *Laminium*

1.7.1 Composition

Highly flexible natural wood veneer, specially designed to cover raised technical floors, doors, etc.



1.7.2 Technical Characteristics

Prodema® Made to last wooden Products	TECHNICAL DATA SHEET			Doc.: FTLAMINIUM Rev.: 004 – Sept 2009 Page: 1/1
MATERIAL:	THICKNESS:			SURFACE FINISH:
LAMINIUM	1 mm			SUPER MATT
TESTS	RESULTS	PROPERTY OR ATTRIBUTE	UNIT OF MESURE	STANDARD
1. INSPECTION REQUIREMENTS				
Colour, pattern and surface finish	Due to the fact that wood is a natural product, each veneer may be considered as unique. Colour and structure differences are considered as normal. Singularities such as knots and resin inclusions are not considered as defects, but as a part of the décor. There are differences in light fastness performances depending on the wood species and the source of the wood.			EN 438-8 Part 5.2.2.3
2. DIMENSIONAL TOLERANCES				
Thickness (t)	± 0,15	t = 1 mm	mm	EN 438-2 Part 5
Length and width	+ 10 / - 0	-----	mm	EN 438-2 Part 6
Edge straightness	1,5	-----	mm/m	EN 438-2 Part 7
Edge squareness	1,5	-----	mm/m	EN 438-2 Part 8
Flatness	120	-----	mm/m	EN 438-2 Part 9
3. GENERAL				
Dimensional stability at elevated temperatures	0,45 0,90	Longitudinal direction Transversal direction	% (max.)	EN 438-2 Part 17
Impact resistance (small diameter ball)	≥ 10	Force Resort	N	EN 438-2 Part 20
Resistance to surface wear	AC4 ≥ 4.000	Initial point (IP)	Revolutions	EN 438-2 Part 11
Resistance to immersion in boiling water	≥ 4	Aspect	Rating Groups 1 and 2 Group 3	EN 438-2 Part 12
Resistance to scratching	≥ 3	Force	Rating	EN 438-2 Part 25
Light fastness (Xenon arc)	≥ 4 < 4 (A)	Contrast	Grey scale rating	EN 438-2 Part 27
Resistance to stain	≥ 5 ≥ 4	Aspect	Groups 1 and 2 Group 3	EN 438-2 Part 26
Resistance to cigarettes burns	≥ 4	Aspect	Rating	EN 438-2 Part 30
Reaction to fire	D-s2,d0 (B)	Euro class	Classification	EN 13.501- 1
Density	≥ 1,10	Density	g/cm³	EN ISO 1.183

(A) Maple, Natural Beech, White Oak
(B) Non FIRE RETARDANT composite panels with wood based substrates

Laminium Reaction to fire

Fire-proof material (Laminium)

Thickness ≥ 1 mm. | Class.: D-s2, d0 (according to EN 13.501-1)

1.7.3 Dimensions

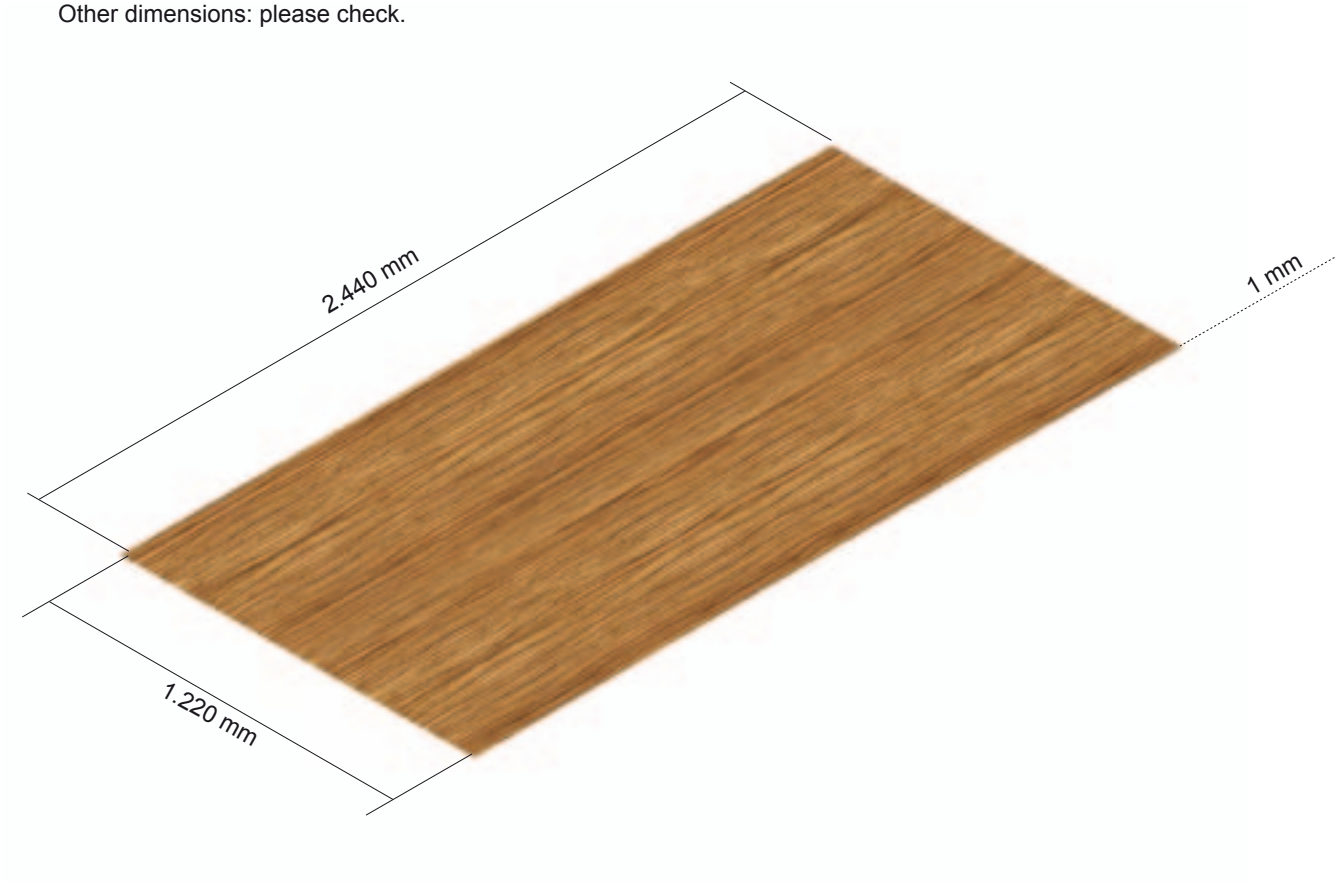
Length x Width

2.440 mm. x 1.220 mm. (tolerance approx ± 2 mm.)

Thicknesses

1 mm. (tolerance ± 0,15 mm.)

Other dimensions: please check.



1.7.4 Colours

Prodema panel veneers are made with natural wood so the tone and graining of the samples is a mere guide. The surface composition of the **Prodema** panels may also vary depending on the application, so there may be differences in tone for the same colour in the different families of panels.

Flat cut wood

Changes in tone and grain between strips is particularly marked in the cases Eucalyptus and Teak so it is advisable to consult with the factory.

Rotary cut wood

Ayous Veneer


Dark brown

Light brown

Mocca

Black wood

Cream

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Natural A

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Deep brown

Almond

Ice grey

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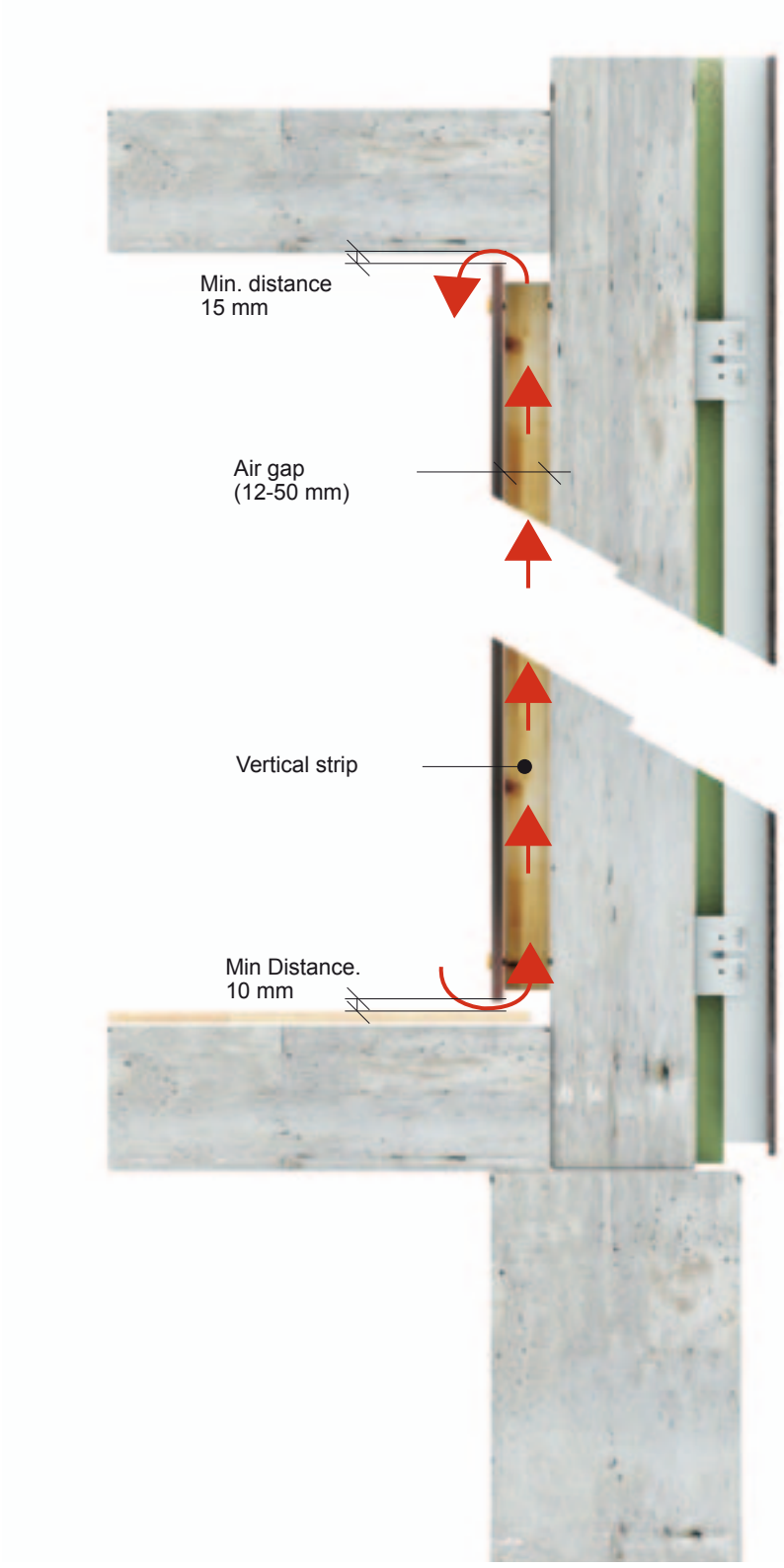
All **Laminium** finishes are Super Matt (smooth matte).

2. Mounting Systems

2.1 Ventillated facade

When assembling **ProdIN** panels (**Neptuno, Proligna** and **Auditorium**) it is essential to use ventilated facade for the optimum performance of such panels is very important that the humidity and temperature differences between the two sides of the panel are minimized. Mounting the panel using a ventilated facade can offer several advantages:

- The ventilated facade generates constant air ventilation through the rear of the panel and prevents accumulation of moisture and the area becoming damp.
- A space is obtained for installations such as electricity sockets.
- Easy installation, removal and good solution for refurbishments.
- Improved sound insulation.

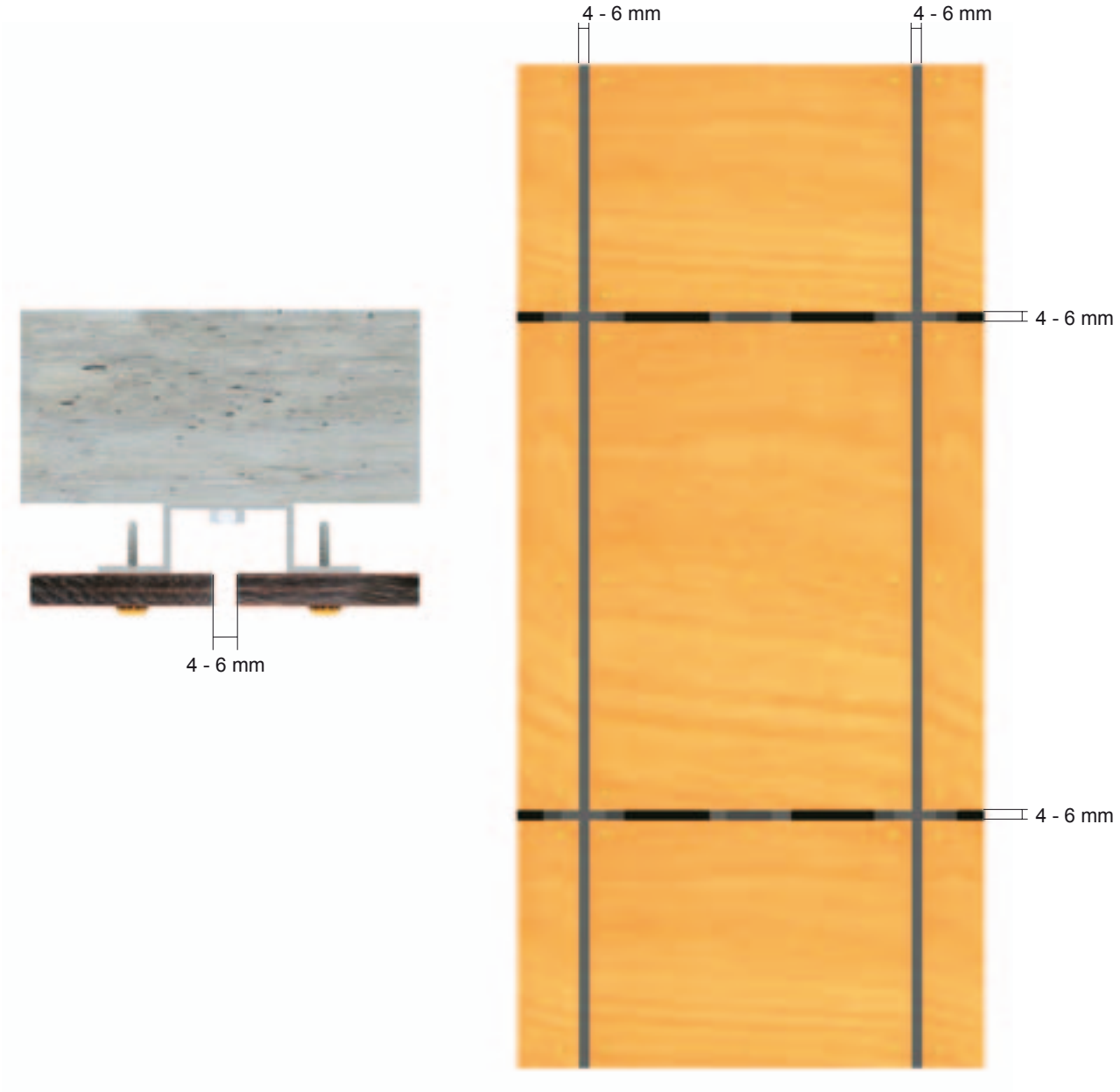


- Leave an opening of min. 10 mm at the bottom and min. 15 mm at the top of the cladding.
- Only vertical battens should be used as they do not interfere with air circulation.
- Leave a gap of between 12 - 50 mm.

