

## FICHA TÉCNICA

### TABLERO CONTRACHAPADO DE ABEDUL

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#### DESCRIPCIÓN

Tablero Contrachapado compuesto de chapas de madera de abedul entrecruzadas, que por su alta estabilidad, es apto para aplicaciones estructurales exteriores.

· 100% abedul, que le confiere una grata apariencia y unas altas prestaciones físico-mecánicas..

#### ESPECIFICACIONES

**VENTAJAS**

- Caras libres de nudos.
- Gran estabilidad dimensional y alta resistencia a la flexión, tracción y compresión.
- Construcción interna y externa sin faltas de material.
- Resistente al agua WBP : uso exterior. Clase III.

**DENSIDAD** · 640 - 760 kg / m<sup>3</sup>

<b>DIMENSIONES</b>	<b>Espesor mm</b>	9	12	15	18	21	24	30
	<b>Nº de chapas</b>	7	9	11	13	15	17	21
	<b>Medidas tablero</b>	2500 X 1250 mm						

**ADHESIVO** · Adhesivo fenolformaldehído. Clase de emisión E1, que cumple la norma de emisión EN 717.

**CERTIFICACIONES** · **CE2+ / FSC**

**GRADOS** BB/BB ; BB/CP

**FILM LISO:** Revestimiento fenolico de 120 g/m<sup>2</sup> prensado a alta presión y temperatura.

**ANTIDESLIZANTE :** El revestimiento fenolico es impreso texturizado.

#### APLICACIONES

- Construcción.
- Mueble.
- Embalajes.
- Industria Naval.
- Decoración.
- Encofrados.
- Carrocerías.

NATURAL

FILM LISO

ANTIDESLIZANTE



# PHYSICAL AND MECHANICAL PROPERTIES OF PLYWOOD

PROPERTIES	VALUES										REMARKS	MEASURED ACCORDING TO STANDARD
<b>Moisture content</b>	4 - 12%											PE-EN 322
<b>Density</b>	550 - 800 kg/m <sup>3</sup>											PN-EN 323
<b>Numbers of piles - according to panel thickness</b>  Markings: „l” and „-” 1,5 mm piles	Nominal thickness (t) [mm]	Number of piles	Example of panel assembly								Standard thickness of veneer is 1,5 mm	
	4	3	-									
	6,5	5	-   -									
	9	7	-   -   -									
	12	9	-   -   -   -									
	15	11	-   -   -   -   -									
	18	13	-   -   -   -   -   -									
	21	15	-   -   -   -   -   -   -									
	24	17	-   -   -   -   -   -   -   -									
	27	19	-   -   -   -   -   -   -   -   -									
	30	21	-   -   -   -   -   -   -   -   -   -									
	35	25	-   -   -   -   -   -   -   -   -   -   -									
	40	27	-   -   -   -   -   -   -   -   -   -   -   -									
45	31	-   -   -   -   -   -   -   -   -   -   -   -   -										
<b>Tolerances on length and width of the panel</b>	± 3,5 mm											PN-EN 315 PN-EN 324-1
<b>Thickness tolerance</b>	Nominal thickness (t) [mm]	Unsanded panels			Sanded panels							PN-EN 315 PN-EN 324-1
		Thickness tolerance within one panel [mm]	Tolerances on nominal thickness [mm]	Thickness tolerance within one panel [mm]	Tolerances on nominal thickness [mm]							
	≥ 3 ≤ 12	1,0	+ (0,8 + 0,03t) - (0,4 + 0,03t)	0,6	+ (0,2 + 0,03t) - (0,4 + 0,03t)							
	≥ 12 ≤ 25	1,5		,8	+ (0,0 + 0,05t) - (0,4 + 0,05t)							
	≥ 25 ≤ 30				+ (0,0 + 0,03t) - (0,4 + 0,03t)							
> 30												
<b>For sanded panels:</b>												
<b>Thickness (t) [mm]</b>	4	6,5	9	12	15	18	21	24	27	30	35	
<b>Tolerance [mm]</b>	+ 0,3 - 0,7	+ 0,9 - 0,6	+ 0,5 - 0,7	+ 0,6 - 0,7	+ 0,7 - 0,8	+ 0,7 - 0,9	+ 0,8 - 0,9	+ 0,9 - 1,5	+ 1,4 - 1,7	+ 1,5 - 1,9	+ 1,1 - 1,5	
<b>Tolerance for straightness of edges and squareness</b>	1 mm/m											PN-EN 315 PN-EN 324-2
<b>Bending strength</b>	30 - 100 MPa										Depending on type of wood used for particular plywood plate	PN-EN 310
<b>Tensile strength</b>	30 - 60 MPa											
<b>Compression strength</b>	25-50 MPa											
<b>Modulus of elasticity in bending</b>	3500 - 10000 MPa											

