

# CORE&TECHNICAL<sup>®</sup>

Products



PB | PARTICLEBOARD

MDF | MEDIUM DENSITY FIBREBOARD

OSB | ORIENTED STRAND BOARD

**SONAE**   
**ARAUCO**

Taking wood further





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Taking wood further

Sonae Arauco is a worldwide producer of wood-based panels. Its mission is to offer wood-based solutions that improve people's lives. Sonae Arauco strives to take innovation further, bringing its products to the next level of design and quality for the furniture and construction sectors.

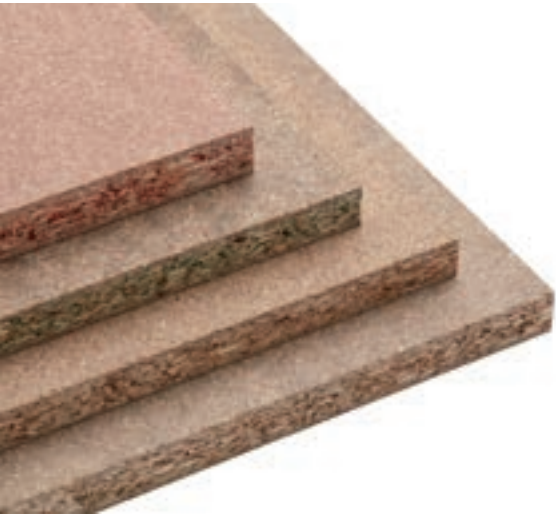
With an international presence, a strong industrial soul and a long-term vision, Sonae Arauco is deeply committed to the environment. The development of its wood-inspired solutions takes industrial, functional, quality and design aspects into consideration, turning its products into value-added solutions with multiple application possibilities.

Together, we take your projects further.



## SONAE ARAUCO CORE & TECHNICAL® PRODUCT PORTFOLIO

### PB | PARTICLEBOARD



## AN INNOVATIVE WOOD SOLUTION IN EACH PRODUCT

Sonae Arauco's goal is to develop solutions inspired by wood that combine industrial knowledge, functionality, quality and design. More than creating wood-based products, it provides solutions that improve people's lives.

Wood-based panels are the basis of everything Sonae Arauco does and the most sustainable, flexible and functional alternative to solid wood. They are a more efficient way to use resources and have greater dimensional flexibility, making it possible to create solutions tailored to people's needs. Sonae Arauco is proud to develop and produce alternatives to solid wood products for a growing number of applications, such as furniture for the home and office, kitchen and bathroom cabinets, doors, walls and decorative products.

Sonae Arauco's base products are:

**PB | PARTICLEBOARD**, a versatile product recommended for furniture and the construction industry;

**MDF | MEDIUM DENSITY FIBREBOARD**, an excellent alternative to solid wood and ideal for furniture, flooring and the construction industry;

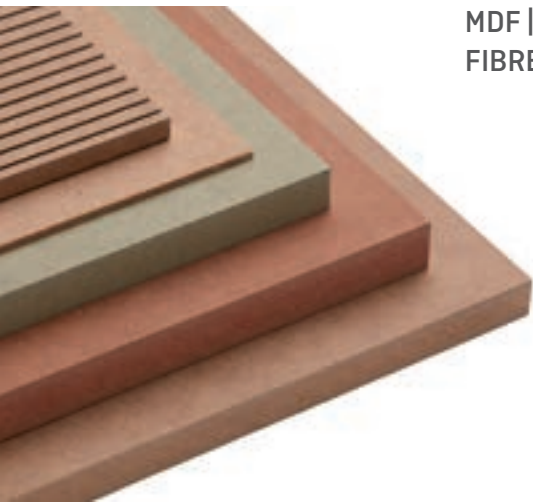
**OSB | ORIENTED STRAND BOARD**, a highly durable product recommended for structural and non-structural applications in the construction industry.

At Sonae Arauco, wood-based panels are available with additional properties, such as fire retardant (FR) and moisture resistant (MR), complying with the strictest environmental requirements in relation to formaldehyde emissions.

Both Particleboard (PB) and Medium Density Fibreboard (MDF) play a crucial role for INNOVUS®, a Sonae Arauco brand that provides a complete range of decorative products for interior design projects. From Decorative Melamine (MF), High Pressure Laminate (HPL) and Compact High Pressure Laminate (HPL C) to INNOVUS® Essence (EIR), with the texture, look and feel of real wood in a melamine panel and INNOVUS® Coloured MDF.

Additionally, for constructions, refurbishments or extensions, the AGEPAN® SYSTEM solutions by Sonae Arauco are ideal for roofs, walls and floors.

### MDF | MEDIUM DENSITY FIBREBOARD



### OSB | ORIENTED STRAND BOARD



## ECOBOARD

### ANOTHER STEP TOWARDS A MORE SUSTAINABLE FUTURE

During the development of our complete offer – from raw materials to decorative products – the impact on the environment and on the lives of those who live in the 80 countries we operate in is always taken into consideration.

During times when sustainability plays an increasingly important role in our everyday lives, our commitment to the responsible use of raw materials could not be more real. Therefore, we are presenting our ECOBOARD® product range, through which we provide a complete offer of products.

Whether in PB (Particleboard), MDF (Medium Density Fibreboard) or OSB (Oriented Strand Board), we have a comprehensive range of products with no-added formaldehyde resins during the manufacturing process to meet the most demanding ecological concerns and to eliminate the effects of this substance on human health.

The launch of the ECOBOARD® range of products is in line with previous initiatives Sonae Arauco has been adopting, in order to guarantee a more sustainable product portfolio and more responsible business practices. FSC® and PEFC™ certifications and the possibility of earning LEED® credits by using our products ensure that our wood-based solutions are developed with ecological factors in mind.

This is another important step towards a more sustainable world and is a firm commitment to the well-being of coming generations.

At Sonae Arauco, we take sustainability further.





## RESPECTING THE ENVIRONMENT IS PART OF OUR NATURE

Sonae Arauco is committed to the concept of sustainable use of raw materials and actively respects this principle in all its business practices.

The basis of the quality provided by its products is the use of wood from sustainably managed and carefully controlled origins. Under the scope of this policy, Sonae Arauco has PEFC™ (Programme for the Endorsement of Forest Certification) and FSC® (Forest Stewardship Council®) certification.

Sonae Arauco contributes to the circular economy in the timber sector, through recovery of waste wood and its integration into the production cycle. It assures its collection, management and recycling, in addition to using recycled wood and preventing it from being burnt or disposed of in landfills.

The production of wood-based panels at Sonae Arauco thus incorporates several of the principles of the circular bioeconomy, such as more efficient production models (reduction of raw materials and energy consumption), lifecycle extension (dynamisation of recycling networks), valorisation of by-products and waste, along with various awareness and social involvement projects.

It should also be pointed out that Sonae Arauco products are an important source of carbon capture, contributing to the mitigation of climate change.

Its Environmental Product Declarations (EPD) are verified by the Institut Bauen und Umwelt e.V. and present a transparent view of the environmental impact of its products. These Declarations describe the materials in relation to their environmental impact, through a lifecycle assessment, as well as their technical and functional characteristics. They are based on a quantitative and objective assessment, according to EN 15804, which allows the sustainability of the materials and projects where they are used to be assessed.

All Sonae Arauco factories meet internationally recognised standards in terms of occupational safety, as well as environmental, quality and energy management standards. This is confirmed by its ISO 45001, ISO 14001, ISO 9001 and ISO 50001 certification.

## HOW CAN OUR PRODUCTS HELP YOU TO GET LEED® CERTIFICATION?

LEED® is a programme that certifies the sustainability of buildings and the way they are planned, constructed and maintained. Comprehensive and flexible, LEED® addresses the entire lifecycle of a building.

Developed by the U.S. Green Building Council (USGBC), LEED® provides building owners and operators with the tools they need to assess the performance of their buildings while providing healthy indoor spaces for building occupants.

The selection of construction materials is crucial for obtaining LEED® Certification and this is why Sonae Arauco products are suitable for helping to build this environmentally friendly road.

There are specific requirements that projects must meet, as well as a set of credits that can be acquired to ensure certification.

Sonae Arauco solutions can help you to earn credits in these categories:

### MATERIALS AND RESOURCES (\*)

These credits encourage the use of sustainable building materials and waste reduction. In this category, we seek to promote and optimise construction products through:

- Environmental Product Declarations, to encourage the use of products and materials that have a positive environmental, economic and social impact;
- The content of the materials, recognising the raw material manufacturers that produce products that show an improvement in the impacts generated throughout their lifecycle;
- The source of raw materials, recognising the project teams that select verified products that have been extracted or sourced responsibly.

### INDOOR AIR QUALITY

These credits recognise better indoor air quality and exposure to daylight and views of the outside. Through our low-emitting materials, we aim to reduce concentrations of chemicals that can damage air quality, human health, productivity and the environment.



### LEED® REQUIREMENTS

#### ENVIRONMENTAL PRODUCT DECLARATION

Wood products available with EPD

PB      MDF      OSB

●      ●      ●

#### RECYCLED CONTENT

Use materials with recycled content, so that the sum of post-consumer content constitutes at least 10% or 20%, based on the total cost of the materials in the project

●

#### CERTIFIED WOOD

Wood products available with FSC® or PEFC™

●      ●      ●

#### LOW-EMITTING MATERIALS

Very low formaldehyde emissions and/or CARB/NAF certified

●      ●      ●

#### REACH OPTIMISATION

End-use products and materials that do not contain substances that meet the REACH criteria for substances of high concern

●      ●      ●

#### REGIONAL MATERIALS

Use building materials or products that have been sourced (extracted, manufactured and purchased) within 100 miles (160 km) of the project site

○      ○      ○

- credits
- positive contribution



(\*) Regional Materials  
For calculating credits, products sourced (extracted, manufactured, purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost.

## WOOD-BASED PRODUCTS

**1**

Physical and Mechanical Properties

**2**

Dimensional Flexibility

**3**

Ease of Transformation

**4**

Aesthetic Wealth

## WHY USE WOOD-BASED PRODUCTS?

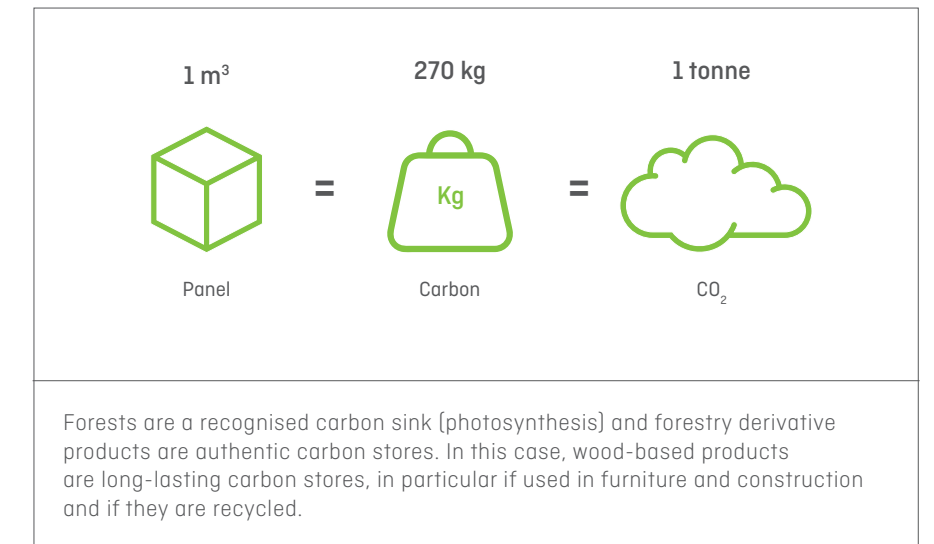
Wood-based boards basically include a set of composite materials and a binder (resin) and may incorporate several different additives, such as moisture resistant and fire retardant.