2.2 Joints and dimensional stability

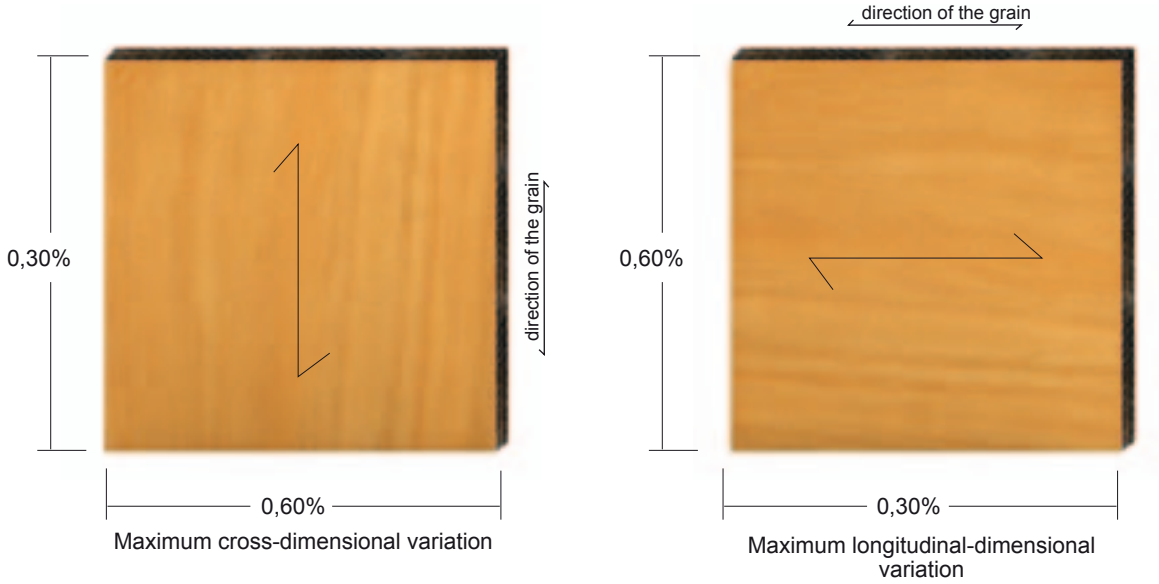
2.2.1 Expansion joints:

Keep an expansion joint between the panels of between 4-6 mm. The joint permits the **ProdIN** panels (**Neptuno, Proligna** and **Auditorium**) the necessary freedom of movement for expansion and contraction.



2.2.2 Dimensional stability:

ProdIN Panels (**Neptuno, Proligna** and **Auditorium**), due to their natural wood veneer, will suffer small dimensional changes due to changes in environmental temperature and humidity. The maximum dimensional variation in the longitudinal direction for **Neptuno** is 0.30%, and in the transverse direction to the strip 0.60%. These small dimensional changes do not affect the aesthetics or functionality of the strips. For this reason it is very important to bear in mind the expansion joints indicated by **Prodema**.



Neptuno is a water-resistant material, resistant to steam and water. However, it is advisable not to submerge the edges permanently or for an extended period in water as areas with a darker colour may appear at the edge of the panel surface.

2.3 Substructure

2.3.1 Different types of battens and auxiliary elements:

To fix **ProdIN** panels (**Neptuno, Proligna** and **Auditorium**), different batten materials can be used:

- Treated wood: Pine, larch, tali, etc.
- Metal: Aluminium and galvanized steel, or occasionally stainless steel.

The choice of metal strips depends on the area on witch the panels are to be applied and the required characteristics.

- Aluminium: For wet or moist areas, sea environments and corrosive atmospheres. In highly corrosive environments, an anodizing layer is usually applied to increase resistance.
- Galvanised steel: For wet or moist areas, non-corrosive atmospheres and non-sea environments. This material has better mechanical properties than aluminium.

The most common strips for **ProdIN** claddings are:

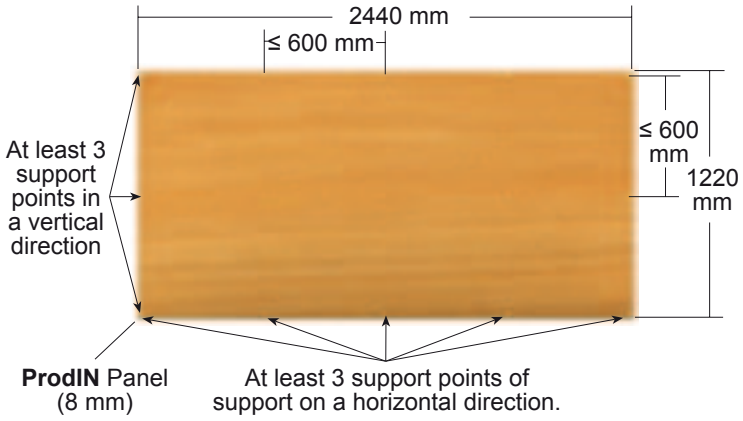
- Wood: Square or rectangular profile.
- Aluminium: Wide variety of forms (see chapter 4 -Accessories-).
- Galvanized steel: “U”, “Z”, “L”, omega and tube profiles (see chapter 4 -Accessories-).

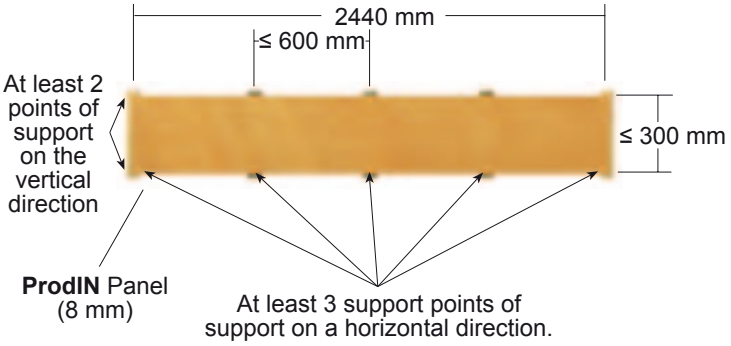
2.3.2 Distance between vertical posts:

Prodema recommended that each panel is supported on the entire surface of the battens or vertical posts for all its mounting systems.

ProdIN panels (**Neptuno, Proligna** and **Auditorium**), must rest on at least three points, both vertically and horizontally, always respecting the distances shown on this page.

The distance between the axes of the vertical posts depends on the thickness and fixing system:





As an exception, for pieces between 150 and 300 mm, two points of support in the same direction are sufficient.

· Column for exposed fixing with screws or rivets:
· Table for concealed fixing with hanging profiles:

THICKNESS (mm)	DISTANCE BETWEEN VERTICAL POSTS (mm)
3*	≤ 300
6*	≤ 400
8, 10	≤ 600
12	≤ 800
14, 16, 18, 20, 22	≤ 1000

*Only for special applications.
Contact **Prodema.**

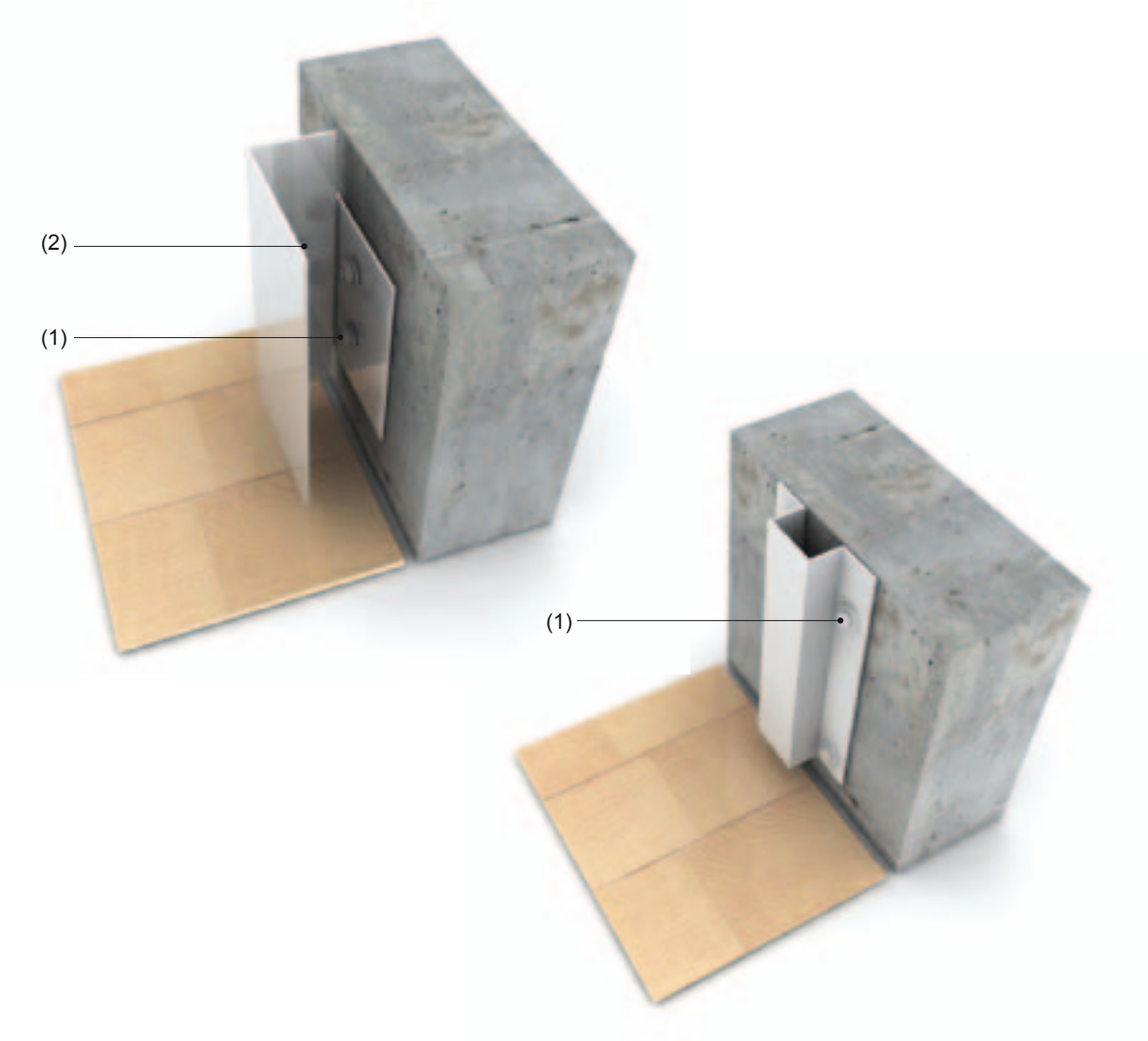
For concealed fixing with adhesive, the distance should be reduced as in the following table.

· Table for concealed fixing with adhesives:

THICKNESS (mm)	DISTANCE BETWEEN VERTICAL POSTS (mm)
8-12	≤ 400
14-22	≤ 600

2.3.3 Anchoring to the facade:

The battens must be fixed to the facade using appropriate fixing elements in keeping with the material itself and the battens.



1) The angles or battens are fixed with screws and the corresponding rawl plugs (made from steel or nylon) to the facade.

2) The battens fixed at the corners with bichromate or stainless steel self-drilling screws.

For more information on accessories, see chapter 4.

2.4 Types of fixing wall cladding with **ProdIN** (**Neptuno, Proligna** and **Auditorium**) materials

Prodema, SA has two types of facade fixing systems:

· Fixing with screws or rivets
· Concealed fixing. The concealed fixing may be:

- With hanging profiles
- Glued

2.4.1 Exposed fitting:

This type of installation is characterized by fixing of the **ProdIN** panels (**Neptuno, Proligna** and **Auditorium**) using exposed screws or rivets. These screws and rivets * are made of metal and can be ordered in the 8 different colours offered by **Prodema**.

• Distances between the screws or rivets on a single panel *
The distance between the screws or rivets * both horizontally and vertically in a row, depends on the thickness of the panel:

THICKNESS (mm)	DISTANCE BETWEEN VERTICAL POSTS (mm)
3*	≤ 300
6*	≤ 400
8,10	≤ 600
12	≤ 800
14,16,18,20, 22	≤ 1000

* Only for special applications.
Contact **Prodema**.

For pre-drilled diameters see chapter 3.3.2.
Never use countersunk screws for fixing the **ProdIN** materials.

* Rivets used only with metal substructures, not wood substructure.

• Distances of screws and rivets * to the corner of the panel

Screws and rivets * on the corner of the panel should be between 15 and 40 mm from the edge of the panel.

• Screws or Rivets recommendations for * fixing of panels.

- For wooden battens:

Screw: SFS-TW-S-D12-(4.8 x 38) (lacquered or unlacquered)
For more screw information see chapter 4.3.1.

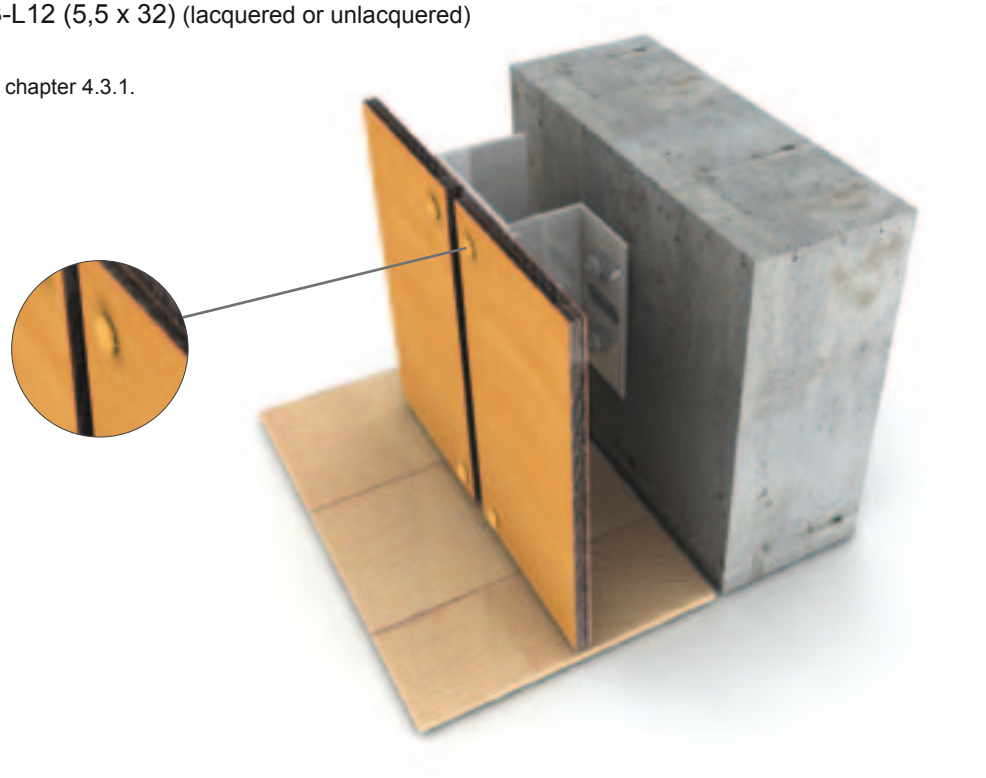
* Rivets used only with metal substructures, not wood substructure.

- For metal battens:

· With Screws:

Screw: SFS-SX3-L12 (5,5 x 32) (lacquered or unlacquered)

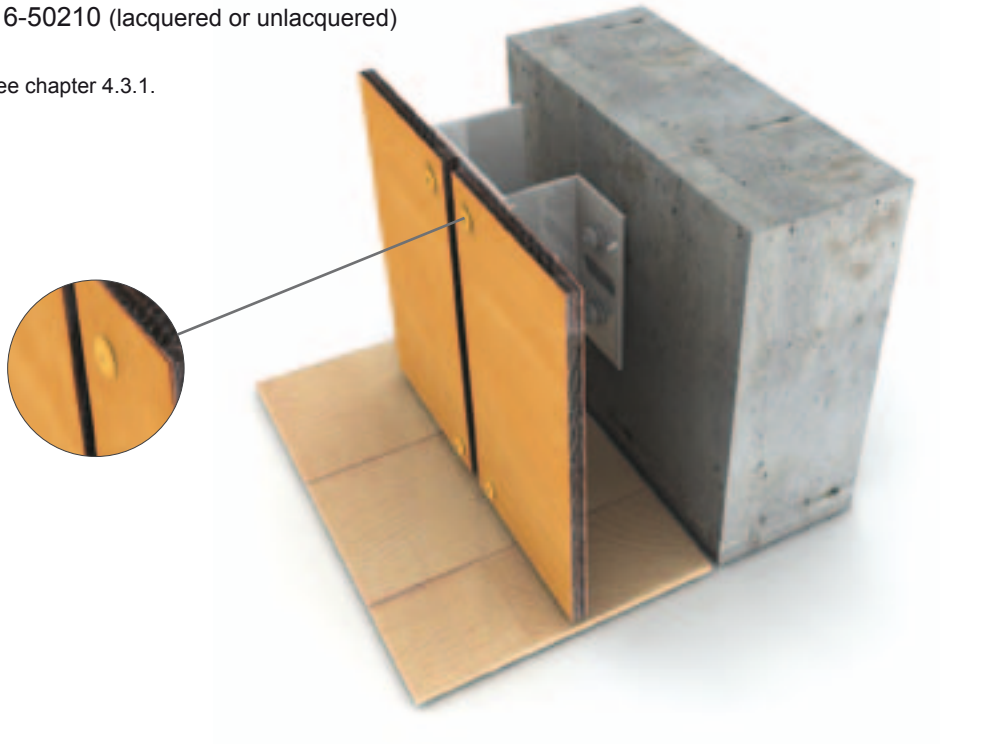
For more screw information see chapter 4.3.1.