There are clear advantages to using wood-based boards rather than solid wood, in particular:

- Availability in different types and formats adapted to the user's needs;
- Allow for application in much larger sizes than sawn solid wood;
- Greater resistance in the plane of the board;
- Good strength-to-weight ratio;
- Greater dimensional stability;
- Obtaining homogeneous products.

In addition to the technical arguments for choosing wood-based products in applications they are recommended for, their good environmental performance should also be pointed out, in particular for:

- Contributing to the sustainable use of forest resources;
- Promoting better use of wood resources, as the materials that cannot be used to manufacture panels are used to generate the energy required for the process.

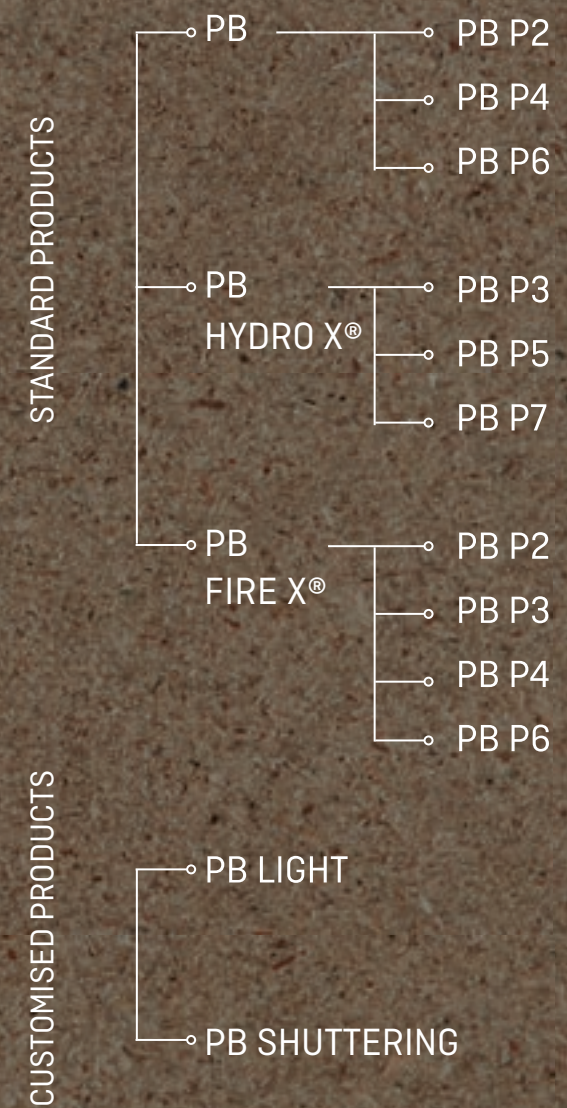




# PB

## PARTICLEBOARD

A versatile solution for  
furniture and construction







Particleboard is probably the most common wood-based product. It is very versatile and has a wide range of applications. Designed for general use in furniture and construction, Sonae Arauco particleboard is a panel consisting of three layers, with a smooth, flat surface.

The various types of particleboards in Sonae Arauco's product portfolio assure the right solution whether for dry or humid conditions, or if there is a need for fire retardants as well. With this range of products, it is possible to choose the best solution for each application. On request, Sonae Arauco particleboard products are available in FSC® or PEFC™ certified wood versions.

## GENERAL CHARACTERISTICS

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)							
			6	> 6 - 10	> 10 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45
Tolerances on nominal dimensions										
Thickness	EN 324-1	mm	± 0,3	± 0,3	± 0,3	± 0,3	± 0,3	± 0,3	± 0,3	± 0,3
Length and width	EN 324-1	mm	± 5	± 5	± 5	± 5	± 5	± 5	± 5	± 5
Squareness	EN 324-2	mm/m	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Moisture content	EN 322	%	5 - 13	5 - 13	5 - 13	5 - 13	5 - 13	5 - 13	5 - 13	5 - 13
Density variation within the board	EN 323	%	± 10	± 10	± 10	± 10	± 10	± 10	± 10	± 10

## STANDARD PRODUCTS

Sonae Arauco's standard particleboard product portfolio includes a wide range of application possibilities, ensuring required quality and performance levels, as well as products meeting the requirements of European standards EN 312 and EN 13986.

They have low formaldehyde emissions (class E1) and most of the available products are compliant with ChemVerbotsV (E05). The products with a thickness of ≥ 9 mm and density higher than 600 kg/m<sup>3</sup> are classified as D-s2, d0 according to EN 13501-1 (reaction to fire).

### PB P2, P4, P6

Particleboard sanded on both sides for use in dry conditions.

APPLICATION	TYPE	THICKNESS RANGE (mm)
Boards for interior fittings (including furniture)	P2	6 to 45
Boards for load-bearing use	P4	10 to 40
Boards for heavy-duty load-bearing use	P6	> 25 to 45

### PB HYDRO X® | MOISTURE RESISTANT | P3, P5, P7

Particleboard sanded on both sides for use in humid conditions.\*

APPLICATION	TYPE	THICKNESS RANGE (mm)
Boards for non-load-bearing use	P3	8 to 45
Boards for load-bearing use	P5	8 to 45
Boards for heavy-duty load-bearing	P7	25 to 40

\*To more easily identify the product, the inner layer in HYDRO X® particleboard is green.

### PB FIRE X® | FIRE RETARDANT | P2, P3, P4, P6

Particleboard sanded on both sides for easy application, with improved fire behaviour properties.\*

APPLICATION	TYPE	THICKNESS RANGE (mm)	EUROCLASS
Boards for non-load-bearing use in dry conditions	P2	10 to 45	B-s1, d0
Boards for non-load-bearing use in humid conditions	P3	10 to 45	B-s1, d0
Boards for load-bearing use in dry conditions	P4	10 to 40	B-s1, d0
Boards for flooring in dry conditions	P4	10 to 40	Bfl - s1
Boards for heavy-duty load-bearing use in dry conditions	P6	> 28 to 40	Bfl - s1

\*To more easily identify the product, the inner layer in FIRE X® particleboard is red.

## CUSTOMISED PRODUCTS

Sonae Arauco's customised product portfolio includes a set of complementary solutions for specific applications in the furniture and construction industries.

### PB LIGHT

Particleboard with low weight, available in thicknesses between > 20 and 45 mm, suitable for use in dry conditions.

APPLICATION	TYPE	THICKNESS RANGE (mm)
Door cores	PB LIGHT	> 20 to 45
	PB ULTRA LIGHT	> 20 to 40

### PB SHUTTERING

Particleboard resistant to humid conditions, with a surface particularly suitable for use in shuttering.

APPLICATION	TYPE
Shuttering	PB P3 SURFACED



## GENERAL APPLICATIONS

SEGMENTS	APPLICATIONS	PB ST	PB HYDRO X®	PB FIRE X®	PB LIGHT / PB ULTRA LIGHT	PB STRUCTURAL*	PB SHUTTERING
<b>DOORS AND FRAMES</b>	Interior doors	•	•	•			
	Door cores				•		
<b>FURNITURE</b>	Residential furniture	•			•		
	Wardrobes and dressers	•					
	Furniture backs and drawer bottoms	•					
	Light construction	•			•		
	Kitchens and counter tops	•	•			•	
	Bathroom furniture	•	•				
	Office furniture	•	•	•		•	
	School furniture	•	•	•			
<b>CONSTRUCTION</b>	Moulding		•				
	Shuttering						•
<b>FLOORING</b>	Access flooring					•	
	Structural flooring					•	
<b>PACKAGING RETAIL AND EXHIBITIONS</b>	Multipurpose crates	•	•			•	
	Public spaces and retail	•	•	•	•	•	
	Exhibitions	•	•	•	•	•	

\* Available also in Moisture Resistant (HYDRO X®) and Fire Retardant (FIRE X®) versions.







**ECOBOARD**

**PB | STANDARD (P2)**

Particleboard suitable for indoor use and in the furniture industry

PB P2 has a fine sanded finish proper to apply decorative surfaces like melamine, veneer or laminate. This particleboard is suitable for the production of furniture and shelving units as it can be easily machined. By default, these products are supplied with E1 certification, in accordance with EN 312 and EN 13986 standards. On request, PB P2 panels are also available in CARB2/EPA, F\*\*\*\* and FF.

E1

**BENEFITS**



EASY TO MILL



VERSATILITY

**APPLICATIONS**

- Furniture
- Doors
- Partitions
- Interior decoration products
- Use in dry conditions

**ALSO AVAILABLE IN**



The mark of responsible forestry  
FSC® C104607



Promoting Sustainable Forest Management  
PEFC® PEFC14-35-0013 www.pefc.org



**CERTIFICATIONS**



**TECHNICAL INFORMATION**

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)						
			6	> 6 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45
<b>PB P2</b>									
Bending strength	EN 310	N/mm <sup>2</sup>	12	11	11	10,5	9,5	8,5	7
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	1950	1800	1600	1500	1350	1200	1050
Internal bond	EN 319	N/mm <sup>2</sup>	0,45	0,40	0,35	0,30	0,25	0,20	0,20
Surface soundness	EN 311	N/mm <sup>2</sup>	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Formaldehyde emission class	E1								
			> 8 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45	
<b>PB P2 E05/CARB2/EPA</b>									
Bending strength	EN 310	N/mm <sup>2</sup>		11	11	10	10	8	7
Modulus of elasticity	EN 310	N/mm <sup>2</sup>		1800	1600	1500	1350	1200	1050
Internal bond	EN 319	N/mm <sup>2</sup>		0,40	0,35	0,30	0,25	0,20	0,20
Surface soundness	EN 311	N/mm <sup>2</sup>		0,8	0,8	0,8	0,8	0,8	0,8
Formaldehyde emission class	CARB Phase 2 / EPA TSCA								

**PRODUCT RANGE**

	FINISH	THICKNESS RANGE (mm)											
		8	10	12	15	16	18	19	22	25	30	35	40
<b>PB P2</b>													
2440 x 1220	SND	•	•	•	•	•	•	•	•	•	•	•	•
2750 x 1830	SND	•	•	•	•	•	•	•	•	•	•	•	•
2800 x 2070	SND	•	•	•	•	•	•	•	•	•	•	•	•
3660 x 2070	SND	•	•	•	•	•	•	•	•	•	•	•	•
<b>PB P2 E05/CARB2/EPA</b>													
2800 x 2070	SND	•	•	•	•	•	•	•	•	•	•	•	•

For CARB2/EPA, NAF or F\*\*\*\*, specific technical datasheets must be requested.  
For the complete and most updated product range, please contact the Sonae Arauco team.





## PB | STRUCTURAL (P4 / P6)

E1

### Particleboard suitable for heavy-duty load-bearing applications

Structural Particleboard, type P4 or P6, is a particleboard to be applied in dry conditions, with high-density and fine sanded surface suitable for coating or laminate. The board has excellent mechanical properties and a particularly adapted core to receive screws and fixation systems. It is easy to mill and has low formaldehyde emissions (E1 class).

Regarding reaction to fire and according to EN 13986, this particleboard is classified as D-s2, d0 (Euroclass definition according to EN 13501-1).

In addition to technical performance, these panels are sustainable and environmentally friendly products.

### BENEFITS



EASY TO MILL



LOAD BEARING

### APPLICATIONS

- Indoor areas in demanding load applications
- Use on structural flooring, walls and roofs
- Structural or access flooring
- Use in dry conditions

### ALSO AVAILABLE IN



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### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)				
			10 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40
<b>PB P4</b>							
Bending strength	EN 310	N/mm <sup>2</sup>	16	15	13	11	9
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2300	2300	2050	1850	1500
Internal bond	EN 319	N/mm <sup>2</sup>	0,40	0,35	0,30	0,25	0,20
Swelling 24h	EN 317	%	16	15	15	15	14
Formaldehyde emission class	E1						
<b>PB P6</b>							
Density*	EN 323	kg/m <sup>3</sup>			690	680	670
Bending strength	EN 310	N/mm <sup>2</sup>			15	14	12
Modulus of elasticity	EN 310	N/mm <sup>2</sup>			2400	2200	2050
Internal bond	EN 319	N/mm <sup>2</sup>			0,35	0,30	0,25
Swelling 24h	EN 317	%			15	14	14
Formaldehyde emission class	E1						

\* Value to be used only as a reference





### PB | HYDRO X (P3)

E1

#### Particleboard suitable for non-load bearing use in humid conditions

PB P3 HYDRO X® is a particleboard with special resistance properties to occasional humidity, with minimal expansion and swelling, for non-load-bearing use. This particleboard has a fine sanded finish and is suitable for countless decorative surfaces applications, such as melamine, veneer or laminate. PB P3 HYDRO X® is available with green pigment in its inner layer. Besides, this product is available with CARB2/EPA certification.

#### BENEFITS



EASY TO MILL



MOISTURE RESISTANT

#### APPLICATIONS

- Kitchen and bathroom furniture
- Non-load-bearing use in humid conditions

#### ALSO AVAILABLE IN



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#### CERTIFICATIONS



### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)					
			8 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45
<b>PB P3 HYDRO X®</b>								
Bending strength	EN 310	N/mm <sup>2</sup>	15	14	12	11	9	7.5
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2050	1950	1850	1700	1550	1350
Internal bond	EN 319	N/mm <sup>2</sup>	0,45	0,45	0,40	0,35	0,30	0,25
Swelling 24h	EN 317	%	17	14	13	13	12	12
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>	0,15	0,13	0,12	0,10	0,09	0,08
Swelling after cyclic test	EN 321	%	14	13	12	12	11	11
Formaldehyde emission class	E1							
			≥8 - 13	>13 - 20	> 20 - 25			
<b>PB P3 HYDRO X® CARB2/EPA</b>								
Bending strength	EN 312	N/mm <sup>2</sup>	15	14	12			
Modulus of elasticity	EN 312	N/mm <sup>2</sup>	2050	1950	1850			
Internal bond	EN 312	N/mm <sup>2</sup>	0,60	0,55	0,50			
Swelling 24 hours	EN 312	%	15	13	12			
Moisture content	EN 312	%	5 - 13	5 - 13	5 - 13			
Internal bond after cyclic test	EN 312	N/mm <sup>2</sup>	0,15	0,13	0,12			
Swelling after cyclic test	EN 312	%	14	13	12			
Formaldehyde emission class	CARB Phase 2 / EPA TSCA							

### PRODUCT RANGE

	FINISH	THICKNESS RANGE (mm)					
		8	10	16	19	22	30
<b>PB P3 HYDRO X®</b>							
2440 x 1220	SND		•	•	•	•	•
2800 x 2070	SND			•	•		
3660 x 2070	SND			•	•		
<b>PB P3 HYDRO X® CARB2/EPA</b>							
2800 x 2070	SND	•	•	•	•		

For CARB2/EPA, NAF or F\*\*\*\*, specific technical datasheets must be requested.  
For the complete and most updated product range, please contact the Sonae Arauco team.





## PB | STRUCTURAL HYDROX<sup>®</sup> (P5 / P7)

E1

### Particleboard suitable for load-bearing use in humid conditions

Structural particleboard with moisture resistant properties, type P5 or P7, is a particleboard with high-density and sanded surface suitable for coating. This particleboard has a high mechanical resistance and performs well in humid environments, with minimal expected expansion and swelling and presents low formaldehyde emissions (E1 class). Regarding reaction to fire and according to EN 13986, this particleboard, above 9 mm, is classified as D-s2, d0 (Euroclass definition according to EN 13501-1). These products are available with green pigment on its inner layer.

### BENEFITS



EASY TO MILL

MOISTURE  
RESISTANTLOAD  
BEARING

### APPLICATIONS

- Building structural floors, walls and ceiling lining
- Load-bearing use in humid conditions

### ALSO AVAILABLE IN



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PEFC14-35-0013 www.pefc.org



### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)							
			≥ 8 - 10	> 10 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45	
<b>PB P5 HYDRO X<sup>®</sup></b>										
Bending strength	EN 310	N/mm <sup>2</sup>	18	18	16	14	12	10	9	
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2550	2550	2400	2150	1900	1700	1550	
Internal bond	EN 319	N/mm <sup>2</sup>	0,45	0,45	0,45	0,40	0,35	0,30	0,25	
Swelling 24h	EN 317	%	13	11	10	10	10	9	9	
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>	0,25	0,25	0,22	0,20	0,17	0,15	0,12	
Swelling after cyclic test	EN 321	%	12	12	12	11	10	9	9	
Formaldehyde emission class									E1	
<b>PB P7 HYDRO X<sup>®</sup></b>										
Density*	EN 323	kg/m <sup>3</sup>					740	730		
Bending strength	EN 310	N/mm <sup>2</sup>					17	16		
Modulus of elasticity	EN 310	N/mm <sup>2</sup>					2800	2600		
Internal bond	EN 319	N/mm <sup>2</sup>					0,60	0,55		
Swelling 24h	EN 317	%					10	9		
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>					0,28	0,25		
Swelling after cyclic test	EN 321	%					9	8		
Formaldehyde emission class									E1	

\* Value to be used only as a reference





**PB | FIRE X<sup>®</sup> (P2 / P3)**



**Particleboard for non-load-bearing indoor use, with improved fire reaction**

PB FIRE X<sup>®</sup> is a particleboard with added fire retardants. It has a fine sanded finish, making it suitable for countless decorative surface applications, such as melamine, veneer or laminate. These products are available with red pigment in the inner layer. Given its fire retardant properties, this product helps to delay combustion. This means that when it is submitted to high temperature fire (reaching 700°C in the first few minutes), it does not deform like steel, crack like plaster or melt like plastic. This allows greater reaction and intervention time for firefighting and delaying the spread of fire, as it does not give off flames or inflammable particles. Regarding fire behaviour, PB FIRE X<sup>®</sup> is classified as B-s1, d0 [Euroclass definition according to EN 13501-1].

**BENEFITS**



**APPLICATIONS**

- Interior decoration products and wall finishes, especially for public spaces
- Retail and exhibitions
- Non-load-bearing use in dry conditions [P2] or humid conditions [P3]

**ALSO AVAILABLE IN**



**CERTIFICATIONS**



**TECHNICAL INFORMATION**

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)					
			≥ 10 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45
<b>PB P2 FIRE X<sup>®</sup> E05/CARB2/EPA</b>								
Bending strength	EN 310	N/mm <sup>2</sup>	11	11	10,5	9,5	8,5	7
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	1800	1600	1500	1350	1200	1050
Internal bond	EN 319	N/mm <sup>2</sup>	0,40	0,35	0,30	0,25	0,20	0,20
Surface soundness	EN 311	N/mm <sup>2</sup>	0,80	0,80	0,80	0,80	0,80	0,80
Formaldehyde emission class	CARB PHASE 2 / EPA TSCA							
<b>PB P3 FIRE X<sup>®</sup></b>								
Bending strength	EN 310	N/mm <sup>2</sup>	15	14	12	11	9	7,5
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2050	1950	1850	1700	1550	1350
Internal bond	EN 319	N/mm <sup>2</sup>	0,45	0,45	0,40	0,35	0,30	0,25
Swelling 24h	EN 317	%	17	14	13	13	12	12
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>	0,15	0,13	0,12	0,10	0,09	0,08
Swelling after cyclic test	EN 321	%	14	13	12	12	11	11
Formaldehyde emission class	E1							

**PRODUCT RANGE**

	FINISH	THICKNESS RANGE (mm)		
		10	16	19
<b>PB P2 FIRE X<sup>®</sup> E05/CARB2/EPA</b>				
2440 x 1220	SND	•	•	•
2800 x 2070	SND	•	•	•





## PB | STRUCTURAL FIRE X<sup>®</sup> (P4 / P6)

E1

### Particleboard suitable for load-bearing use with improved fire retardant properties

PB FIRE X<sup>®</sup> is a structural particleboard, type P4 or P6, with high-density and fine sanded surface suitable for coating or laminate, to be applied in dry conditions. The board, with red pigment in the inner layer, has excellent mechanical characteristics and a particularly adapted core to receive screws and fixation systems. It is an easy to mill product with low formaldehyde emissions [E1 Class]. Regarding fire reaction and according to EN 13986, the particleboard type P4 is classified as Bs1, d0 and Bfl-s1. The particleboard type P6 is Bfl-s1 [Euroclass definition according to EN 13501-1].