· With rivet *:

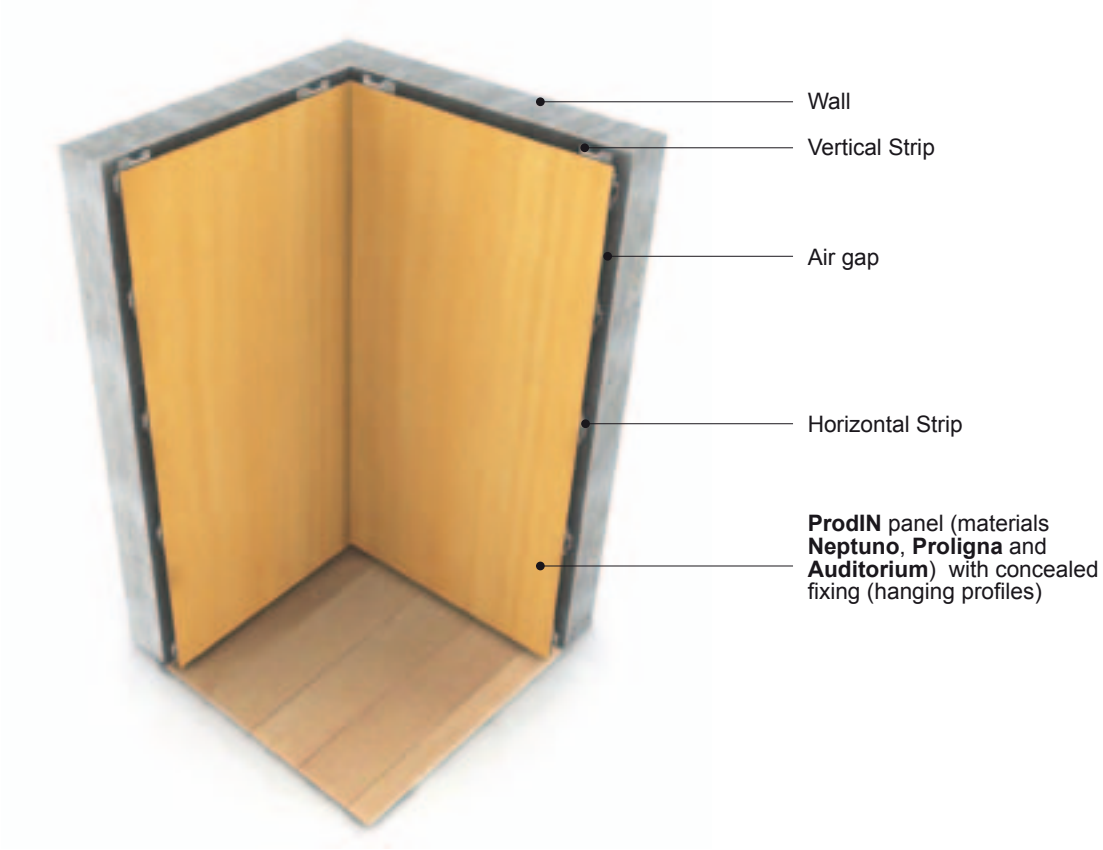
Rivets *: SFS- AP16-50160 (lacquered or unlacquered)
SFS- AP16-50180 (lacquered or unlacquered)
SFS- AP16-50210 (lacquered or unlacquered)

For more information on rivets see chapter 4.3.1.



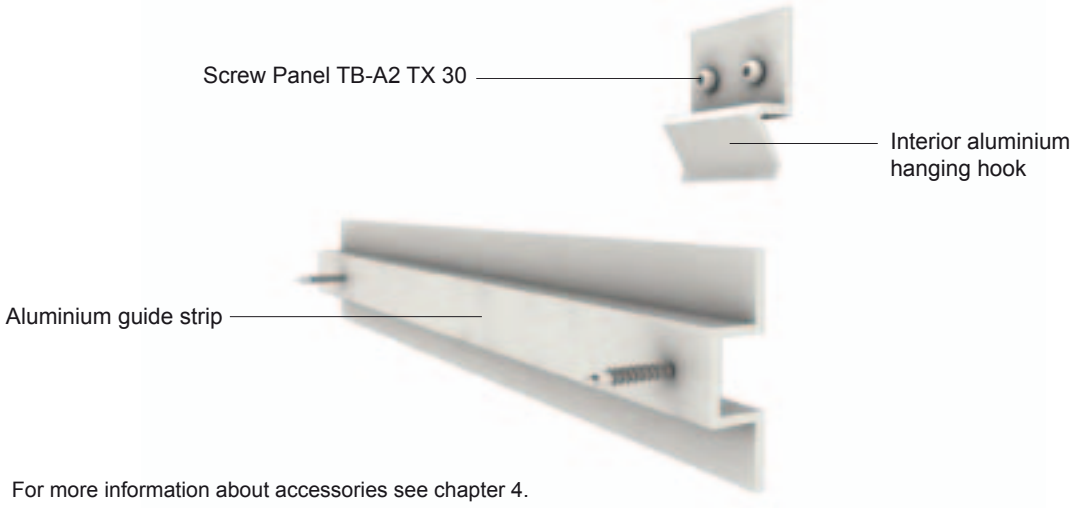
* Rivets used only with metal substructures, not wood substructure.

2.4.2 Concealed fixing with hanging profile:



Concealed fixing systems with handing profiles enable **ProdIN** (**Neptuno, Proligna** and **Auditorium**) panels to be installed using concealed screws through the back of the panel. This fixing system is only possible with panel thicknesses ≥ 12 mm or with the help of washers with panel thicknesses ≥ 10 mm and is limited to a thickness of <14 mm.

This system consists in fixing vertical battens and horizontal aluminium guide strips, where the hanging hooks will be hung.

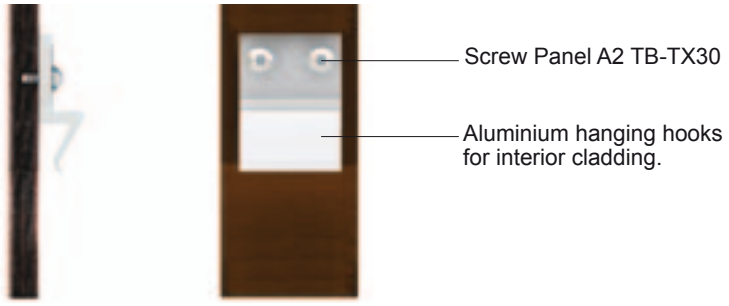


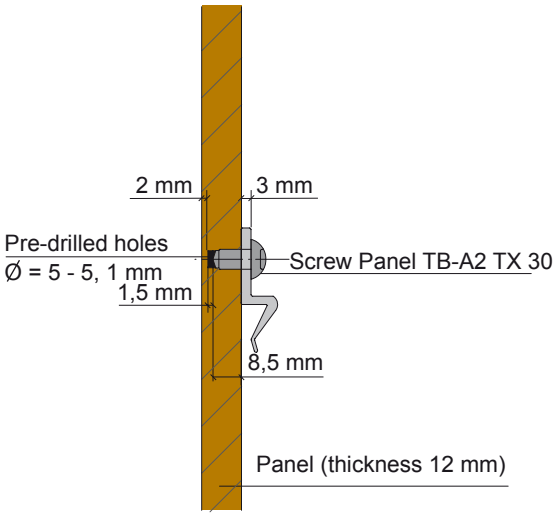
For more information about accessories see chapter 4.

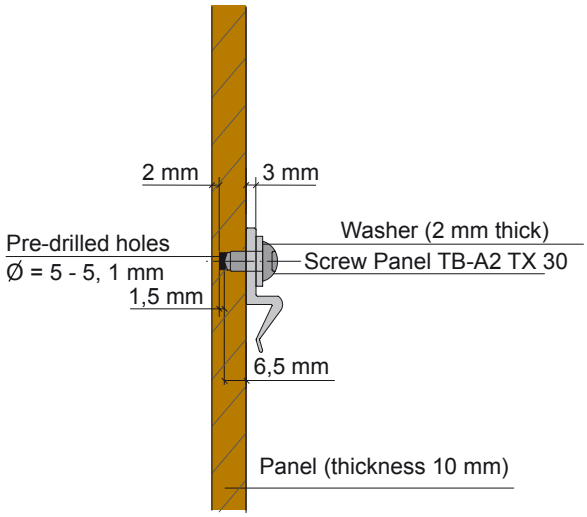
The guide profiles are horizontal posts placed on the top of the primary aluminium substructure. To fix the guide profile to the sub-structure, self-threading screws are used.

The hanging hooks are aluminium pieces that are fixed to the back of the board, using Panel TB-A2 TX 30 Screws.

As the **ProdIN** material is very hard material a blind perforation will have to be made on the panel beforehand in order to screw in the screw. The pre–drilled hole should have a diameter of 5 - 5.1 mm and 1.5 mm deeper than the screw after adjustment. The distances between these screws must be accurately measured and they must be at a certain height from the edge of the panel.





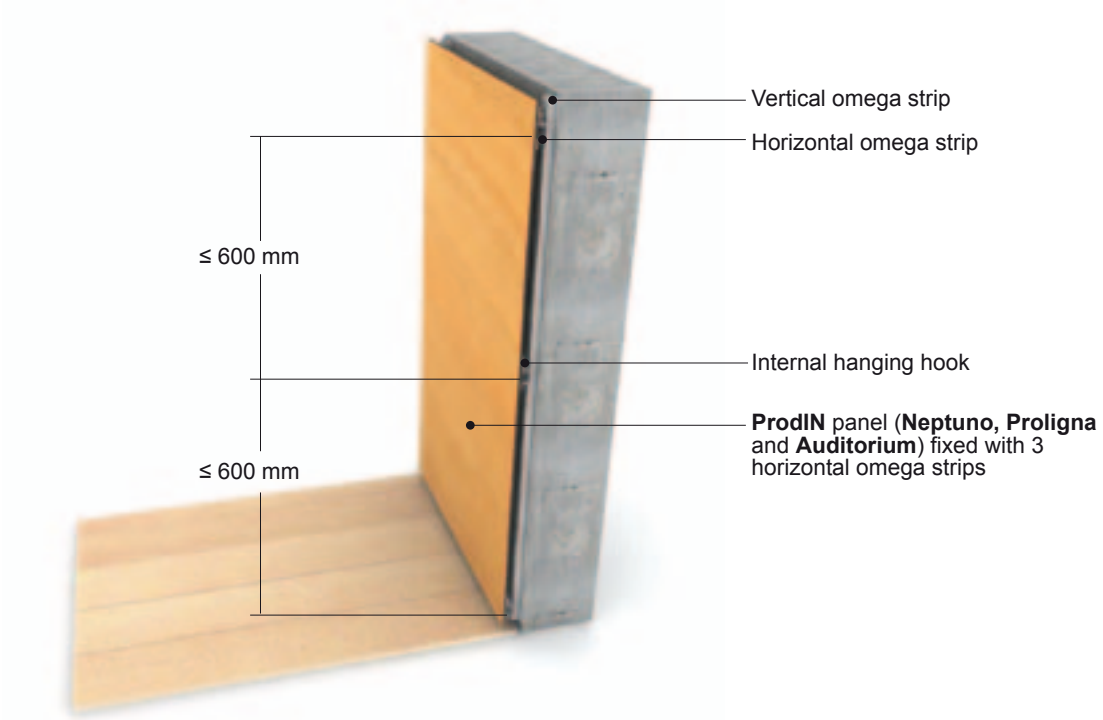


With 10 mm thick panels 2 mm thick washers must be used.

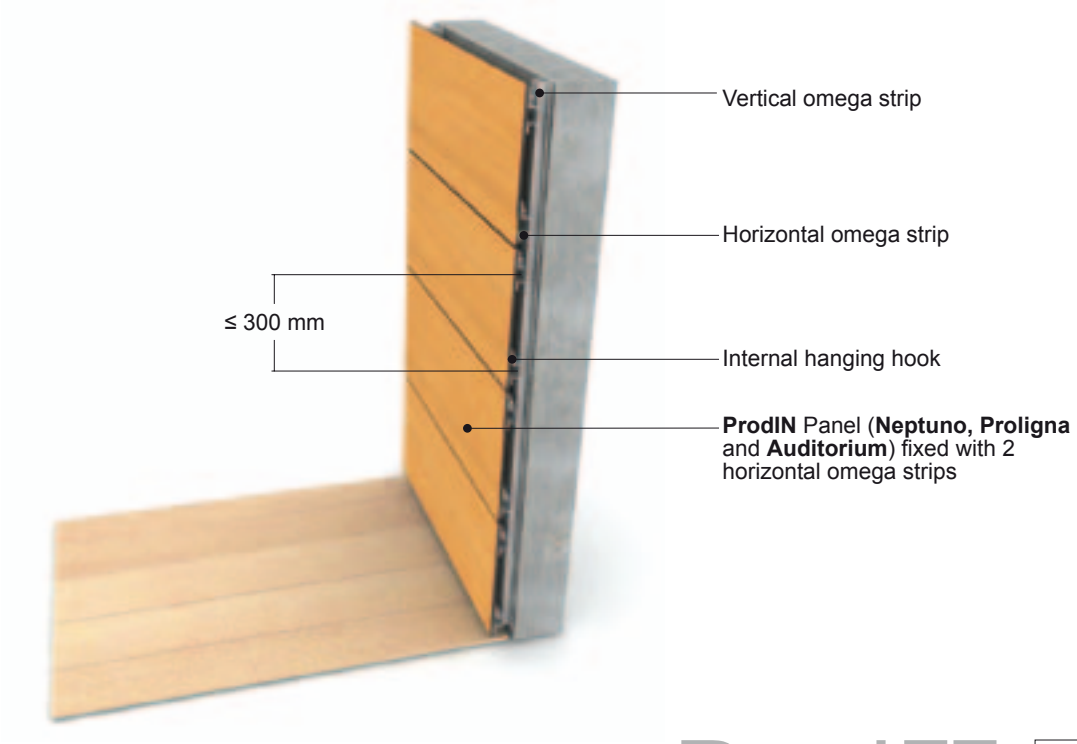
For more information about accessories see chapter 4.

• Mounting horizontal battens:

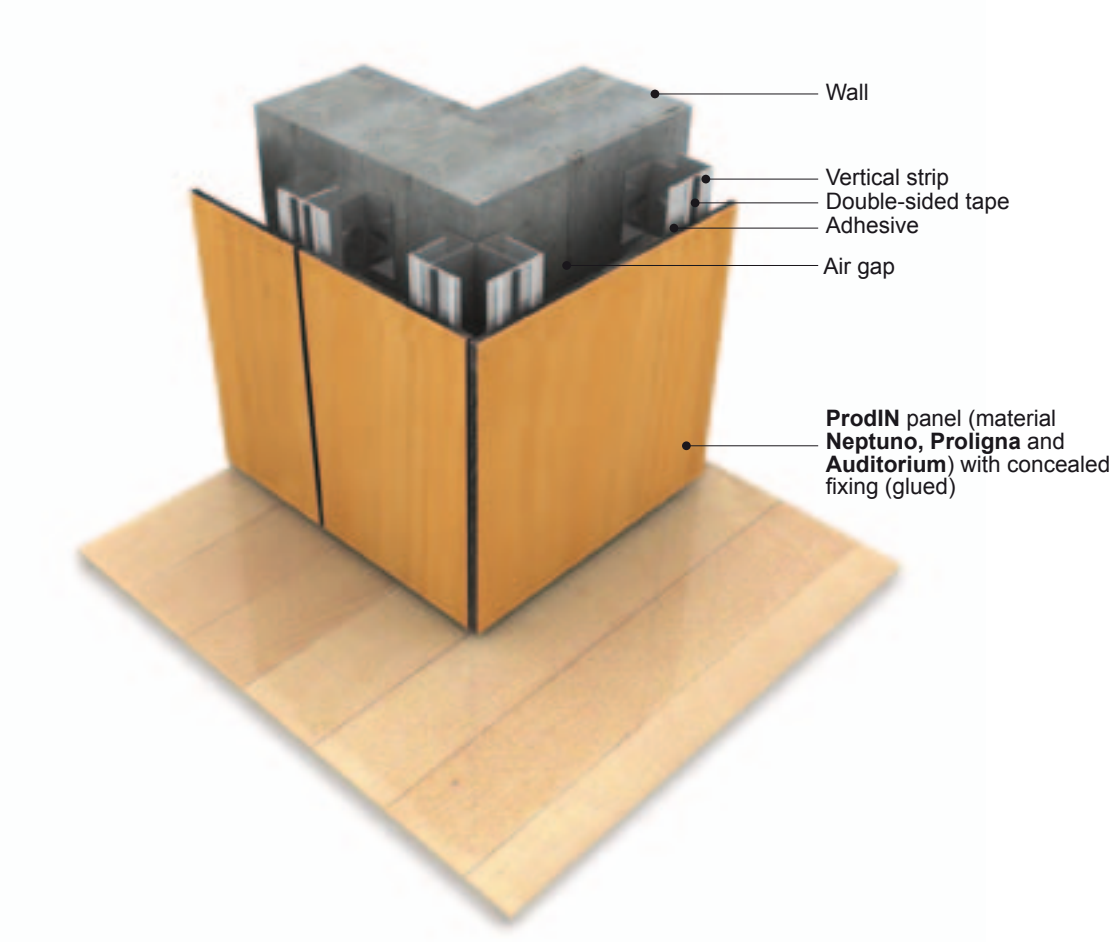
Aluminium guiding battens are placed horizontally on the aluminium substructure at a distance from the vertical axis ≤ 600 mm, provided that there are least three aluminium guide strips per panel unit.