### BENEFITS



EASY TO MILL



LOAD BEARING



FIRE RETARDANT

### APPLICATIONS

#### PB P4 FIRE X<sup>®</sup>

- Built-in furniture, shelving units and furniture with specific requirements, especially in public buildings
- Wall and roof finishes
- Load-bearing use on floors, in dry conditions

#### PB P6 FIRE X<sup>®</sup>

- Structural use on ceilings and floors
- High load-bearing capacity in dry conditions

### ALSO AVAILABLE IN



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### CERTIFICATIONS



### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)				
			10 - 13	> 13 - 20	> 20 - 25	> 25 - 32	> 32 - 40
<b>PB P4 FIRE X<sup>®</sup></b>							
Bending strength	EN 310	N/mm <sup>2</sup>	16	15	13	11	9
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2300	2300	2050	1850	1500
Internal bond	EN 319	N/mm <sup>2</sup>	0,40	0,35	0,30	0,25	0,20
Swelling 24h	EN 317	%	16	15	15	15	14
Formaldehyde emission class							E1
<b>PB P6 FIRE X<sup>®</sup></b>							
Density*	EN 323	kg/m <sup>3</sup>				730	730
Bending strength	EN 310	N/mm <sup>2</sup>				15	14
Modulus of elasticity	EN 310	N/mm <sup>2</sup>				2400	2200
Internal bond	EN 319	N/mm <sup>2</sup>				0,35	0,30
Swelling 24h	EN 317	%				15	14
Formaldehyde emission class							E1

\* Value to be used only as a reference

Structural fire retardant particleboard dimensions under request.

For the complete and most updated product range, please contact the Sonae Arauco team.





**PB LIGHT**

E1

**Low density particleboard for indoor use**

PB LIGHT is a low density particleboard, suitable for indoor non-structural use in dry conditions. PB LIGHT can be transformed and machined in most industrial transformation processes. It is particularly suitable for making doors, where low weight is an important factor. This product is also available in an ULTRA LIGHT version, with even lower densities.

**BENEFITS**



EASY TO MILL



VERSATILITY



LIGHT

**APPLICATIONS**

- Doors
- Furniture
- Use in dry conditions

**ALSO AVAILABLE IN**



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**TECHNICAL INFORMATION**

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)			
			> 20 - 25	> 25 - 32	> 32 - 40	> 40 - 45
<b>PB LIGHT</b>						
Density*	EN 323	kg/m <sup>3</sup>	550	550	550	550
Bending strength	EN 310	N/mm <sup>2</sup>	6	5	4.5	4
Internal bond	EN 319	N/mm <sup>2</sup>	0,25	0,20	0,17	0,17
Formaldehyde emission class	E1					
<b>PB ULTRA LIGHT</b>						
Density*	EN 323	kg/m <sup>3</sup>	500	500	500	
Bending strength	EN 310	N/mm <sup>2</sup>	4	3.5	3	
Internal bond	EN 319	N/mm <sup>2</sup>	0,20	0,17	0,14	
Formaldehyde emission class	E1					

\* Value to be used only as a reference





## PB SHUTTERING

Moisture resistant particleboard with a surface specially prepared for shuttering

PB SHUTTERING is a particleboard type P3 for non-structural use. It's suitable for applications in humid conditions and is particularly suitable for use in shuttering.

### BENEFITS



EASY TO MILL



MOISTURE RESISTANT

### ALSO AVAILABLE IN



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### APPLICATIONS

- Shuttering
- Bases for roofs and flooring

### CERTIFICATIONS



E1

## TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)			
			> 8 - 13	> 13 - 20	> 20 - 25	> 25 - 32
<b>PB SHUTTERING</b>						
Bending strength	EN 310	N/mm <sup>2</sup>	15	14	12	11
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2050	1950	1850	1700
Internal bond	EN 319	N/mm <sup>2</sup>	0,45	0,45	0,40	0,35
Swelling 24h	EN 317	%	17	14	13	13
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>	0,15	0,13	0,12	0,10
Swelling after cyclic test	EN 321	%	14	13	12	12
Formaldehyde emission class	E1					

## PRODUCT RANGE

	FINISH	THICKNESS RANGE (mm)		
		10	19	22
<b>PB SHUTTERING</b>				
2440 x 1220	Surfaced	•	•	•

Particleboard for Shuttering dimensions under request.

For the complete and most updated product range, please contact the Sonae Arauco team.



# MDF

## MEDIUM DENSITY FIBREBOARD

Resistance and flexibility  
for personalised projects

### STANDARD PRODUCTS

- MDF ST
- MDF BASIC
- MDF THIN
- MDF HYDRO X®
- MDF THIN HYDRO X®
- MDF FIRE X®

### CUSTOMISED PRODUCTS

- MDF NOVOLAC®
- MDF SUPERLAC®
- HDF FLOORING
- MDF FORM®





MDF is a wood-based product that can actually replace solid wood and its use has been increasing continuously all over the world.

MDF has high mechanical resistance and good dimensional stability against temperature variations and moisture in the environment. This is why it is a product with a wide range of applications.

Perfectly suited for meeting the requirements of furniture or flooring applications, the need for them to be moisture resistant or fire retardant, low density or shaping capacity, or even for use in construction, Sonae Arauco MDF boards have smooth homogeneous finishes, which are ideal for lacquering or applying melamine and laminate decorative surfaces. These MDF boards can also be easily machined.

On request, Sonae Arauco MDF products are available in FSC® or PEFC™ certified wood versions.

## GENERAL CHARACTERISTICS

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)								
			2 - 2,5	> 2,5 - 4	> 4 - 6	> 6 - 9	> 9 - 12	> 12 - 19	> 19 - 30	> 30 - 35	
Tolerances on nominal dimensions											
Thickness (sanded)	EN 324-1	mm	± 0,2	± 0,2	± 0,2	± 0,2	± 0,2	± 0,2	± 0,2	± 0,3	± 0,3
Length and width	EN 324-1	mm/m	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)	± 2 (máx 5 mm)
Squareness	EN 324-2	mm/m	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Moisture content	EN 322	%	4 - 11	4 - 11	4 - 11	4 - 11	4 - 11	4 - 11	4 - 11	4 - 11	4 - 11
Density variation within the board	EN 323	%	± 7	± 7	± 7	± 7	± 7	± 7	± 7	± 7	± 7

## STANDARD PRODUCTS

All MDF boards supplied by Sonae Arauco are produced with the greatest care and quality, meeting the requirements of European standards EN 622 and EN 13986.

Sonae Arauco MDF products have low formaldehyde emissions (CARB2/EPA certification) and the boards with a thickness of ≥ 9 mm and density higher than 600 kg/m<sup>3</sup> are classified as D-s2, d0 according to EN 13501-1 (reaction to fire).

## MDF

Wood-based fibreboards available in thicknesses from 2 to 35 mm for general purpose use in dry conditions.

APPLICATION	TYPE
Boards for non-load-bearing use	MDF MDF THIN

## MDF HYDRO X®

Wood-based fibreboard with a high moisture resistance ratio, for use in humid conditions, available in thicknesses of 2,5 to 30 mm.

APPLICATION	TYPE
Boards for non-load-bearing use	MDF.H MDF THIN

## MDF FIRE X®

Wood-based fibreboard, available in thicknesses from 10 to 25 mm with improved fire retardant performance for use in dry conditions.

APPLICATION	TYPE	EUROCLASS
Boards for non-load-bearing use	MDF	B-s2, d0

## CUSTOMISED PRODUCTS

Sonae Arauco's customised product portfolio offers a range of complementary solutions adapted to specific applications, where the choice of a suitable material is a vital factor in the final result.

Depending on the product, wood-based fibreboard is available in thicknesses from 2,5 to 30 mm with special properties for use in dry conditions.

APPLICATION	TYPE
Boards for use in furniture and wall panelling	MDF NOVOLAC® MDF SUPERLAC® MDF FORM®
Boards for use in flooring	HDF FLOORING





## GENERAL APPLICATIONS

SEGMENTS	APPLICATIONS	MDF ST	MDF HYDRO X®	MDF THIN / MDF THIN HYDRO X®	MDF FIRE X®	MDF NOVOLAC®	MDF SUPERLAC®	HDF FLOORING	MDF FORM®
<b>DOORS AND FRAMES</b>	Interior doors	.	.	.	.	.	.		
	Door cores								
<b>FURNITURE</b>	Residential furniture	.				.	.		.
	Wardrobes and dressers	.					.		
	Furniture backs and drawer bottoms			.					
	Light construction			.					
	Kitchens and countertops	.	.			.	.		
	Bathroom furniture	.	.			.	.		
	Lockers and partitions					.			
	Office furniture	.				.	.		
	School furniture	.				.	.		
<b>CONSTRUCTION</b>	Ceilings		.						
	Shuttering		.						
	Insulation								
	Acoustic solutions	.			.	.			
	Skirting boards / door frames	.	.		.		.		
	Wall panelling	.	.		.		.		.
<b>FLOORING</b>	Laminated flooring							.	
<b>PACKAGING</b>	Fruit and vegetable crates			.					
	Gift boxes			.					
	Multipurpose crates	.	.						
<b>RETAIL AND EXHIBITIONS</b>	Public spaces and retail	.	.	.	.	.	.		.
	Exhibitions	.	.	.					.





### MDF ST CARB2/EPA



MDF ST CARB2/EPA for non-load-bearing use in dry, indoor environments (EN 622-5 type MDF)

MDF ST CARB2/EPA is a medium density fibreboard panel for indoor non-structural use in a dry conditions. The MDF ST CARB2/EPA is an extremely versatile product suitable for a wide range of uses, in particular furniture production, bearing in mind its high machinability and low formaldehyde emission levels. It is classified as D-s2, d0 (Euroclass definition according to EN 13501-1), according to EN 13986 (for a minimum thickness of 9 mm).

MDF ST is also available in boards produced with formaldehyde-free glues, with NAF certification.

### BENEFITS



EASY TO MILL



VERSATILITY

### APPLICATIONS

- Furniture
- Retail and exhibitions
- Interior finishes
- Public buildings such as schools, kindergartens, museums, courts and offices
- Non-load-bearing use in dry conditions

### ALSO AVAILABLE IN



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E05



### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)					
			6	> 6 - 9	> 9 - 12	> 12 - 19	> 19 - 30	> 30 - 35
<b>MDF ST CARB2/EPA</b>								
Density*	EN 323	kg/m <sup>3</sup>	820	780	770	700	680	680
Bending strength	EN 310	N/mm <sup>2</sup>	23	23	22	20	18	17
Internal bond	EN 319	N/mm <sup>2</sup>	0,80	0,75	0,70	0,65	0,65	0,60
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2700	2700	2500	2200	2100	1900
Swelling 24h	EN 317	%	30	17	15	12	10	8
Formaldehyde emission class	CARB Phase 2 / EPA TSCA							

\* Value to be used only as a reference

### PRODUCT RANGE

	FINISH	THICKNESS RANGE (mm)												
		6	7	8	10	12	15	16	18	19	22	25	30	35
<b>MDF ST CARB2/EPA</b>														
2440 x 1220	SND	•	•	•	•	•	•	•	•	•	•	•	•	•
2440 x 2070	SND	•	•											
2750 x 1830	SND			•	•	•	•	•	•	•	•	•	•	•
2800 x 2070	SND			•	•	•	•	•	•	•	•	•	•	•
3660 x 2070	SND			•	•	•	•	•	•	•	•	•	•	•

For CARB2/EPA, NAF or F\*\*\*\*, specific technical datasheets must be requested.

For the complete and most updated product range, please contact the Sonae Arauco team.