As an exception, for pieces between 150 mm and 400 mm two aluminium guide strips are sufficient. The distance between the horizontal battens on the same panel are always ≤ 300 mm.



2.4.3 Concealed fixing with adhesive:



The minimum thickness to be used for the adhesive system is 8 mm.

Fixing using glue is a delicate process which requiring the correct procedure and to be strictly followed, consistent with the adhesive manufacturer's instructions.

• Gluing procedure instructions:

1.) Carefully sand down the **ProdIN** panel (**Neptuno Proligna** and **Auditorium**) in the area to be glued before doing do. This operation should be carried out using coarse grit sandpaper. The panel should only be sanded down in the area where the adhesive is to be applied, coinciding with the position of the battens.

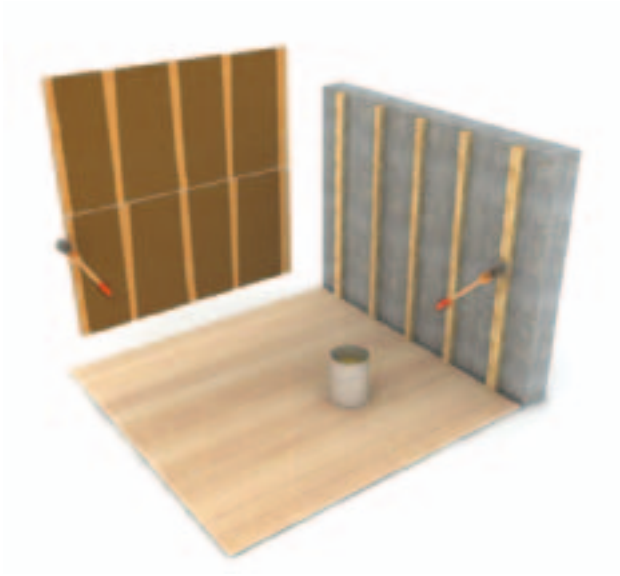
Depth of sanding for the different materials:

-**Neptuno** and **Auditorium**: sand down to the layer of wood, without passing through it.

-**Proligna**: sand the surface removing surface shine.

2.) Clean the sanded areas of the panel with a brush, air or special liquid supplied by the adhesive manufacturer.

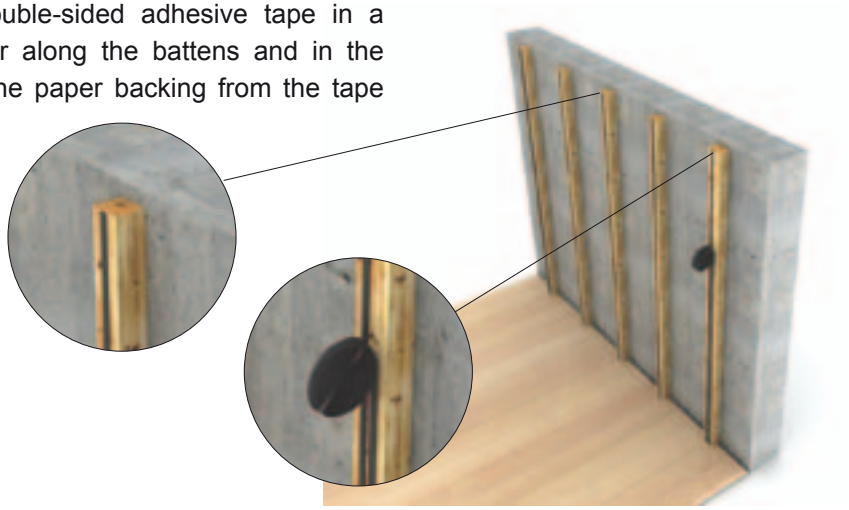
3.) Also sand the battens on the surface where the panel rests. Wooden and aluminium battens must be sanded ensuring that the batten is perfectly clean and dust-free and the gluing surface completely dry. Steel battens must not be sanded to avoid damaging the protective oxide; these should be degreased with a liquid.



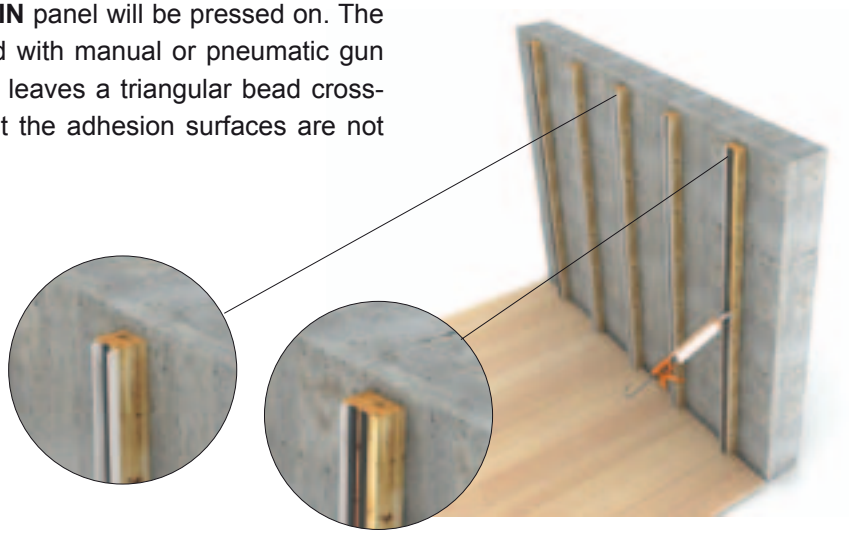
4.) Stir the primer well before use and apply on the clean, dry, sanded, areas of the panels and the battens, taking care not to prime any more area than the area to be glued within the next 6 hours. For each material (wood battens, metal battens, panel...) the specific primer indicated by the adhesive manufacturer should be used.

5.) Follow the instructions for the minimum and maximum drying time in accordance with the material to be primed. After the drying procedure continue with the gluing procedure.

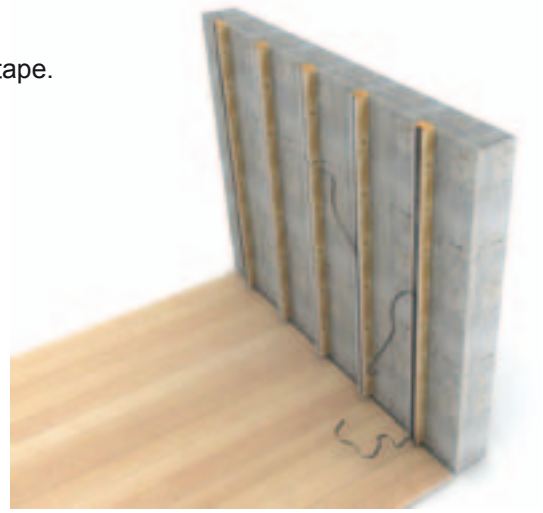
6.) Stick two strips of double-sided adhesive tape in a continuous parallel manner along the battens and in the centre, without removing the paper backing from the tape surface yet.



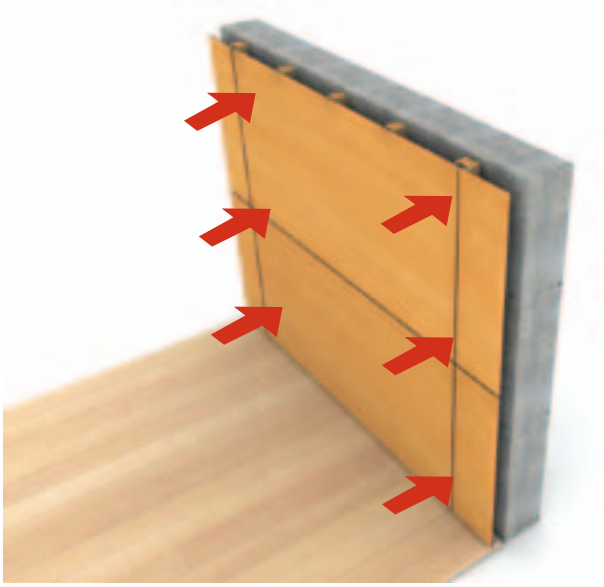
7.) Apply the single-component adhesive bead on the battens, in the area where the **ProdIN** panel will be pressed on. The adhesive should be applied with manual or pneumatic gun using a special nozzle that leaves a triangular bead cross-section. Always ensure that the adhesion surfaces are not wet or dirty.



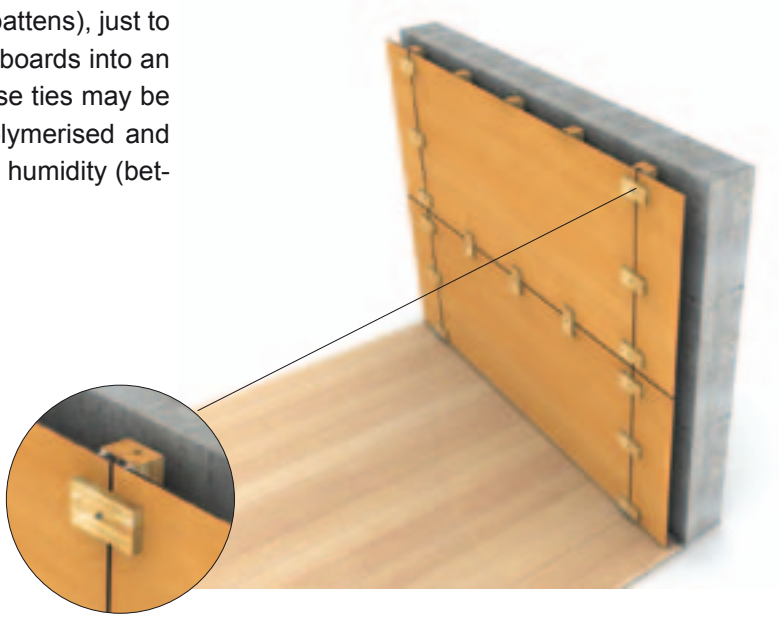
8.) Remove the protective backing from the adhesive tape.



9.) 10 minutes after applying the adhesive, carefully place the panels, taking care not to press too hard as this could cause the adhesive bead to spread too much, leaving an uneven facade. With the help of double-sided adhesive tape the panels will be held tight in their three dimensions in the required place on the batten.



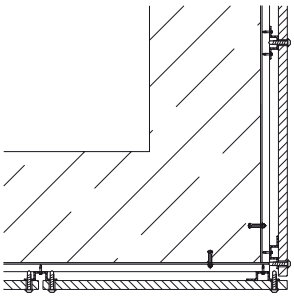
10.) The boards should be fixed with the aid of several ties (fastened with screws to the battens), just to hold them together; do not force the boards into an incorrect position on the batten. These ties may be removed when the adhesive has polymerised and how long will depend on the ambient humidity (between 17 and 24 hours).



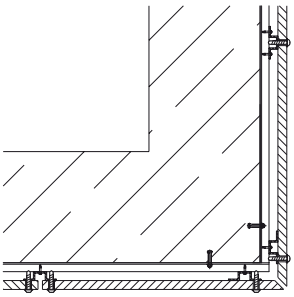
This is a brief and general description of the **Prodema** gluing procedure which does not replace the full instructions from the adhesive manufacturer of adhesive, explaining each particular case.

2.5 Corner solutions

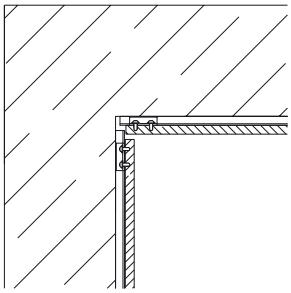
ProdIN (**Neptuno, Proligna** and **Auditorium**) materials can be processed on site to create all types of finishes typically used with wood, making them quick and easy to mount on any surface.



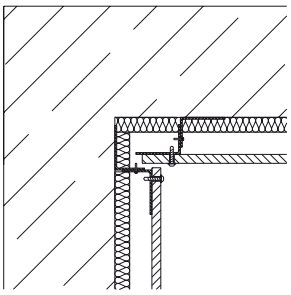
Overlapped screwed



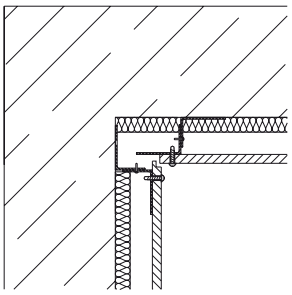
Screwed mitre



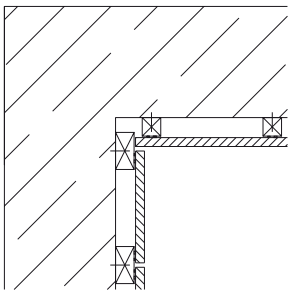
Overlay with concealed profiles



Screwed overlay

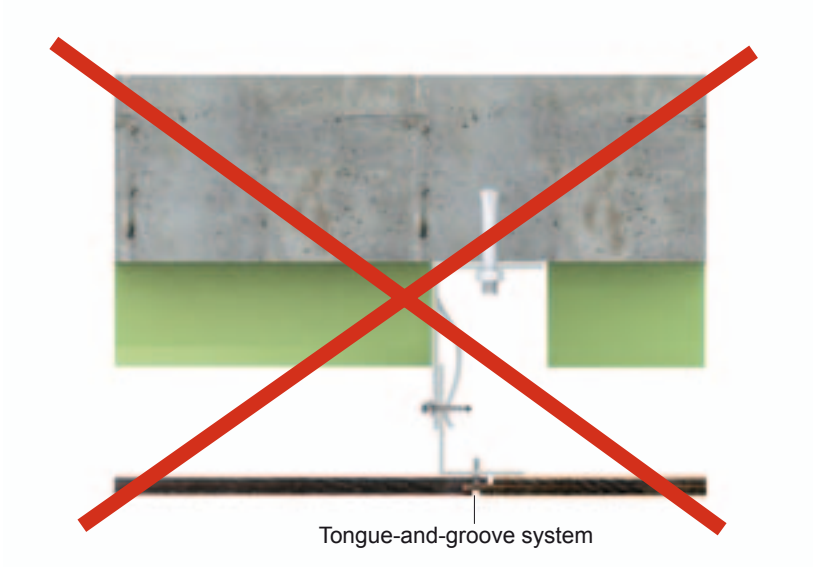


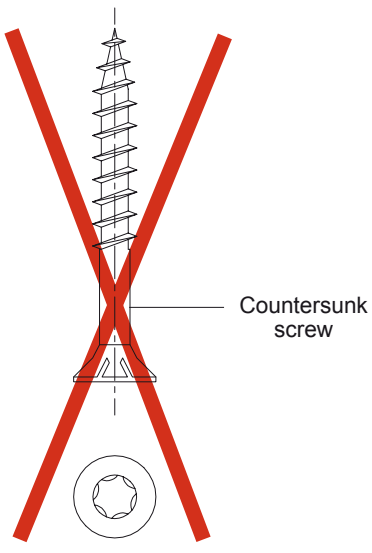
Screwed pilaster



Adhesive overlay

ProdIN (**Neptuno, Proligna** and **Auditorium**) should not be fitted with tongue and groove systems. In addition, no **Prodema** material should be fixed using countersunk screws.





2.6 Fixing types for **ProdIN** ceiling cladding (**Neptuno**, **Proligna** and **Auditorium**)

Prodema recommends ceilings only to be fitted with exponed fixing (screws or rivets) and the following panel thicknesses:

- Neptuno ≥ 8 mm.
- Proligna ≥ 11 mm.
- Auditorium ≥ 12 mm.

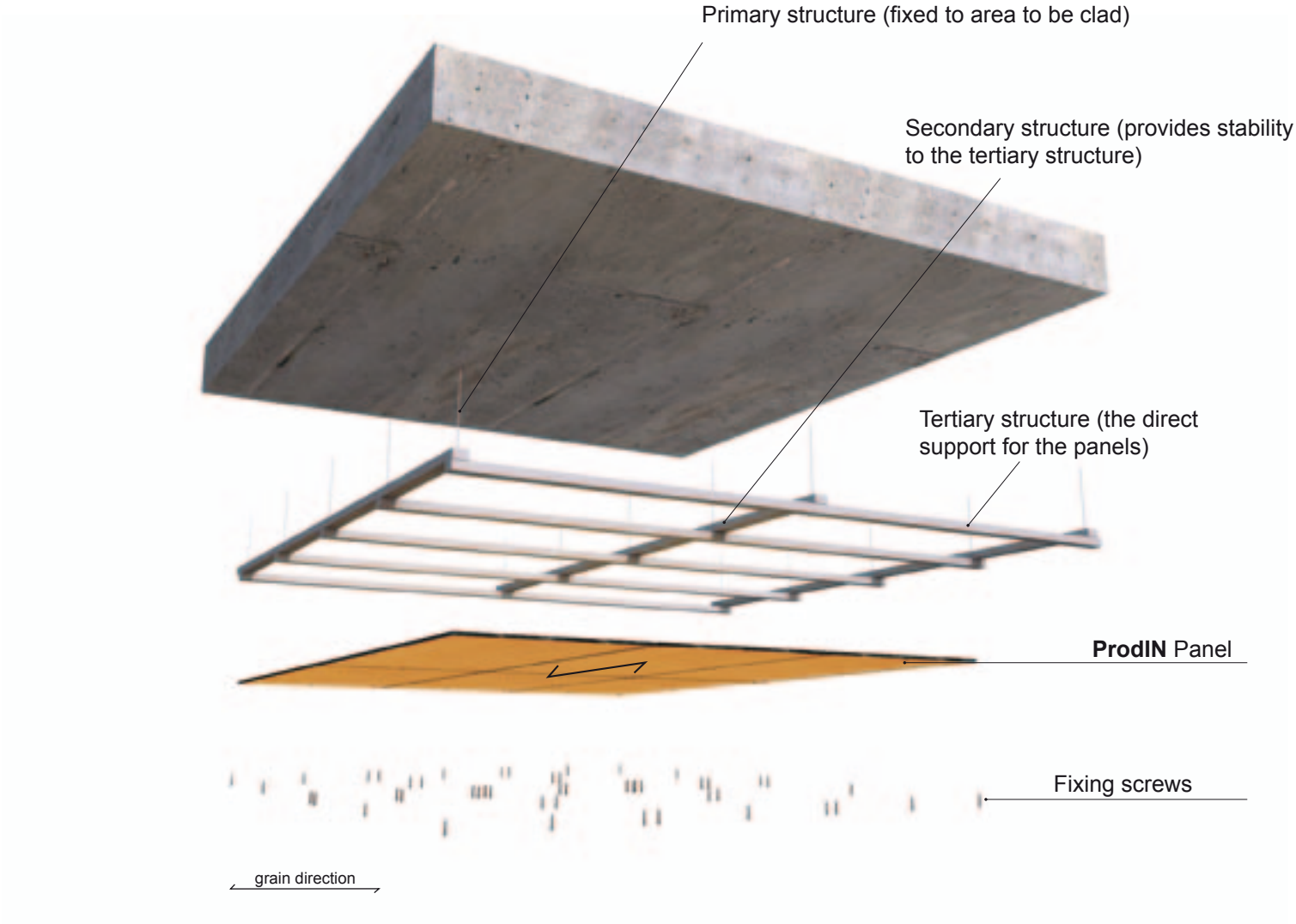
2.6.1 Rectangular arrangement (1200 x 600 x 14 mm):

Grain direction

2.6.2 Square arrangement (600 x 600 x 14 mm):

Grain direction

Breakdown in layers:



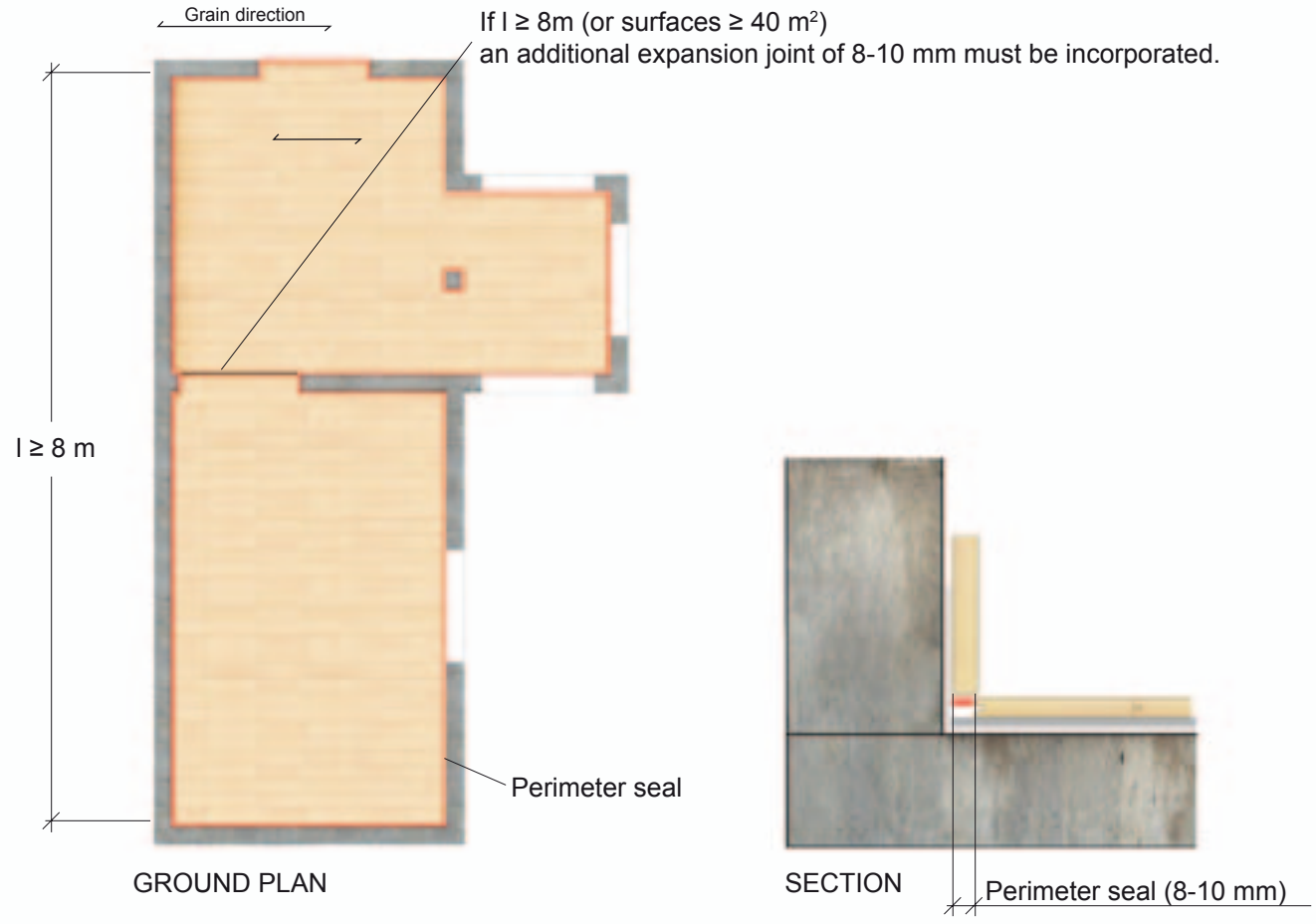
The usual arrangements for ceilings is 1200 x 1200 mm, 1200 x 600 mm and 600 x 600 mm for which at least 8 screws (or bolts) are required to hold each piece of the roof.

Each piece must be supported throughout its length on 3 battens placed perpendicular to the direction of the grain of the panel.

2.7 Types of fixing for *Supra*

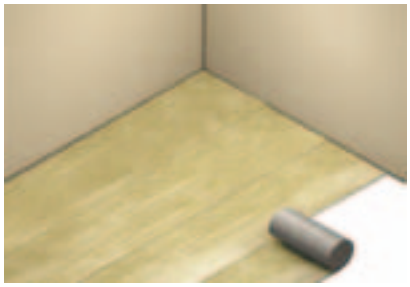
Supra cladding can be fitted in three different ways and the base must meet certain minimum requirements before fitting the material:

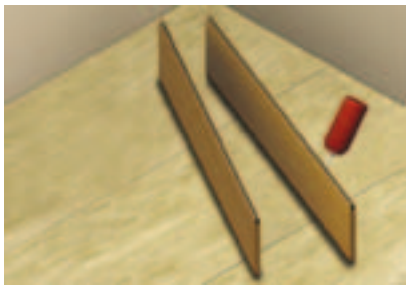
- be level / good flatness.
- must be solid and consistent, without warping at a later stage.
- be clean.
- be dry.
- have a moisture content below 2.5%.

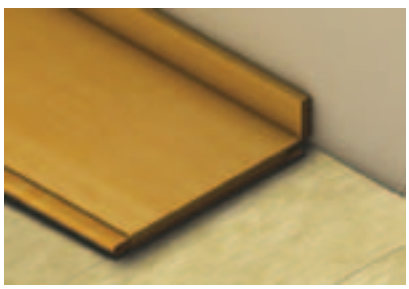


Supra floors must always be installed with a perimeter seal of 8 to 10 mm on the edges of the building and on the walls or other fixed obstacles in the construction, thus enabling dilatation and contraction as a consequence of changes in temperature and humidity of the material.

It is also necessary to consider expansion seals for lengths of more than 8 meters and / or in areas larger than 40 m².







Floating Parquet

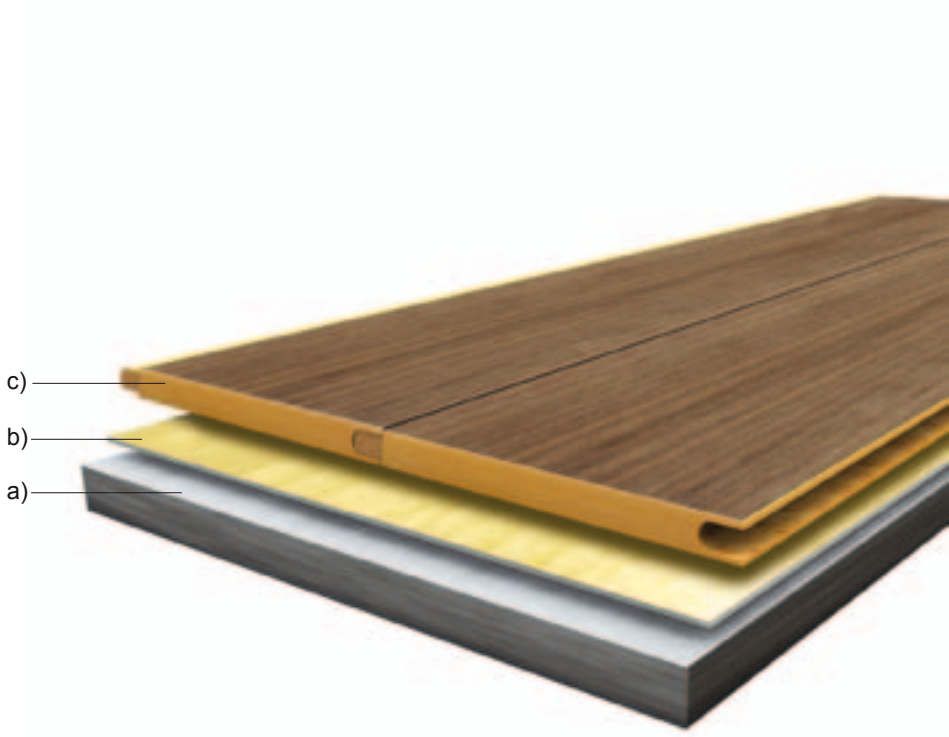
This system must be used provided that the slenderness of the piece (length / width) is greater than five.

Spread a layer of plastic material (e.g. insulation material in chapter 4.4.1 and 4.4.2) on the existing flooring. This layer is to create a barrier against moisture that may arise from underfloor and should be placed transversely to the flooring. Place the first row with groove-side towards the wall ensuring it is parallel to the wall in question. For good adhesion between the pieces, we recommend gluing the groove side with a continuous bead of adhesive. It is also advisable to place distance spacer against the walls, columns, pipes, etc. found on the flooring, in order to ensure an expansion gap 10 mm.

In areas of more than 8-10 m long, we recommend installing at least an expansion joint of 8-10 mm.

Enlargement joints for the consecutive rows should be located at minimum 50 cm from each other.

After drying the glue the wedges are removed and the baseboard placed to conceal the expansion joint created.



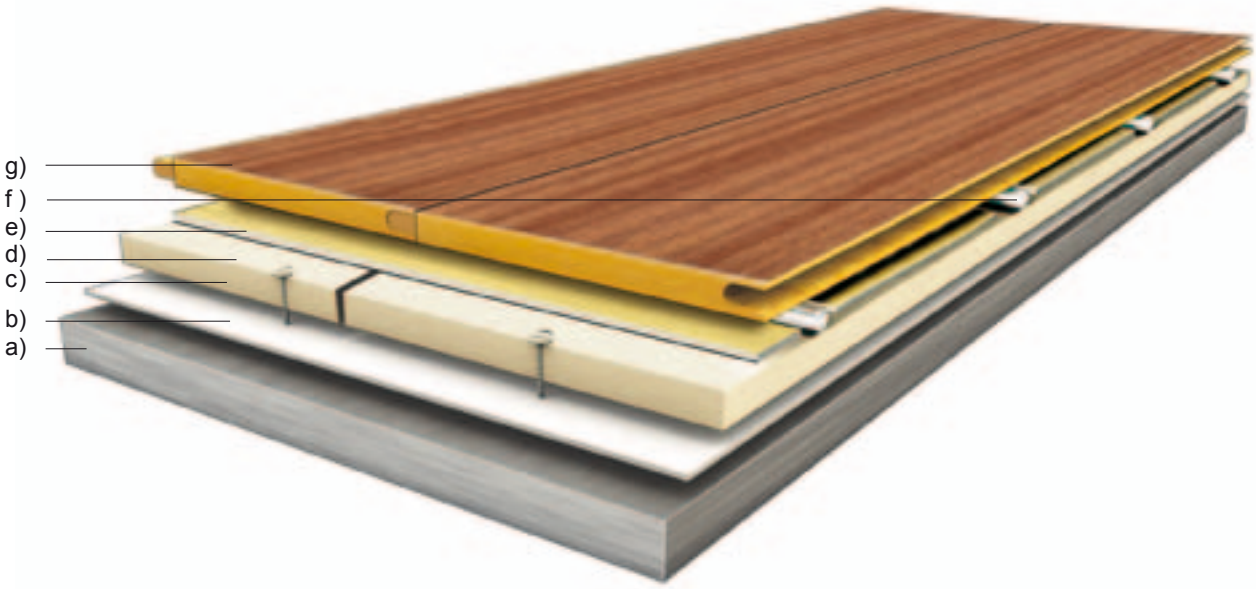
a) Existing framework/floor structure
b) Layer of PVC / polyethylene (moisture and acoustic barrier)
c) **Supra** tongue and grooved boards and glued on the tongue-groove

Gluing

The gluing system is used when the slenderness of the piece is equal to or less than 5.

For this system it is imperative that the floorwork does not contain any moisture.