## MDF BASIC CARB2/EPA



### Medium density fibreboard for basic applications in dry conditions

MDF BASIC CARB2/EPA is a medium density fibreboard that is easy to mill, for non-structural interior applications, in dry conditions. MDF BASIC CARB2/EPA has low formaldehyde emissions, certified according to the rules of the official California Air Resource Board (CARB). Regarding reaction to fire and according to EN 13986, MDF BASIC CARB2/EPA, with a thickness  $\geq 9$  mm and a minimum density of  $600 \text{ kg/m}^3$ , is classified as D-s2, d0 (Euroclass definition according to EN 13501-1). In addition to technical performance, MDF BASIC CARB2/EPA panels are sustainable and environmentally friendly products.

### BENEFITS



EASY TO MILL



VERSATILITY

### APPLICATIONS

- Furniture
- Panelling
- Offices and education
- Restaurants and hotels
- Health and wellness
- Retail and exhibitions
- Doors

### ALSO AVAILABLE IN



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## TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)					
			4	> 4 - 6	> 6 - 9	> 9 - 12	> 12 - 19	> 19 - 30
<b>MDF BASIC CARB2/EPA</b>								
Density*	EN 323	kg/m <sup>3</sup>	650	650	650	650	650	650
Bending strength	EN 310	N/mm <sup>2</sup>	23	23	23	22	20	18
Internal bond	EN 319	N/mm <sup>2</sup>	0,70	0,70	0,70	0,65	0,60	0,60
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	--	2700	2700	2500	2200	2100
Swelling 24h	EN 317	%	35	30	17	15	12	10
Formaldehyde emission class	CARB Phase 2 / EPA TSCA							

\* Value to be used only as a reference

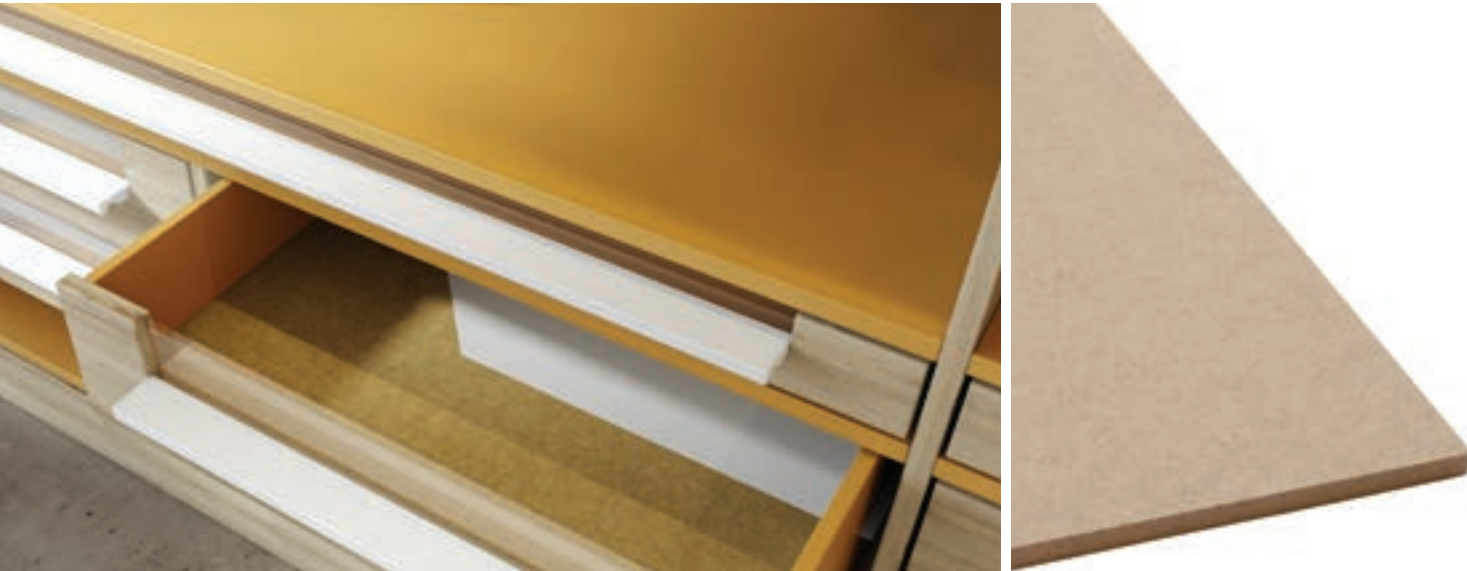
## PRODUCT RANGE

	FINISH	THICKNESS RANGE (mm)				
		9	12	15	22	28
<b>MDF BASIC CARB2/EPA</b>						
2250 x 1220	SND	•	•	•	•	•

For CARB2/EPA, NAF or F\*\*\*\*, specific technical datasheets must be requested.

For the complete and most updated product range, please contact the Sonae Arauco team.





## MDF THIN CARB2/EPA



### MDF for non-load-bearing use in dry conditions (EN 622-5 type MDF)

MDF THIN CARB2/EPA is the low thickness range medium density fibreboard panel. Its exceptionally homogeneous surface is ready for any kind of finish. Its elasticity allows for easy implementation of elegant curves.

## BENEFITS



EASY TO MILL



VERSATILITY

## APPLICATIONS

- Furniture backs and drawer bottoms
- Wall panelling
- Interior doors
- Manufacture of gifts, frames and household items
- Laminated curved structures
- Packaging
- Non-load-bearing use in dry conditions

## ALSO AVAILABLE IN



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## TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)		
			2 - 2,5	> 2,5 - 4	> 4 - 5
<b>MDF THIN CARB2/EPA</b>					
Density*	EN 323	kg/m <sup>3</sup>	860	840	820
Bending strength	EN 310	N/mm <sup>2</sup>		23	
Internal bond	EN 319	N/mm <sup>2</sup>	0,90	0,85	0,80
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	--	--	2700
Swelling 24h	EN 317	%	45	35	30
Formaldehyde emission class	CARB Phase 2 / EPA TSCA				

\* Value to be used only as a reference

## PRODUCT RANGE

	FINISH	THICKNESS RANGE (mm)			
		2,5	3	4	5
<b>MDF THIN CARB2/EPA</b>					
2050 x 650	SND		•		•
2050 x 750	SND		•		•
2050 x 850	SND		•		•
2050 x 950	SND		•		•
2130 x 750	SND		•		•
2130 x 850	SND		•		•
2440 x 1220	SND	•	•	•	•
2440 x 1830	SND	•	•	•	•
2440 x 2070	SND	•	•	•	•

For CARB2/EPA, NAF or F\*\*\*\*, specific technical datasheets must be requested.

For the complete and most updated product range, please contact the Sonae Arauco team.





**MDF HYDRO X<sup>®</sup> CARB2/EPA**



**MDF for use in humid conditions (EN 622-5 type MDF.H)**

MDF HYDRO X<sup>®</sup> CARB2/EPA with moisture resistance properties is the right choice for rooms with high relative humidity, such as bathrooms and kitchens. This product has very low swelling values thanks to the use of special resins in its production. It also has excellent dimensional stability against variations in relative humidity in the environment where it is used.

**BENEFITS**



EASY TO MILL



VERSATILITY



DIMENSIONAL STABILITY



MOISTURE RESISTANT

**APPLICATIONS**

- Kitchen and bathroom furniture
- Doors and profiles
- Window frames
- Non-load-bearing use in humid conditions

**ALSO AVAILABLE IN**



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**CERTIFICATIONS**



**TECHNICAL INFORMATION**

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)				
			6	> 6 - 9	> 9 - 12	> 12 - 19	> 19 - 30
<b>MDF HYDRO X<sup>®</sup> CARB2/EPA</b>							
Density*	EN 323	kg/m <sup>3</sup>	820	780	770	780	730
Bending strength	EN 310	N/mm <sup>2</sup>	27	27	26	24	22
Internal bond	EN 319	N/mm <sup>2</sup>	0,70	0,80	0,80	0,75	0,75
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2700	2700	2500	2400	2300
Swelling 24h	EN 317	%	18	12	10	8	7
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>	0,35	0,30	0,25	0,20	0,15
Swelling after cyclic test	EN 321	%	25	19	16	15	15
Formaldehyde emission class	CARB Phase 2 / EPA TSCA						

\* Value to be used only as a reference

**PRODUCT RANGE**

	FINISH	THICKNESS RANGE (mm)										
		8	9	10	12	15	16	19	22	25	28	30
<b>MDF HYDRO X<sup>®</sup> CARB2/EPA</b>												
2250 x 1220	SND		•		•	•			•		•	
2440 x 1220	SND			•	•		•	•	•	•		•
2750 x 1830	SND	•		•	•		•	•	•	•		•
2800 x 2070	SND			•			•	•		•		•
3660 x 2070	SND						•	•				

For the complete and most updated product range, please contact the Sonae Arauco team.





### MDF THIN HYDRO X® CARB2/EPA



MDF THIN HYDRO X® CARB2/EPA is a moisture resistant medium density fibreboard (EN 622-5 type MDF.H)

The wood fibres and special resins used in its production give this product good dimensional stability and low swelling, making it the best option for use in areas with temporary exposure to high humidity, such as kitchens or bathrooms.

#### BENEFITS



EASY TO MILL



VERSATILITY



DIMENSIONAL STABILITY



MOISTURE RESISTANT

#### APPLICATIONS

- Kitchen and bathroom furniture
- Doors and profiles
- Window frames
- Non-structural use in humid conditions

#### ALSO AVAILABLE IN



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#### CERTIFICATIONS



#### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)		
			2,5	> 2,5 - 4	> 4 - 5
<b>MDF THIN HYDRO X® CARB2/EPA</b>					
Density*	EN 323	kg/m <sup>3</sup>	860	840	820
Bending strength	EN 310	N/mm <sup>2</sup>	27	27	27
Internal bond	EN 319	N/mm <sup>2</sup>	0,70	0,70	0,70
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2700	2700	2700
Swelling 24h	EN 317	%	35	30	18
Internal bond after cyclic test	EN 321	N/mm <sup>2</sup>	0,35	0,35	0,35
Swelling after cyclic test	EN 321	%	50	40	25
Formaldehyde emission class	CARB Phase 2 / EPA TSCA				

\* Value to be used only as a reference





## MDF FIRE X<sup>®</sup> CARB2/EPA



MDF with improved reaction to fire (fire retardant) for general non-load-bearing use in dry conditions (EN 622-5 type MDF)

MDF FIRE X<sup>®</sup> CARB2/EPA is a medium density fibreboard panel for indoor use in a dry environment and has an improved reaction to fire. This product is suitable for a wide range of uses such as furniture, doors, and finishing on walls and ceilings in areas subject to compliance with special fire regulations, as it contributes to reducing combustion and heat, as well as reducing or slowing the spread of fire. MDF FIRE X<sup>®</sup> CARB2/EPA is classified as B-s2, d0 (Euroclass definition according to EN 13501-1), according to EN 13986, and has low formaldehyde emission levels.

On request, MDF FIRE X<sup>®</sup> is also available with a NAF certificate.