If the system has to be used stuck onto a base where water is a component, for example a concrete floor, an underlay must be created using a waterproof MDF base, placed on a layer of PVC / polyethylene. These waterproof boards must be anchored to the floor using screws with a seal perimeter of 10 mm between them. The MDF boards must be primed and once dry continuous beads of SikaBond- T52FC, at a distance of 30 cm apart and transversely to the floor must be spread out. Finally the boards are applied in the same way as the floating parquet.



a) Existing framework/floor structure
b) Layer of PVC / polyethylene (moisture barrier)
c) Waterproof MDF board (16mm) with 10mm seal between them bolted to the groundwork
d) MB Sika Primer (only In the case of moisture and to improve adhesion qualities)
e) Acoustic underlay
f) SikaBond adhesive T52FC
g) **Supra** tongued and grooved boards and glued on the tongue and groove joint

Underfloor heating

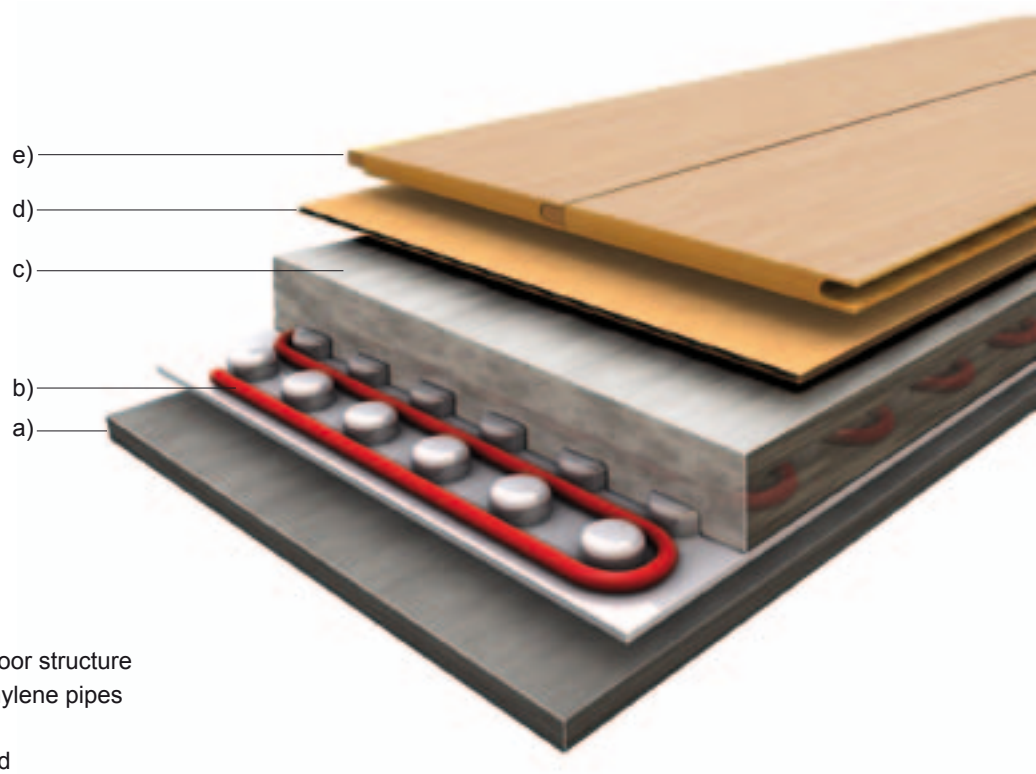
To fit **Supra** on underfloor heated areas, various conditions relating to moisture, the start up of the heating circuit and its subsequent operation must be complied.

Perfect flatness must be guaranteed and the floor must be sealed from possible humidity from the underfloor. This system is used corrugated cardboard (smooth side up) instead of polyethylene underlay to protect the wood from possible floor moisture, since the thermal conductivity of corrugated cardboard is better than polyethylene.

Also make sure before installation of the wooden strips that the underfloor water circuit has no leaks that could wet the wood once assembled. This factor can be checked by putting the boiler at the maximum temperature and pressure, always following the manufacturer's instructions.

Floor moisture during a 2-week consecutive period must be less than 2% in order to mount the wooden strips. To do so the heating should be left to run 75% of its normal operation and the humidity of the floor should be measured. To place the panels, the heating must have been off for 2 days before installation.

Once the **Supra** assembly is finished, the floor temperature should not exceed 25 ºC and there should be no abrupt changes in temperature and humidity.



a) Existing framework/floor structure
b) Lattice-linked polyethylene pipes
c) Layer of mortar
d) Corrugated cardboard
e) **Supra** tongued and grooved boards and glued on the tongue and groove joint

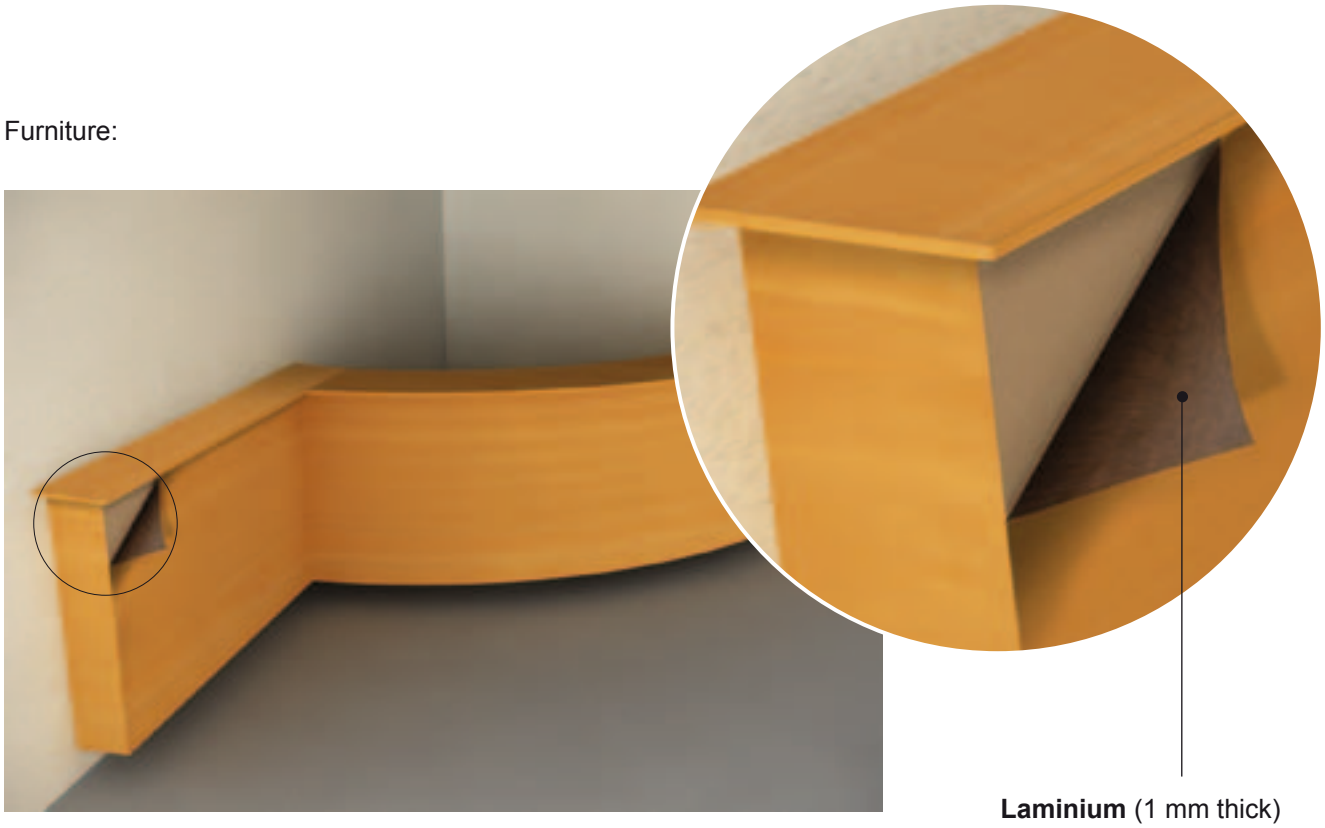
2.8 Fixing types for *Laminium*

Laminium is the only **Prodema** product that can be applied directly onto another surface without the need to leave an air gap on the back of the laminate.

It is designed to be machined in a workshop or carpenters, never directly on-site. All the surfaces should be stuck with white glue on any wood support (plywood, DM, etc. or wooden battens at a maximum distance of 150 mm).

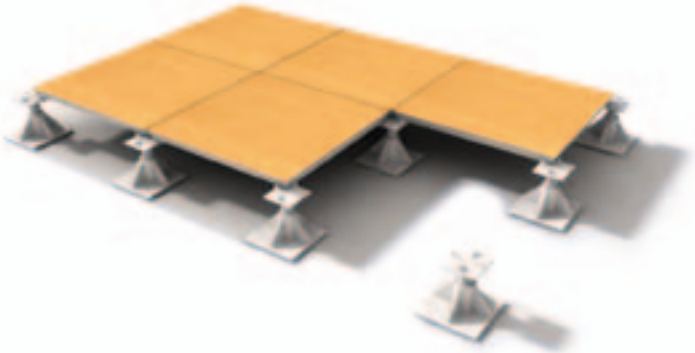
The following image shows some possible applications:

Furniture:

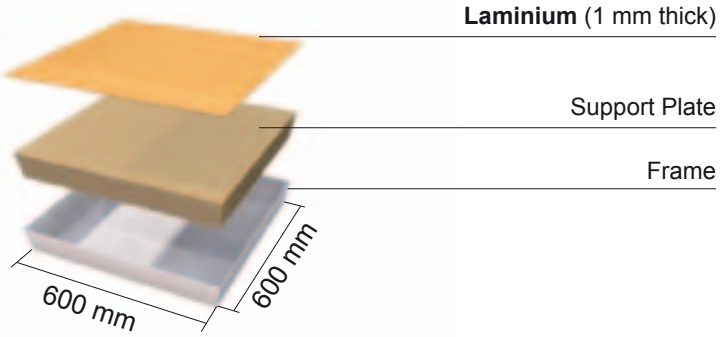


Laminium (1 mm thick)

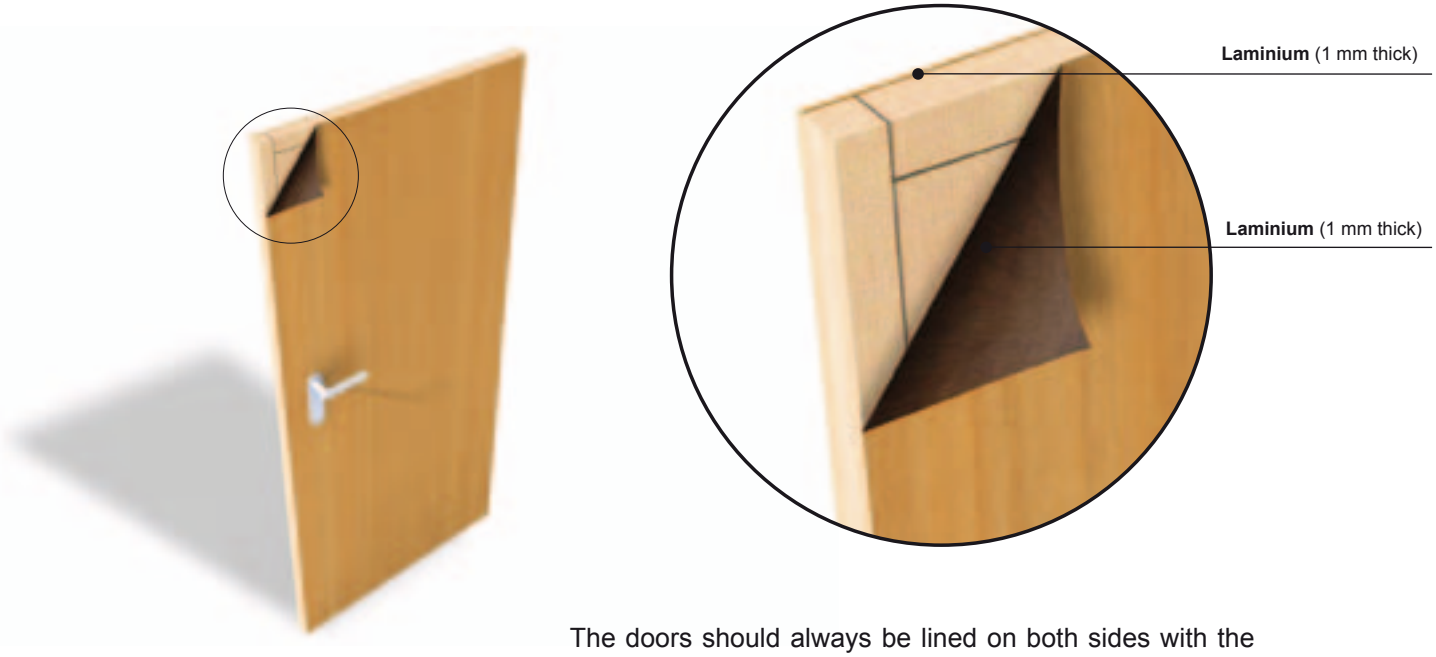
Raised floor:



Tile composition:



Door cladding:



The doors should always be lined on both sides with the same wood and in the same direction of the **Laminium** grain.

3. Product care and handling

3.1 Transport

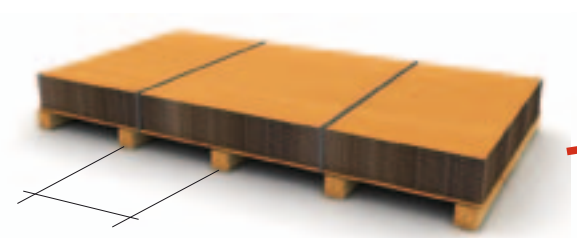
To transport the **ProdIN** cladding panels by **Prodema** stable, smooth pallets with the same dimensions as the panel should be used.

To prevent any possible damage to the decorative layer due to rubbing ensure that the strips do not rub against each other.

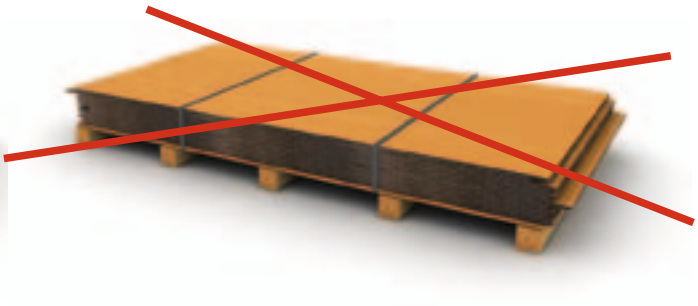
3.2 Storage

During storage, the panels must be protected from moisture, heat, dirt, damage and panels should be prevented from being distorted at all times as this is irreversible.

The panels must be stored in a closed, ventilated area at an ambient temperature of approximately 20 (± 5) ºC and approximately between 30 - 50% humidity. After placement and storage, the metal bands for transport packaging should be removed. In horizontal storage, the panels must be laid flat along the entire surface. This is the most suitable storage method.



Maximum 600 mm



Panels should not be stored vertically; they will only be supported vertically as a temporary measure and for a short space of time always less than 8 hours.

The ground on which the pallet rests must be free from materials that can cause damage.

Prodema sends the panels on a pallet and generally between the pallet and the lower panel a protective coating or film is fitted.

Storage time shall not exceed five months from the date of issue shown on the waybill.

3.3 Machining

3.3.1 Cutting recommendations:

Before a preparing a panel, check that it is perpendicular, the size and straightness of the board.

Panels cuts for interiors must be made with hard metal tools (carbide-tungsten / Widia) for wood finishes with rotary cuts and PCD (Poly Crystalline Diamond) for flat cut wood. Tools must be sharp and prevented from overheating at all times.

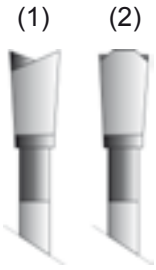
• Type of disk:

- Hard material (Widia tip).

- PCD Disk saws (Poly Crystalline Diamond).

Approximate parameters for saw blades according to the type of tool

Diameter (mm)	Teeth (z)	Speed (rpm)	Blade thickness (mm)	Types of teeth
300	48	4000-6000	3,2	Slanted alternating teeth (1) and trapezoidal flat teeth (2).
250	40/48	4000-6000	3,2	
190	30	3000-3500	2,2	



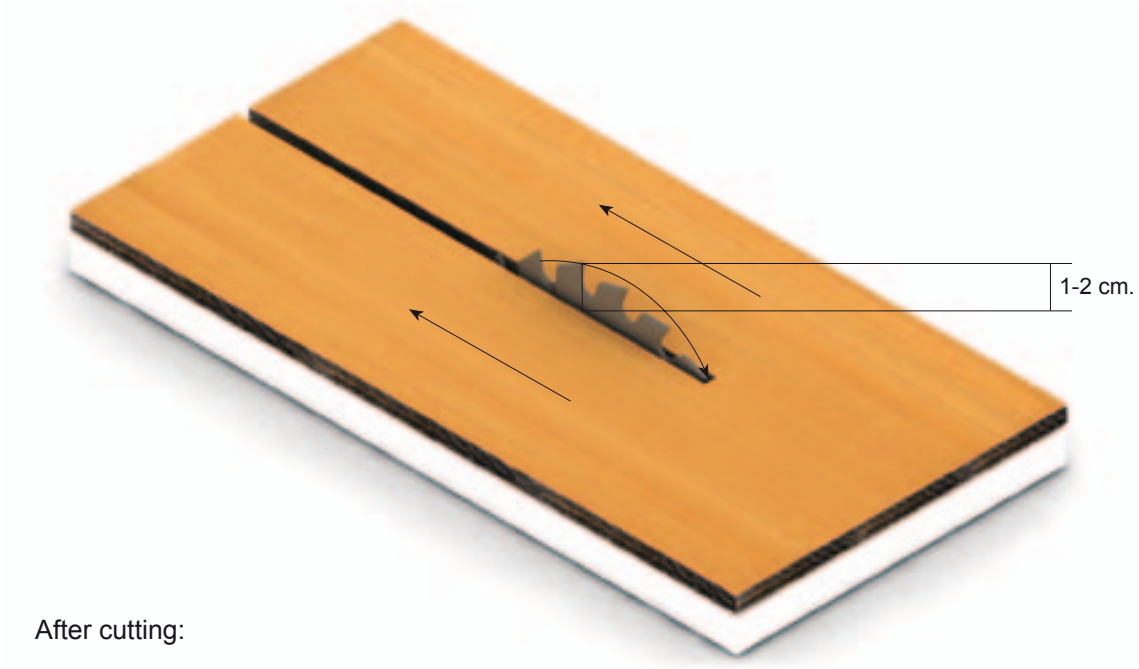
• Placement of the board

The cutting blade must always enter from the board's good side.