### BENEFITS



VERSATILITY



FIRE  
RETARDANT

### APPLICATIONS

- Public buildings (such as shopping centres, hospitals, schools, concert halls, hotels, etc.)
- Retail and exhibitions
- Doors
- General non-load-bearing use in dry conditions

### ALSO AVAILABLE IN



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### TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)		
			10 - 12	> 12 - 19	> 19 - 25
<b>MDF FIRE X<sup>®</sup> CARB2/EPA</b>					
Density*	EN 323	kg/m <sup>3</sup>	820	820	820
Bending strength	EN 310	N/mm <sup>2</sup>	22	20	18
Internal bond	EN 319	N/mm <sup>2</sup>	0,80	0,80	0,80
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	2500	2200	2100
Swelling 24h	EN 317	%	15	12	10
Formaldehyde emission class	CARB Phase 2 / EPA TSCA				

\* Value to be used only as a reference

### PRODUCT RANGE

	FINISH	THICKNESS RANGE (mm)		
		12	16	19
<b>MDF FIRE X<sup>®</sup> CARB2/EPA</b>				
2440 x 1220	SND	•	•	•
2800 x 2070	SND	•	•	•

For NAF specific technical datasheet must be requested.

For the complete and most updated product range, please contact the Sonae Arauco team.





**ECOBOARD**

**MDF NOVOLAC CARB2/EPA**



The ideal MDF for deep routing in non-load-bearing applications

MDF NOVOLAC® CARB2/EPA is ideal for producing three-dimensional components for furniture and interior design. The quality of its particularly fine fibres combined with a density that is significantly higher in the surfaces, means that this MDF meets the most demanding milling requirements. Its surface remains uniform and smooth, even after deep routing, and can be painted or finished with excellent results.

**BENEFITS**



EASY TO MILL



DEEP ROUTERING



PERFECT LACQUERING

**APPLICATIONS**

- Furniture manufacturing, particularly 3D furniture fronts and table tops
- Retail and exhibitions
- Wall panelling and door manufacture
- Non-load-bearing use in dry conditions

**ALSO AVAILABLE IN**



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**TECHNICAL INFORMATION**

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)					
			4	> 4 - 6	> 6 - 9	> 9 - 12	> 12 - 19	> 19 - 30
<b>MDF NOVOLAC® CARB2/EPA</b>								
Density*	EN 323	kg/m <sup>3</sup>	840	820	780	770	800	730
Bending strength	EN 310	N/mm <sup>2</sup>	23	23	23	22	20	18
Internal bond	EN 319	N/mm <sup>2</sup>	1,20	1,20	1,20	1,20	1,20	1,20
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	--	2700	2700	2500	2200	2100
Swelling 24h	EN 317	%	35	30	17	15	12	10
Formaldehyde emission class	CARB Phase 2 / EPA TSCA							

\* Value to be used only as a reference

**PRODUCT RANGE**

	FINISH	THICKNESS RANGE (mm)		
		16	19	22
<b>MDF NOVOLAC® CARB2/EPA</b>				
2800 x 2070	SND	•	•	•
3660 x 2070	SND	•	•	•

For the complete and most updated product range, please contact the Sonae Arauco team.





**MDF SUPERLAC<sup>®</sup> CARB2/EPA**



MDF for non-load-bearing use in dry conditions with high lacquering quality properties

The particularly fine fibre in MDF SUPERLAC<sup>®</sup> CARB2/EPA is impressive, making it the perfect solution for any kind of high gloss paint or finish. It is smoothly sanded on both sides and can be used with all painting systems. Its excellent quality combined with its high processing capacity makes MDF SUPERLAC<sup>®</sup> CARB2/EPA the ideal material for painted indoor applications in dry conditions.

**BENEFITS**



PERFECT LACQUERING



VERSATILITY



EASY TO MILL

**APPLICATIONS**

- High quality furniture
- Retail and exhibitions
- Lacquers and paints with demanding finishes (e.g. glass)
- Non-load-bearing use in dry conditions

**ALSO AVAILABLE IN**



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**TECHNICAL INFORMATION**

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)							
			2,5	>2,5 - 4	> 4 - 6	> 6 - 9	> 9 - 12	>12 - 19	>19 - 30	> 30 - 35
<b>MDF SUPERLAC<sup>®</sup> CARB2/EPA</b>										
Density*	EN 323	kg/m <sup>3</sup>	860	840	820	780	770	770	730	720
Bending strength	EN 310	N/mm <sup>2</sup>	23	23	23	23	22	20	18	28
Internal bond	EN 319	N/mm <sup>2</sup>	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,65
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	--	--	2700	2700	2500	2200	2100	1900
Swelling 24h	EN 317	%	45	35	30	17	15	12	10	16
Formaldehyde emission class	CARB Phase 2 / EPA TSCA									

\* Value to be used only as a reference

**PRODUCT RANGE**

	FINISH	THICKNESS RANGE (mm)		
		3	5	8
<b>MDF SUPERLAC<sup>®</sup> CARB2/EPA</b>				
2050 x 640	SND	•	•	•
2050 x 740	SND	•	•	•
2050 x 840	SND	•	•	•
2050 x 940	SND	•	•	•
2440 X 1220	SND	•	•	•

For the complete and most updated product range, please contact the Sonae Arauco team.





## TECHNICAL INFORMATION

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)		
			6	> 6 - 8	9
<b>HDF FLOORING CARB2/EPA</b>					
Density*	EN 323	kg/m <sup>3</sup>	870	870	820
Bending strength	EN 310	N/mm <sup>2</sup>	50	50	37
Internal bond	EN 319	N/mm <sup>2</sup>	1,50	1,25	1,00
Modulus of elasticity	EN 310	N/mm <sup>2</sup>	4000	4000	2700
Swelling 24h	EN 317	%	16	12	10
Formaldehyde emission class	CARB Phase 2 / EPA TSCA				

\* Value to be used only as a reference

## HDF FLOORING CARB2/EPA



### High-density MDF for floating floor substrates

The structure and density of the HDF FLOORING CARB2/EPA product range make it suitable for applications that are demanding with regard to mechanical resistance and that are subject to high wear and tear, as is the case with floors. Its smooth uniform surfaces mean it is suitable for any kind of flooring finish.

In addition to its technical properties, this product exhibits improved behaviour to moisture and can also be customised with different swelling levels.

## BENEFITS



EASY TO MILL



VERSATILITY

## APPLICATIONS

- Floating floor

## ALSO AVAILABLE IN



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For the complete and most updated product range, please contact the Sonae Arauco team.





## MDF FORM

E05

### Mouldable MDF for curved applications

MDF FORM® opens up new possibilities for the development of creative solutions. Whether it is varnished, lacquered, veneered or laminated, this product will allow you to create elegant curved surfaces quickly and easily. The precise milling of the grooves and the accurate depths allow for perfect moulding for curvature radiuses  $\geq 150$  mm. Product available in thickness of 8 and 10 mm with vertical grooves.

### BENEFITS



VERSATILITY



MOULDABLE

### APPLICATIONS

- Shops and exhibitions
- Counters
- Finishes for walls, arches and pillars
- Design parts
- Use of grooves as a design element
- Use in dry conditions

### ALSO AVAILABLE IN



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**3DF**

E05

**An innovative wood-based composite for compression moulding processes**

3DF panels allow for infinite design possibilities: building deep structures, elegant arcs and curves is now possible in a single operation. During the development of the furniture element concept, 3DF also allows for defining the inclusion of details for fixing systems or others to guarantee a final product that is easy to build and with built in screws. 3DF is produced with a formaldehyde free thermoplastic glue that, with the action of temperature and pressure, can be shaped into the required densities and thicknesses. On top, the surface achieved is perfect for lacquering, and powder coating is also possible. Depending on bending radius and structure deepness, it can be surfaced with thin CPL or 3D foil directly during the moulding process. The product gives you the design freedom required for your most demanding projects, combined with the advantages of a sustainable and controlled wood-based panel. Product supplied without moulding. The photo is merely illustrative of the final product after moulding.

**BENEFITS**



VERSATILITY



MOULDABLE



LOW EMISSIONS



PERFECT LACQUERING

**APPLICATIONS**

- Doors
- Kitchens
- Panelling
- Bedrooms
- Offices
- Living rooms

**ALSO AVAILABLE IN**



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**TECHNICAL INFORMATION**

		INITIAL THICKNESS (mm)			
		5,7	8,5	17	30
3DF PROPERTIES	UNIT				
Density*	kg/m <sup>3</sup>	600	600	500	440
3DF PROPERTIES AFTER PRESS					
Thickness	mm	3,6	5,2	8,7	13,7
Density*	kg/m <sup>3</sup>	970	970	970	970
Internal bond	N/mm <sup>2</sup>	2,7	2,1	2,8	2,0
Modulus of rupture	N/mm <sup>2</sup>	39	40	46	46
Modulus of elasticity	N/mm <sup>2</sup>	3400	3900	4000	4700
Swelling 24h	%	12	12	9	5

\* Value to be used only as a reference

**PRODUCT RANGE**

		THICKNESS RANGE (mm)			
		5,7	8,5	17	30
3DF					
2440 x 2100	SND	•	•	•	•

For the complete and most updated product range, please contact the Sonae Arauco team.



OSB

# OSB

## ORIENTED STRAND BOARD

Durability for demanding applications

- OSB 2 ECOBOARD®
- OSB 3 ECOBOARD®
- OSB 4 ECOBOARD®





OSB panels - oriented strand board – are particularly suitable for use in the construction industry. The three bonded layers of long wood strands, arranged at right angles to each other, provide a panel with an excellent modulus of elasticity and bending resistance values.

OSB formats assure high versatility in building walls which, along with its moisture resistant properties, make this an unique product. This product is suitable for practically all kinds of roofs, including bitumen, bricks and tiles. When used in combination with solid wood to form an I-joists, construction becomes cheaper and simpler.

OSB is also excellent for flooring, from use in dry domestic conditions to use in high moisture conditions. It is also available with a tongue and groove system on 2 or 4 edges, for fixed or floating construction.

OSB can also be used as a decorative solution due to its natural wood pattern, varnished or painted, making it suitable for furniture and interior decoration. In the packing industry, under wet or dry conditions, OSB gives a higher cost-benefit ratio due to its resistance, lightness and availability in larger sizes.

Last, but by no means least, OSB is a truly eco-efficient option with excellent mechanical performance. The raw materials used are small logs of previously selected wood.

Sonae Arauco OSB panels are produced with formaldehyde-free glue, complying with the requirements of EN 300 and EN 13986.

On request, these panels are available in FSC® or PEFC™ certified wood versions.

## GENERAL CHARACTERISTICS

PROPERTY	TEST	UNIT	THICKNESS RANGE (mm)				
			> 6 - 10	> 10 - 18	> 18 - 25	> 25 - 32	> 32 - 40
Tolerances on nominal dimensions							
Thickness sanded	EN 324-1	mm	± 0,3	± 0,3	± 0,3	± 0,3	± 0,3
Thickness unsanded	EN 324-1	mm	± 0,8	± 0,8	± 0,8	± 0,8	± 0,8
Length and width	EN 324-1	mm	± 3	± 3	± 3	± 3	± 3
Squareness	EN 324-2	mm/m	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Moisture content	EN 322	%	2 - 12	2 - 12	2 - 12	2 - 12	2 - 12
Density variation within the board	EN 323	%	± 15	± 15	± 15	± 15	± 15

APPLICATION	DRY CONDITIONS	HUMID CONDITIONS
Boards for load-bearing use	OSB 2	OSB 3
Boards for heavy-duty, load-bearing use		OSB 4

## GENERAL APPLICATIONS

SEGMENTS	APPLICATIONS	OSB 2	OSB 3	OSB 4
CONSTRUCTION	Roofs		•	•
	Shuttering		•	•
	Ceilings		•	•
	Wall panelling	•	•	•
FLOORING	Tongue and groove flooring		•	•
	Technical flooring		•	•
PACKAGING	Gift boxes	•	•	
	Multipurpose crates	•	•	
RETAIL AND EXHIBITIONS	Public spaces and retail	•	•	•
	Exhibitions	•	•	•




**ECOBOARD**

## OSB 2 ECOBOARD

E05

FF

### OSB designed for structural use in dry conditions

OSB 2 ECOBOARD® is a structured panel with three layers of long wood strands arranged at right angles to each other, bonded with resin applied under high temperature and pressure. In the outer layers, the particles are arranged lengthwise in relation to the length of the board; in the inner layer, they are at right angles to the length of the board. It is a product with an excellent mechanical resistance and durability and is extremely versatile.

### BENEFITS



DURABILITY



VERSATILITY



VERY LOW EMISSIONS

### APPLICATIONS

- Shop fitting and exhibition stand construction
- Decorative areas in the interior construction
- Load-bearing and floating floor construction
- Load-bearing OSB panel for use in dry conditions (service class 1)

### ALSO AVAILABLE IN



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### TECHNICAL INFORMATION

PROPERTIES	UNIT	THICKNESS RANGE (mm)		
		6 - 10	> 10 - < 18	18 - 25
Density*	kg/m <sup>3</sup>	≥ 600		
Rated thermal conductivity $\lambda_{tr}$	W/(m*K)	0,13		
Fire reaction	Class	D-s2, d0 *1		
Thickness swelling (24 hours)	%	20		
Bending strength - major axis	N/mm <sup>2</sup>	22	20	18
Bending strength - minor axis	N/mm <sup>2</sup>	11	10	9
Modulus of elasticity - major axis	N/mm <sup>2</sup>	3500		
Modulus of elasticity - minor axis	N/mm <sup>2</sup>	1400		
Internal bond	N/mm <sup>2</sup>	0,34	0,32	0,30
Formaldehyde emission class	E1 - formaldehyde-free glue (<0,03 ppm) (E05 Compliant)			

\* Value to be used only as a reference

### CHARACTERISTIC VALUES\*2

PROPERTY	UNIT	THICKNESS (mm)	BENDING $f_m$		TENSION $f_t$		COMPRESSION $f_c$		PANEL SHEAR $f_v$	PANEL SHEAR $f_r$
			or 0	⊥ or 90	or 0	⊥ or 90	or 0	⊥ or 90		
Strength	N/mm <sup>2</sup>	6 - 10	18,0	9,0	9,9	7,2	15,9	12,9	6,8	1,0
		> 10 - 18	16,4	8,2	9,4	7,0	15,4	12,7		
		> 18 - 25	14,8	7,4	9,0	6,8	14,8	12,4		
PROPERTY	UNIT	THICKNESS (mm)	BENDING $E_m$		TENSION $E_t$		COMPRESSION $E_c$		PANEL SHEAR $G_v$	PANEL SHEAR $G_r$
			or 0	⊥ or 90	or 0	⊥ or 90	or 0	⊥ or 90		
Stiffness		6 - 25	4930	1980	3800	3000	3800	3000	1080	50

\*1 for thicknesses of 9 mm or more; for thicknesses of 6 to 9 mm: fire reaction Class E.

\*2 acc. to EN 12369-1.

OSB 2 ECOBOARD® dimensions under request.

For the complete and most updated product range, please contact the Sonae Arauco team.





## OSB 3 ECOBOARD

E05

FF

### OSB for load-bearing purposes in humid conditions

OSB 3 ECOBOARD® is a high-performance wood-based panel which complies with EN 300 and EN 13986. It is also available in multiple formats with a tongue and groove profile on all 4 sides or with butt edges, with a Contiface surface (treated, not sanded) or in a sanded surface version.

OSB 3 ECOBOARD® offers excellent results in the construction sector and can be used as a multipurpose panel for structural purposes in roof, wall and floor areas. It can be used as an airtight layer or vapour barrier in a vapour permeable construction, so that the use of additional isolation foil is unnecessary.

OSB 3 ECOBOARD® is part of AGEPAN® SYSTEM.

### BENEFITS



DURABILITY



VERSATILITY

MOISTURE  
RESISTANTLOAD  
BEARINGVERY LOW  
EMISSIONS

### APPLICATIONS

- Floor construction
- Wall panelling
- Structural wall elements and roof panelling
- Housing, industrial and formwork construction
- Transport packaging

### CERTIFICATIONS



### ALSO AVAILABLE IN



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### TECHNICAL INFORMATION

PROPERTIES	UNIT	THICKNESS RANGE (mm)				
		6 - 10	> 10 - < 18	18 - 25	> 25 - 32	> 32 - 40
Density*	kg/m <sup>3</sup>	≥ 600				
Rated thermal conductivity $\lambda_r$	W/(m*K)	0,13				
Fire reaction	Class	D-s2, d0 *1				
Thickness swelling (24 hours)	%	15				
Bending strength - major axis	N/mm <sup>2</sup>	22	20	18	16	14
Bending strength - minor axis	N/mm <sup>2</sup>	11	10	9	8	7
Bending strength - after cyclic test	N/mm <sup>2</sup>	9	8	7	6	6
Modulus of elasticity - major axis	N/mm <sup>2</sup>	3500				
Modulus of elasticity - minor axis	N/mm <sup>2</sup>	1400				
Internal bond	N/mm <sup>2</sup>	0,34	0,32	0,30	0,29	0,26
Internal bond after boil test	N/mm <sup>2</sup>	0,15	0,13	0,12	0,06	0,05
Formaldehyde emission class	E1 - formaldehyde-free glue (<0,03 ppm)					

\* Value to be used only as a reference

### CHARACTERISTIC VALUES\*2

PROPERTY	UNIT	THICKNESS (mm)	BENDING $f_m$		TENSION $f_t$		COMPRESSION $f_c$		PANEL SHEAR $f_v$	PANEL SHEAR $f_r$
			or 0	⊥ or 90	or 0	⊥ or 90	or 0	⊥ or 90		
Strength	N/mm <sup>2</sup>	6 - 10	18,0	9,0	9,9	7,2	15,9	12,9	6,8	1,0
		> 10 - 18	16,4	8,2	9,4	7,0	15,4	12,7		
		> 18 - 25	14,8	7,4	9,0	6,8	14,8	12,4		
Stiffness		6 - 25	BENDING $E_m$		TENSION $E_t$		COMPRESSION $E_c$		PANEL SHEAR $G_v$	PANEL SHEAR $G_r$
			or 0	or 90	or 0	or 90	or 0	or 90		
			4930	1980	3800	3000	3800	3000	1080	50

\*1 for thicknesses of 9 mm or more; for thicknesses of 6 to 9 mm: fire reaction Class E.

\*2 acc. to EN 12369-1.

### PRODUCT RANGE

	THICKNESS RANGE (mm)				
	10	12	15	18	22
<b>OSB 3 ECOBOARD®</b>					
2500 x 1250	•	•	•	•	•
<b>OSB 3 T&amp;G ECOBOARD®</b>					
2500 x 675			•		

For the complete and most updated product range, please contact the Sonae Arauco team.




**ECOBOARD**
**OSB 4 ECOBOARD**

E05

FF

**OSB for use in high load-bearing areas in humid conditions**

OSB 4 ECOBOARD® is a wood-based panel for use in construction that requires excellent load-bearing and dimensional stability capacities. It offers impressive technical values in compliance with EN 300 and EN 13986 and is particularly suitable for heavy-duty constructions.

OSB 4 ECOBOARD® is also available in a variety of formats with a tongue and groove profile on all 4 sides or butt edges, with the tried and tested Contiface surface. It provides excellent results in the construction sector thanks to its reinforced technical properties. It is used in sturdy construction elements and for structural and load-bearing purposes in roof, wall and floor areas.

OSB 4 ECOBOARD® can be used as an airtight layer or vapour barrier in a vapour permeable construction, so that the use of additional isolation foil is unnecessary.

OSB 4 ECOBOARD® is part of AGEPAN® SYSTEM.

**BENEFITS**


DURABILITY

DIMENSIONAL  
STABILITYLOAD  
BEARINGMOISTURE  
RESISTANTVERY LOW  
EMISSIONS
**ALSO AVAILABLE IN**


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**APPLICATIONS**

- Heavy-duty floor constructions
- Structural heavy-duty wall elements and roof panelling
- Load-bearing ceiling sheathing
- Housing, industrial and formwork construction

**CERTIFICATIONS**

**TECHNICAL INFORMATION**

PROPERTIES	UNIT	THICKNESS RANGE (mm)			
		6 - 10	> 10 - < 18	18 - 25	> 25 - 32
Density*	kg/m <sup>3</sup>	≥ 600			
Rated thermal conductivity $\lambda_r$	W/(m*K)	0,13			
Fire reaction	Class	D-s2, d0 *1			
Thickness swelling (24 hours)	%	12			
Bending strength - major axis	N/mm <sup>2</sup>	30	28	26	24
Bending strength - minor axis	N/mm <sup>2</sup>	16	15	14	13
Modulus of elasticity - major axis	N/mm <sup>2</sup>	4800			
Modulus of elasticity - minor axis	N/mm <sup>2</sup>	1900			
Internal bond	N/mm <sup>2</sup>	0,50	0,45	0,40	0,35
Internal bond after boil test	N/mm <sup>2</sup>	0,17	0,15	0,13	0,06
Formaldehyde emission class	E1 - formaldehyde-free glue (<0,03 ppm)				

\* Value to be used only as a reference

**CHARACTERISTIC VALUES\*2**

PROPERTY	UNIT	THICKNESS (mm)	BENDING $f_m$		TENSION $f_t$		COMPRESSION $f_c$		PANEL SHEAR $f_v$	PANEL SHEAR $f_r$
			or 0	⊥ or 90	or 0	⊥ or 90	or 0	⊥ or 90		
Strength	N/mm <sup>2</sup>	6 - 10	24,5	13,0	11,9	8,5	18,1	14,3	6,9	1,1
		> 10 - 18	23,0	12,2	11,4	8,2	17,6	14,0		
		> 18 - 25	21,0	11,4	10,9	8,0	17,0	13,7		
			BENDING $E_m$		TENSION $E_t$		COMPRESSION $E_c$		PANEL SHEAR $G_v$	PANEL SHEAR $G_r$
			or 0	or 90	or 0	or 90	or 0	or 90		
Stiffness		6 - 25	6780	2680	4300	3200	4300	3200	1090	60

\*1 for thicknesses of 9 mm or more; for thicknesses of 6 to 9 mm: fire reaction Class E.