- Bench-mounted saw the visible side of the board must be facing upwards.
- Hand-held saw: the visible side of the board must be facing downwards

Height of the cutting blade:

To achieve a clean cut on the exposed side. the cutting blade should protrude approximately 1-2 cm from the material being sawn



After cutting:

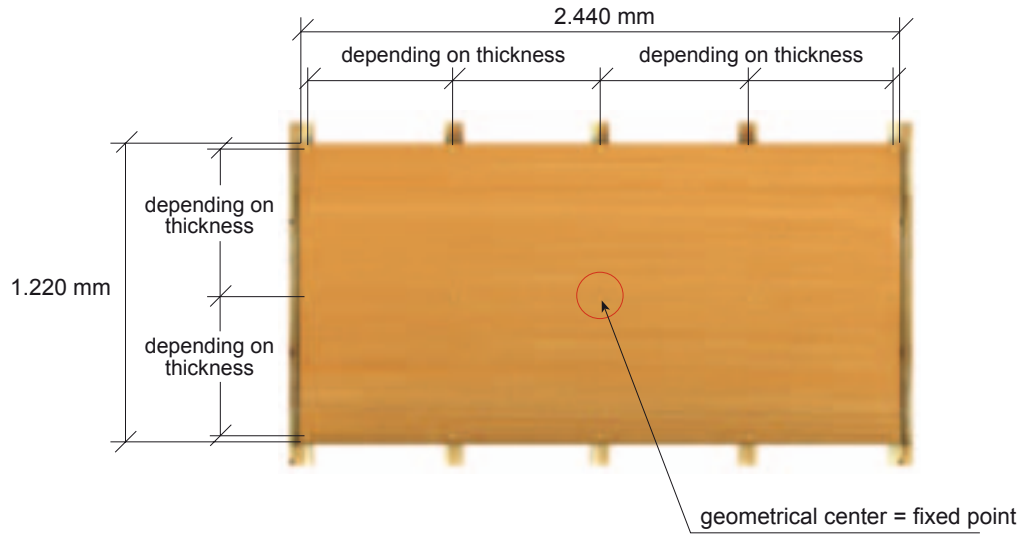
After machining (sawing, drilling, milling, bevelling, sanding and polishing perhaps) the surfaces obtained do not require any finishing treatment or protection treatment. Sharp edges can be smoothed with sandpaper.

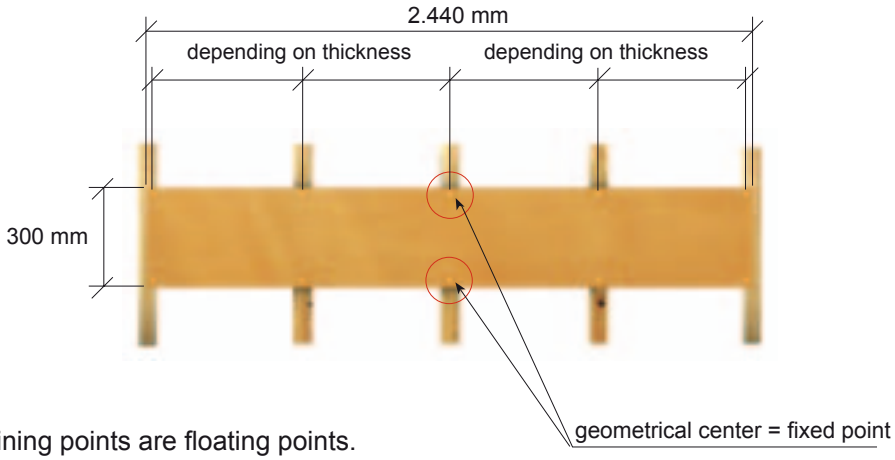
3.3.2 Drilling Recommendations:

ProdIN panels are drilled using integrated hard metal drill bits or steel bits - with tungsten carbide tips (Widia) with a cutting angle greater than 100°. Mounting plates must be placed under the panel to achieve a clean hole.

• Hole clearance for screws

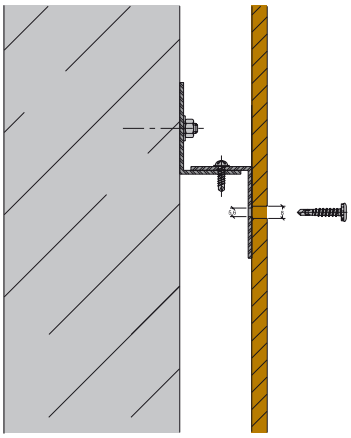
All the holes for the exposed fixing board's holding screws must be 1-2 mm greater than the diameter of the screw used, except the hole at the board's geometric centre, which may be the size of the screw. Screw clearance allows the board to expand and contract freely at any time without forcing the screw in the direction perpendicular to its axis.



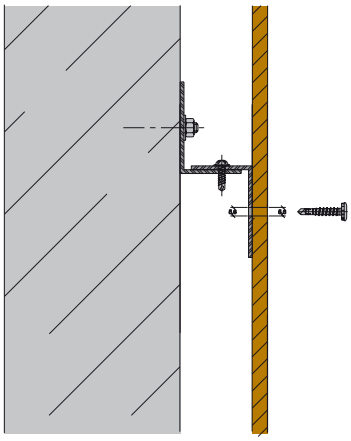


The remaining points are floating points.

Metal sub-structure with self-drilling SFS-SX3-L12-5.5x32 mm

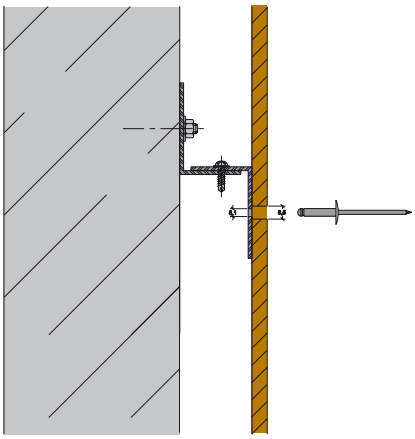


• Floating Points
Pilot hole in the panel: 8,5 mm

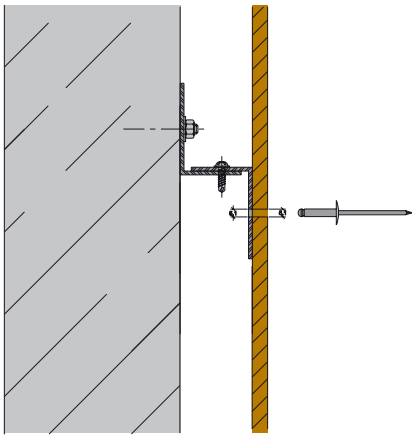


• Fixed points
Pilot hole in the panel: 5,6 mm

Metal sub-structure with rivet SFS-AP-16-I-S

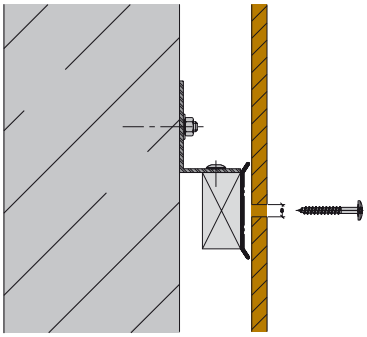


• Floating Points
Pilot hole in the panel: 8,5 mm
Pilot hole in the profile: 5,1 mm

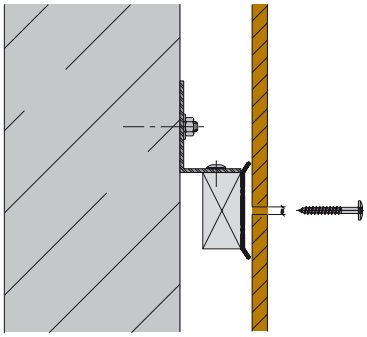


• Fixed points
Pilot hole in the panel: 5,1 mm
Pilot hole in the profile: 5,1 mm

Wood sub-structure with SFS-TW-S-D12-4,8x38 mm screws



• Floating Points
Pilot hole in the panel: 8 mm



• Fixed points
Pilot hole in the panel: 4,9 mm

3.4 Maintenance and Cleaning

Although **ProdIN´s** surface is dirt repellent, surface cleaning of the boards to recover their initial appearance and aesthetics may be required with the passage of time.

Cleaning is the only maintenance required for **ProdIN** panels. The **Prodema** patented formula that covers the surface of the **ProdIN** boards means that the surface needs no other preventive wood treatment.

- The following general indications for periodic cleaning are recommended:

  • Always use NON-ABRASIVE household detergents dissolved in water.

  • Never use abrasive cleaning powders or cleaning pastes that may scratch the surface.

  • Always rinse with abundant clean water to avoid the appearance of marks.

  • Use a clean soft cloth or sponge that will not damage the surface. Do not use steel wool pads that can scratch the surface.

• Removing stains from the product:

Most stains are easily removed using only water and household detergents. However, when necessary, a universal solvent may be used but the surface must be gently rubbed with water and NON-ABRASIVE household detergent and then rinsed. Abrasive cleaners or strong alkaline components and / or acids must not be used. Nitrocellulose-based thinner should not be used as they can cause the formation of scratches on the boards.

A cleaning test should always be carried out on a small area of the material to verify the effectiveness of the procedure, and only then proceed with the entire surface.

- Some of the most common stains that can be produced on site can be cleaned as follows:

  • Cement stains: if the concrete is still fresh, it can be easily removed with water. However, if the stain has started to set, it must be completely dry before removing it with a cloth. It is important **NOT TO SCRATCH** the surfaces as this will damage the panel, dry stains will come off easily without scrubbing. Rinse with plenty of water.

  • Remnants of glue or adhesive: can be eliminated with universal solvent or alcohol. In any case, always clean afterwards with soapy water.

  • Paints and primers: check with the manufacturer. Always clean with soap and water at the end.

  • Oil Stain: use warm water and a non-abrasive household detergent; there is no need to use solvents and chemical cleaning products.

  • Scratches and knocks: there is no method of repairing scratched and knocked panels.

Important Note: the use of solvents and chemical cleaners should be done respecting the corresponding health and safety rules.

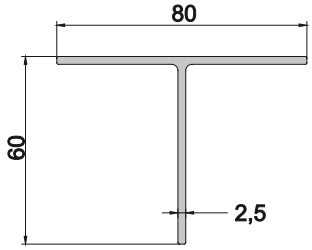
3.5 Repairing a damaged panel

Natural wood is a delicate material. There is no prescribed method for repairing of the **ProdIN** panels. Damaged panels must be replaced by new ones.

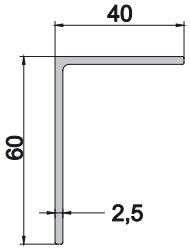
4. Accessories

4.1 Strips

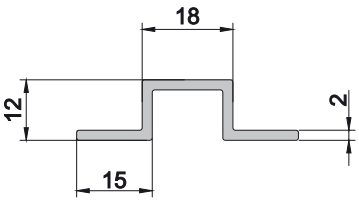
4.1.1 Aluminium:



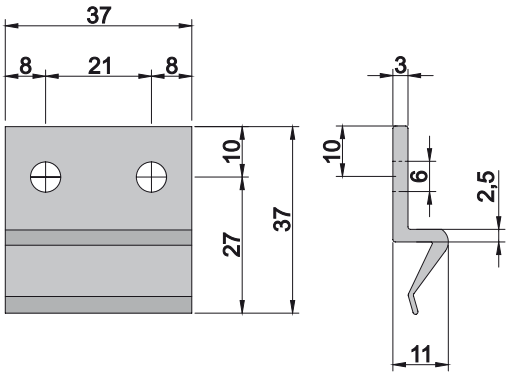
Ref: T-strip
Material: Aluminium
Length: 3000 mm bar



Ref: L strip
Material: Aluminium
Length: 3000 mm bar

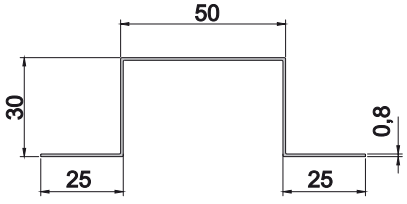


Ref: Omega for indoors
Material: Aluminium
Length: 3000 mm bar

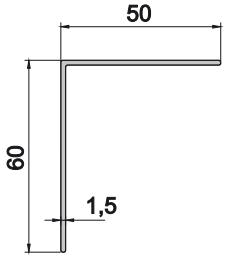


Ref: Hanging hook for interiors
Material: Aluminium
Length: Piece

4.1.2 Steel:



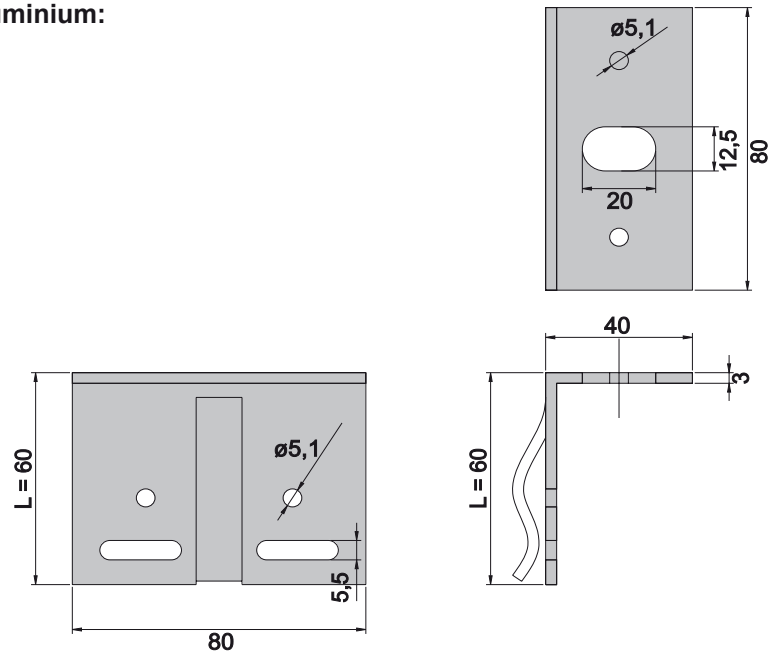
Ref: Omega strip
Material: Galvanized steel
Length: 2500 mm bar



Ref: L-strip
Material: Galvanized steel
Length: 2500 mm bar

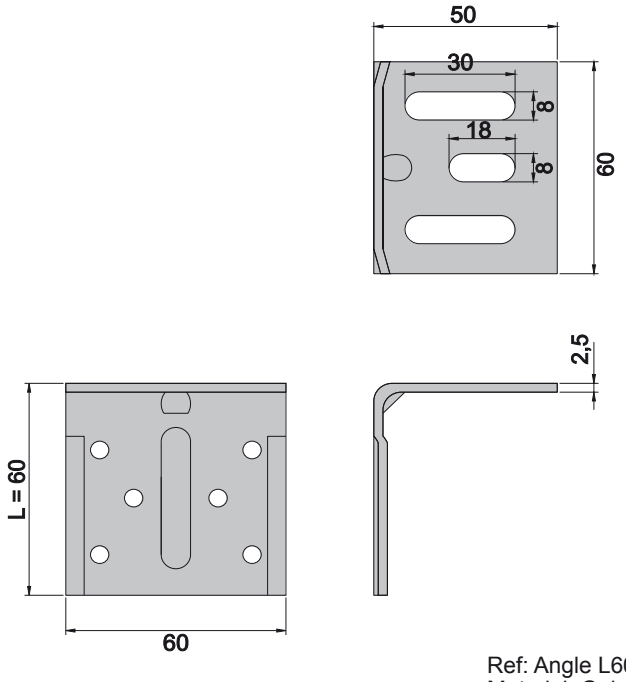
4.2 Cement fixing elements

4.2.1 Aluminium:



Ref: Angle L60
Material: Aluminium

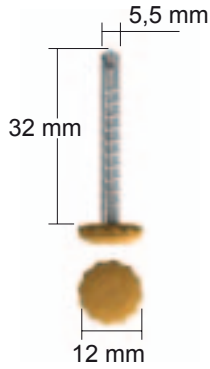
4.2.2 Steel:



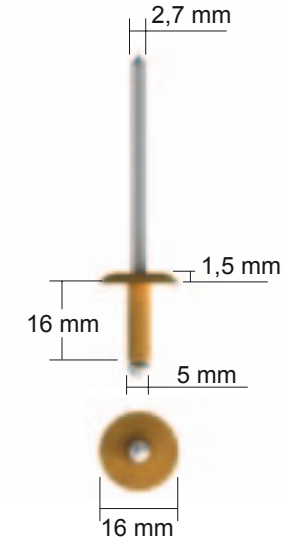
Ref: Angle L60
Material: Galvanized steel

4.3. Screws and rivets

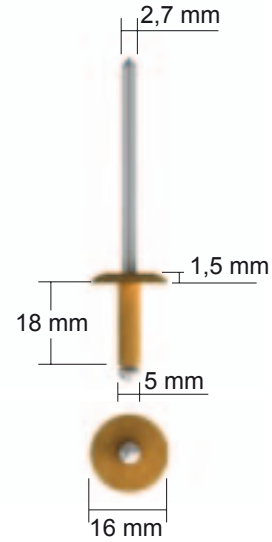
4.3.1 Fixing the board to the metal strip



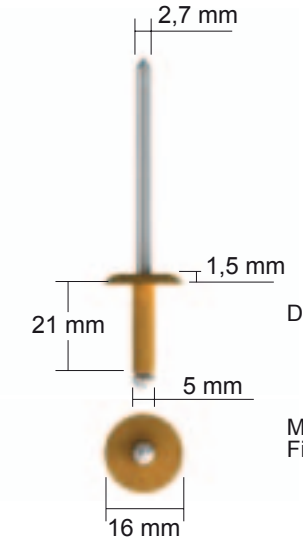
Ref: SFS-SX3-L12 self-drilling screw
Klamping lenght: ≤ 17 mm
Dimensions: ø head: 12 mm
ø screw: 5.5 mm
L: 32 mm
Material: Austenitic stainless steel A2
Finishes: Steel or lacquered in a choice of **ProdIN** colours



Ref: Rivet
SFS-AP-16-50160-S
Klamping lenght: 8,0-12,0 mm



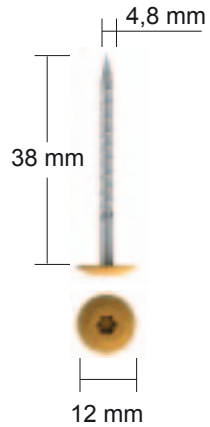
Ref: Rivet
SFS-AP-16-50180-S
Klamping lenght: 9,5-13,5 mm



Ref: Rivet
SFS-AP-16-50210-S
Klamping lenght: 12,5-16,5 mm

Dimensions: ø head: 16 mm
ø rivet: 5 mm
head thickness: 1.5 mm
ø shaft thickness: 2.7 mm
L: 16, 18 and 21 mm
Materials: AlMg5/ A3
Finishes: Steel or lacquered in a choice of **ProdIN** colours

4.3.2 Fixing the board to the wooden strip



Ref: SFS-TW-S-D12 - 4.8 x 38 Screw
Dimensions: ø head: 12 mm
ø screw: 4.8 mm
L: 38 mm
Material: Austenitic stainless steel A2
Finishes: Steel or lacquered in the same colour as the **ProdIN**

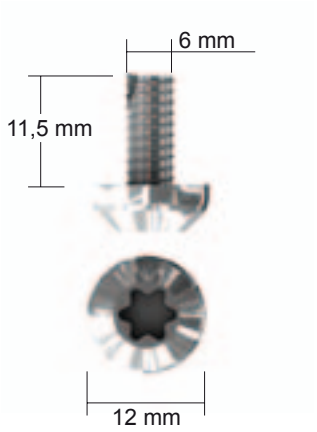
To choose the colour of these screws see the following page.

SFS-SX3-L-12 self-threading screws

SFS-AP-16-L-S rivets

SFS-TW-S-D12-4.8x38 screws

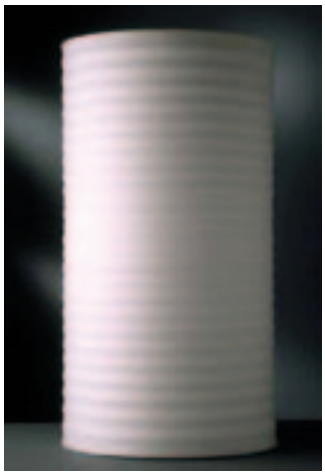
4.3.3 Fixing the board to the hanging hook



Ref: Screw Panel TB-A2 TX 30
Dimensions: ø head 12 mm
ø screw: 6
L: 11.5 mm
Material: Stainless Steel
Finishes: Stainless Steel

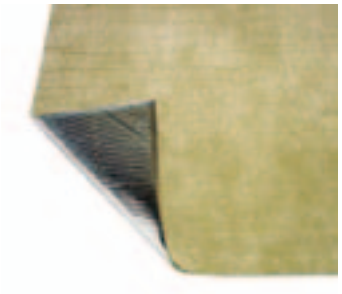
4.4 Sound insulation and floor movement seal

4.4.1 Polyethylene foam sound insulation



Ref: Estalki Pack ESPOL 30
Dimensions: Coil width 1600mm
100m coil length (± 6)
Material: Polyethylene with sealed bubbles
Thickness: 3 mm (± 0.3)

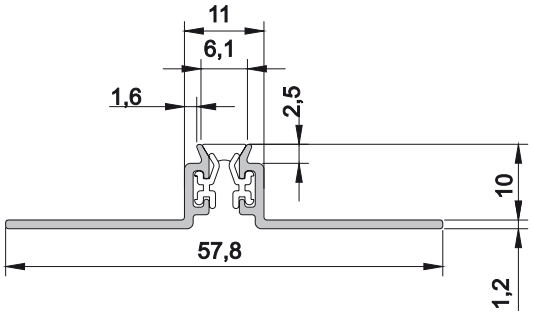
4.4.2 Sound insulation with steam barrier



Ref: Interfloor Timbermate Excel
Dimensions: Coil width 1370mm
Coil length 11m
Material: Green foam rubber with “vapourstop” membrane
Thickness: 3.6 mm (± 0.3mm)

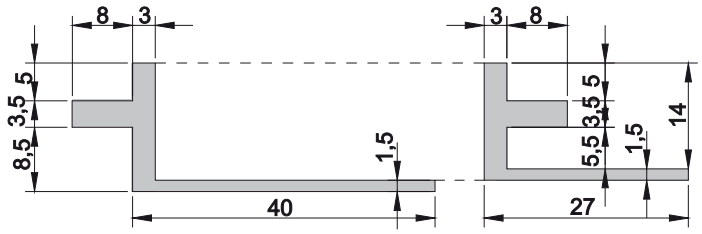
4.4.3 Movement seal for floors

- For 11 mm thick **Supra**



Ref: Schlüter® - DILEX- AKWS
Length: 2500mm Bar
Material: Aluminium profile and soft PVS movement area

- For 14 mm thick **Supra**



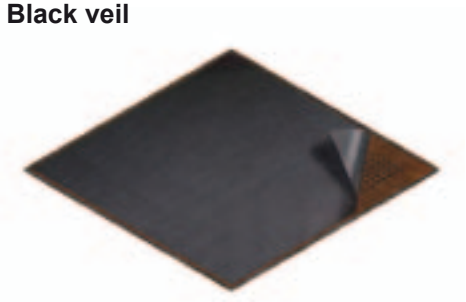
Ref: Expansion joint
Length: Bar 3000mm
Material: Aluminium profile

4.5 Auxiliary elements

4.5.1 Screwdriver

Ref: 420-SFS-E Federversion Screwdriver.

4.5.2 Black veil



Ref: Polypropylene non-woven
Material: Non-woven (adhesive on one side) in black colour.

For more information on accessories, please contact **Prodema S.A.**

5. Other **Prodema** products

Clínica Pombaldial (Pombal - Portugal)
Arq. Filipe Sousa

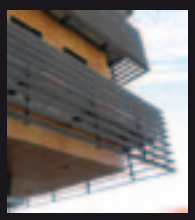
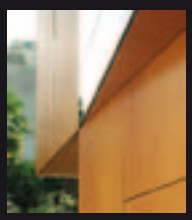
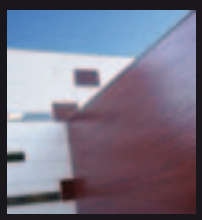
ProdEX
exteriors by Prodema®

We would like to present **ProdEX** by **Prodema**:

The new and revolutionary generation of natural wood composite products for covering façades by **Prodema**, the result of intensive R+D+I work, achieves unprecedented technical results:

- Solid colour and artificial climate resistance: according to standard EN 438 - 2:2005 (section 29).
  Passes 6000 hour Xenon test.
- Reaction to fire: according to standard EN 13501-1:2002.
- Graffiti resistance: according to standard ASTM D 6578: 2000.

And, of course, with the same spectacular aesthetic results that **Prodema** is famous for, and which have captivated thousands of architects the world over.


Some skins do
withstand the best of time
Prod EX
exteriors by Prodema®
YOUR FAÇADES WILL
ALWAYS BE IN PERFECT
CONDITION

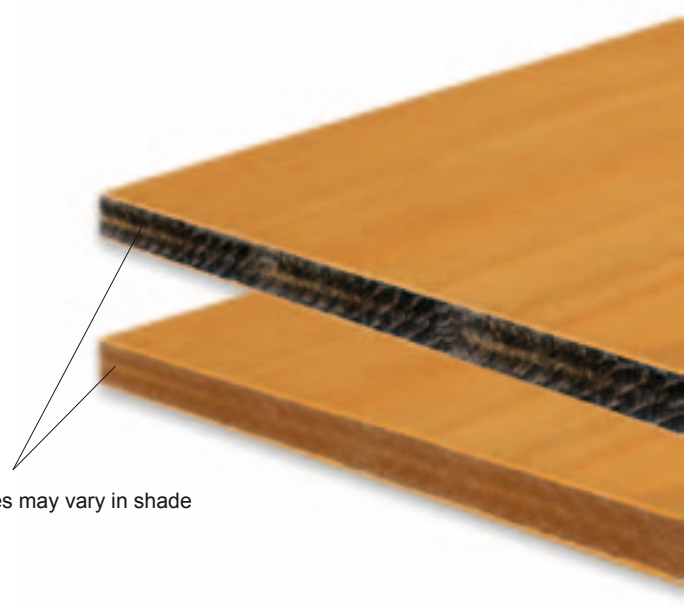
ProdEX

exteriors by Prodema®

ProdEX (by **Prodema**), our new line of exterior cladding, is about to change the mindset in architecture on a global level.

Because with **ProdEX** (by **Prodema**) finally there is a range of composite wood, which synthesizes all the benefits of a material so noble, beautiful and versatile as wood, with the guarantee of performance and durability that our patented formula based on paper and resins offers.

Opening up a new world of possibilities to architects or quantity surveyors seeking a real alternative to cold, grey and mundane materials for cladding their buildings.



Edges may vary in shade

Light brown *

Rustik **

Pale *

Mocca *

Mint *

Cream *

Deep brown **

Dark brown *

Ice grey **

* Ayous veneer

** Okume Veneer

65th Street Village
Mark Dziewulski Arch.
California (USA)

6. **Prodema** the company

The description of the products' features and the technical instructions for their use contained in this document do not imply any contractual obligations whatsoever on the manufacturer's part. They correspond to current knowledge and may be modified without prior warning. This document contains general information that may be updated through that given in the manufacturer's website.

Our corporate brand is built around 3 basic mainstays:

Class and comfort

Here at **Prodema** we are convinced that it's not really a question of selling our wooden products, but rather the added value that the class, elegance, design and comfort that our products bring to our clients' architectural and decoration projects. That is why we are committed to innovation and to continue our quest to find wood-based architectural solutions.

Quality

What's left to say about quality? However, at **Prodema** we are particularly sensitive to this concept, as we are aware of how demanding our clients are and, above all, how demanding our clients' clients are. For that reason we make twice the effort.

We understand quality to be an intrinsic part of the product as well as the service we offer.

Prodema has a management system certified with the ISO 9001:2000 standard.

Corporate Social Responsibility

At **Prodema** we love wood, because it is our life and livelihood. This is why, apart from strictly meeting all international standards, we have also launched a plan that we have called “Friends with nature” in which we will heighten our support for all matters related to sustainable forest management.

This is why **Prodema’s** products are manufactured in accordance with the most rigorous environmental requirements of the UNE-EN ISO 14.001:2004 and UNE 150301:2003 Standards. And **Prodema** does not use any of the tree species included in appendixes 1, 2 and 3 of the CITES convention.

In addition, upon request, certificates can be requested with the PEFC for **ProdEX** panels which guarantees that the wood and other products of wood origin used to manufacture the **ProdEX** panels are from forests that are managed in an environmentally sustainable fashion.

AENOR Gestión Ambiental UNE EN ISO 14001 GA-2002/0070

AENOR Ecodiseño UNE EN ISO 14006 ED-0009/2010

PEFC/14-35-00025

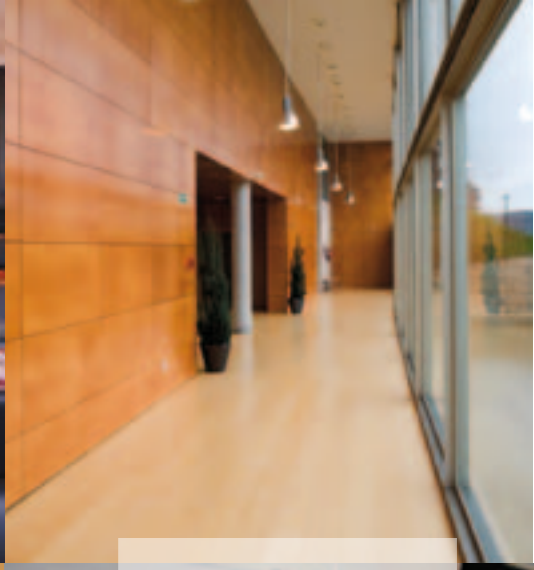
Prodema around the world

Prodema means beauty, warmth and experience in wooden floors and coverings.

We have been working in this field for over 100 years, and this experience has enabled us to become what we are today: a reputable brand respected by architects around the world, who have found in our products the breath of fresh air they had been looking for to meet their creative needs.

With over 75 regional offices all over the world, **Prodema** is now a global trademark and can be seen in many of the large-scale architectural projects in a wide range of countries.

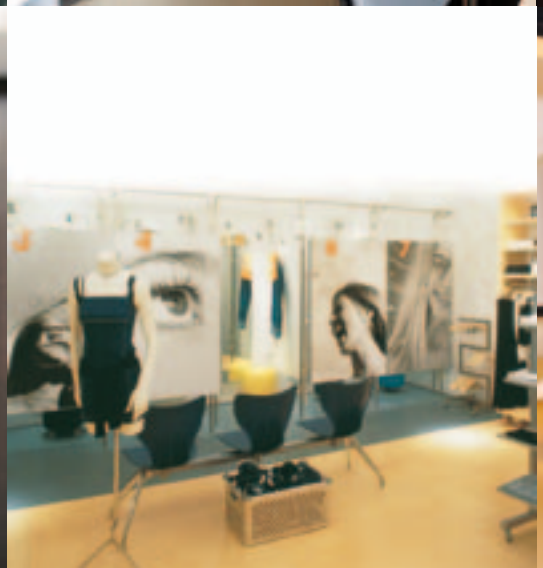







MNG





interiors by Prodema®

Prodema®

Made to last wooden Products

We just trees

At **Prodema** we have always been committed to the environment in general and specifically with forest sustainability.

Our compromise may seem selfish, and in fact it is. But above all it is sincere; because having worked with wood for over 100 years has led us to respect it and to be conscious of the importance to establish policies to protect it.

That is why we accepted the CITES convention so many years ago. We also obtained the **ISO 14001** certificate.

Now, we have taken a large step by obtaining the **PEFC** Certificate which guarantees that the wood and other products of wood origin used to manufacture **ProdEX** panels are from forests that are managed in an environmentally sustainable fashion.

We continue to progress in this area and have obtained the **UNE 150301:2003 eco-design** management certification, which means continuous improvement throughout a product's entire life cycle in order to reduce its environmental impact.

PEFC
PEFC/14-35-00025

AENOR
Gestión Ambiental
UNE EN ISO 14001
GA-2002/0070

AENOR
Ecodiseño
UNE EN ISO 14006
ED-0009/2010

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Prodema®

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interiors by Prodema®

Prod IN

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E-mail: prodema@prodema.com
http://www.prodema.com

Your local **Prodema** representative:

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