\*2 acc. to EN 12369-1.

**PRODUCT RANGE**

	THICKNESS RANGE (mm)			
	12	15	18	22
<b>OSB 4 ECOBOARD®</b>				
2500 x 1250	•	•	•	•

For the complete and most updated product range, please contact the Sonae Arauco team.



## NOTES ON PROCESSING, TRANSPORT AND STORAGE

### HANDLING AND STORAGE

The recommended storage conditions for wood-based panels should be close to 20°C (15-25°C) with a relative humidity of 35-50%. It is important to prevent sudden, drastic changes in the conditions because this can affect the quality of the boards. For proper storage and transportation of wood-based panels, the following is recommended:

- always transport the boards supported on a flat base and store them horizontally, keeping them off the ground by using dry pads or supports at a height that allows the entry of forklift forks without damaging the material;
- repackage the boards whenever the packaging is damaged;
- protect the edges of the boards when raising, moving or stacking, especially if handling unpackaged material;
- ensure that the floor is levelled in the storage area and that there are no objects that could cause unevenness, in order to prevent possible board warping, which is very often irreversible;
- store the boards in a covered area, protected from the weather and away from sources of humidity and intense heat;
- do not store boards in draughty areas especially if the air is humid;
- keep the boards away from water, especially the edges;
- always store the boards horizontally and grouped by size, so that they are aligned and no board protrudes more than 15 mm;
- if boards with a thickness of 8 mm or less are stacked, place a board no less than 15 mm thick or a wooden pallet, preferably flat topped, at the bottom of the stack;
- if using shims or support beams, ensure that these are the same height and the spacing between them is 600 mm or less;
- ensure the vertical alignment of the beams between batches, placing them parallel to the smaller dimension of the boards.

If storage space is limited, stack the boards closely against each other and at an angle not exceeding 20° in relation to the vertical, avoiding direct contact of the boards with the ground. It is also advisable to cover the exposed side of the stack with a protection board.

In high temperature conditions, put a protection board on top of the pile, both in storage and in transportation during the transformation process, to reduce the effect of the heat on the face of the material. The loss of moisture in the exposed face, with the consequent structural imbalance of the board, can cause warping.

In high humidity conditions, also place a protection board or another physical protection over the batch so as to minimise potential material imbalances due to moisture absorption in the exposed area. In situations of prolonged storage or greater demand, the use of specific packaging with protective film may be called for.

Stock management is also recommended to minimise the time the material is kept in storage, using the FIFO (First In, First Out) principle, whenever possible.

### EFFECT OF MOISTURE

The humidity of wood-based products can undergo changes depending on the environmental conditions, particularly moisture in the air. Thus, the moisture in a panel may vary depending on how long it is stored and where it is stored, influenced by changes in ambient temperature and humidity.

Changes in the length, width and thickness of the material resulting from exposure to relative humidity should always be taken into account in order to make any adjustments to machine tolerances and to ensure the perfect fit of the parts, particularly in construction work.

As a general indication, it can be assumed that 1% of moisture variation in a panel will cause a dimensional variation of 0,4% in length and width and 0,7% in thickness.

To reduce size variations, the panels should be stored under conditions similar to service conditions, for example, in stacks with appropriate spacers.

The stabilisation period will vary depending on the usage conditions, being longer under conditions of extreme humidity. Generally speaking, a minimum stabilisation period of 5 days is recommended.

### HYGIENE AND SAFETY

The handling of wood-based panels does not require special protective care, just compliance with the equipment safety requirements and taking normal respiratory and eye protection precautions in operations that produce dust (cutting, sanding, painting, etc.).

We recommend the use of gloves and safety goggles when removing packaging straps from the boards or cutting material. You should also be careful when lifting and handling heavy panels so as to avoid injury.

The installation of dust extraction systems, which can be central or individual (machine to machine) depending on the size of the facilities, is recommended.

Taking the grain size of the sanding dust into account, there may be a risk of explosion. Therefore, fire extinguishing devices should be adapted to this potential risk and the possibility of installing spark detection systems with automatic extinction should also be considered.

Moving unstrapped batches should be avoided due to the risk of the material falling.

### CUTTING

Wood-based boards can be cut with normal wood saws (vertical and horizontal saws, bench saws or even manual circular saws). It is important to bear the condition of the blades in mind, ensuring that the panel is properly supported and that machine vibration has been eliminated.

### GLUING

All wood glues and adhesives are suitable for use on wood-based products. To ensure the best results, follow the glue manufacturer's recommendations regarding the amount of glue, the pressing time and the pressure to be applied.

A prior test is recommended for fire retardant (FR) products.

When choosing the glue, the following aspects should be taken into account:

- Resistance of glue;
- Resistance to humidity and durability;
- Type of application;
- Setting time.

### MILLING

Wood-based boards can be milled, both at the edges and on the surfaces.

For particleboard (PB), the profiles should be simple in order to reduce the risk of pulling out the particles.

### DRILLING

The same tools that are used for solid wood processing can be used for drilling wood-based panels.

It is advisable to pre-drill before inserting screws to prevent pulling out particles or delamination of the board. For the best results, use a drill bit whose diameter is the same as the core of the screw. Screws inserted on the surfaces should be placed at least 20 mm from the edge. When the screws are inserted at the edges, they should be at least 70 mm from the corners and there should be at least 30 mm between consecutive screws

### SANDING

Wood-based boards (PB and MDF) are usually supplied with factory sanding at grit 120. For more demanding painting work, finer sandpaper is recommended.

### EDGES

The edges of wood-based panels (PB and MDF) can be edged or glued with decorative profiles in order to close, protect and decorate the edges.

### END-OF-LIFE

Wood-based boards are free of halogen and halogenated organic compounds. Chemicals used to preserve wood such as pentachlorophenol, chloro-organic biocides, pyrethroids and dioxins are not added to our wood-based products.

Waste from wood-based boards can be recycled for thermal utilisation, as fuel.

For further information, see the product EPD (Environmental Product Declaration).

## PAINTING MDF

### BEFORE PAINTING

Before carrying out any finishing work on MDF boards, bear in mind the possible colour variations between production batches and between thicknesses. These slight colour variations are unavoidable for manufacturing reasons.

Sharp edges should be avoided - round the edges whenever possible. In highly demanding situations, with regard to the quality of the finish, particularly lacquering, the boards should first be sanded, grit 150, and smoothed at grit 240 or 320.

### GENERAL PAINTING INSTRUCTIONS

In principle, the processing instructions from the manufacturers of lacquers and varnishes should be followed. All MDF lacquers and varnishes on the market can be used on Sonae Arauco MDF products.

Before beginning, test a sample of the board, particularly for fire retardant (FR) products, and make sure the board is completely free of grease, silicone and dust. If strong dilutions, low solid content and/or a low quantity of sealer, base or lacquer, are used, this can adversely affect the quality of the painting.

### INSULATION

Complete insulation can prevent later cracking at the edges and on the surface of the board. This operation should be repeated after intermediate sanding.

### BASE

The base is applied after insulation and intermediate sanding. For surfaces with high quality finishes, a base coat should be applied after sanding.

### LACQUER

After the base is consolidated, the lacquer can be applied, preferably in a pressurised cabin to avoid the deposition of impurities on the lacquered boards.

### WAXES AND OILS

Wax or oil should be applied in fine layers using a cotton cloth or sponge. They should be distributed and spread evenly along the product, otherwise there is a risk of having to deal with drying problems. MDF is compatible with several oils and waxes. However, the recommendations from the manufacturers of these products should be followed.

### USE AND MAINTENANCE

Our products are for indoor use only. They should not be exposed to jets or splashes of water, e.g. in showers.

Untreated (raw) MDF should only be cleaned with dry cloths. On the other hand, treated (lacquered) MDF can also be cleaned with slightly damp cloths. Abrasive liquids or powders should not be used on painted MDF.



## GLOSSARY

**CARB2** – The CARB2 class is defined by a regulation [93120.12, title 17, California Code of Regulations] of the State of California in the United States, which was adopted by several multinational furniture chains for specification of their wood-based products. The main method of measurement is what is called the chamber method described in the ASTM E 1333 standard.

**US EPA TSCA TITLE VI** – The TSCA Title VI regulation is defined by Federal Toxic Substances Control Act, 15 U.S.C., Sec. 2697 [TSCA Title VI] from the United States. It came into effect on 22 May 2017 and compliance date (manufacture-by date) for emission standards is 1 June 2018. The main method of measurement is what is called the chamber method described in the ASTM E 1333 standard.

**F\*\*\*\*** – This class of formaldehyde applies primarily to wood used in construction or furniture and decoration items designed for spaces subject to restricted regulations regarding indoor air quality. It corresponds to a product with very low formaldehyde content in accordance with Japanese legislation (test method JIS A 1460).

**FF (Formaldehyde Free)** – Products indicated as FF are manufactured with resins with no formaldehyde in their formulation.

**NAF (No-Added Formaldehyde)** – Formaldehyde-free glue is used in the production of NAF products. It currently represents the most demanding standard for formaldehyde emissions in wood-based products and is certified by the California Air Resources Board (CARB).

**FSC®** – The Forest Stewardship Council™ is a non-profit organisation of international scope, dedicated to the promotion of responsible forest management all over the world. FSC® Chain of Custody Certification applies to manufacturers, processors and distributors of forest products and it verifies the traceability of FSC® certified materials and products throughout the production chain.

**PEFC™** – The Programme for the Endorsement of Forest Certification™ is a non-profit government organisation dedicated to promoting Sustainable Forest Management and its certification by an external (third-party) entity. PEFC™ operates along the entire supply chain of forest products to promote best forest management practices and ensure that wood, cork and non-timber forest products are produced according to the best ethical, ecological and social standards. Thanks to the PEFC™ label, clients and consumers can identify products coming from sustainably managed forests.

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The recommendations in this document serve as an example only and are not intended to define all of the possible conditions of use or alteration of Sonae Arauco products. It is up to each user to identify and define their own operating conditions in accordance with the use, type of equipment and other raw materials used in the process concerned. Sonae Arauco cannot, therefore, be held liable for any loss or damage arising from the application of these recommendations.

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# LEARN MORE ABOUT SONAE ARAUCO

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Visit our website and discover all the features we have to offer you. Access detailed information about our range of products, download the technical documents and marketing materials that are available to you and find out more about our offer.

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## SAMPLES

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Before making your final decision, please contact our Sales Team and ask for samples.

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## SOCIAL MEDIA

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Keep up with all the news from Sonae Arauco and be inspired by our posts on social media. Follow our pages and discover the architecture and interior design trends as well as the events we will be attending.



Innovus Decors



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