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PROPERTIES	VALUES		REMARKS	MEASURED ACCORDING TO STANDARD
Dimensional changes associated with changes in relative humidity	do 0,5%			PN-EN 318
Formaldehyde emission class	Emission class A $\leq 3,5$ mg HCHO/m <sup>2</sup> ·h; Standard formaldehyde emission acc. to CARB Phase 2 ( $\leq 0,5$ mg/m <sup>2</sup> ·h)		Hygienic class E1	PN-EN 717-2
Bonding quality	Mean shear strength $f_v$ [N/mm <sup>2</sup> ]	Mean apparent cohesive wood failure [%]		PN-EN 314-2
	$0,2 \leq f_v < 0,4$ $0,4 \leq f_v < 0,6$ $0,6 \leq f_v < 1,0$ $1,0 \leq f_v$	$>80$ $>60$ $>40$ no requirement		
Reaction to fire class	D-s2,d0 D - products which can resist in a long time reaction of a small flame, without significant propagation of flame. They can resist thermal reaction of single flaming objects with sufficient thermal emission s2 - all quantity of smoke and increase factor of smoke emission are limited d0 - there are not flaming drops/particles		Thickness $\geq 9$ mm Density $\geq 400$ kg/m <sup>3</sup>	PN-EN 13986 EN 13501 - 1
	F - products for which is not given reaction to fire class		Thickness $\geq 9$ mm	
Water vapour resistance factors	Mean density [kg/m <sup>3</sup> ]	Resistance factor on water vapour penetration $\mu$		PN-EN 13986 EN 12524
		for high air moisture content	for low air moisture content	
	300	50	150	
	500	70	200	
	700	90	220	
1000	110	250		
Sound absorption coefficient	Frequency range 250 Hz to 500 Hz	Frequency range 1000 Hz to 2000 Hz		PN-EN 13986
	0,10	0,30		
Airborne sound insulation	The sound transmission loss R a single wood-based panel, measured in dB, is related to the mean surface mass $m_A$ in kg/m <sup>2</sup> according to the following equation: $R = 13 \times \lg(m_A) + 14$ (which is only valid for frequency range of 1 kHz to 3 kHz at a surface mass $> 5$ kg/m <sup>2</sup> )			PN-EN 13986 EN ISO 140-3 EN ISO 717-1
Thermal conductivity	Mean density [kg/m <sup>3</sup> ]	Thermal conductivity $\lambda$ [W / (m °K)]		PN-EN 13986 EN 12664
	300	0,09		
	500	0,13		
	700	0,17		
	1000	0,24		

# PLYWOOD – CLASSIFICATION BY SURFACE APPEARANCE

HARDWOOD - EN 635-2	
Class	Permissible characteristic and defects
E	Practically without defect
I	Sound intergrown knots up to 15 mm Ø, 30 mm cumulative Ø/m <sup>2</sup>
	Filled unsound knots up to 6 mm Ø, 2/m <sup>2</sup>
	Filled splits up to 3 mm width, 1/10 panel length, 3/m
	Colour matched plugs (repairs) 3/m <sup>2</sup>
	Discoloration if low contrast
	Defects at the edges up to 2 mm
II	Sound intergrown knots up to 35 mm Ø
	Filled unsound knots and knot holes up to 10 mm Ø, 3/m <sup>2</sup>
	Filled splits up to 5 mm width, 1/5 panel length, 3/m
	Colour matched plugs (repairs) 6/m <sup>2</sup>
	Discoloration if low contrast
	Defects at the edges up to 5 mm
III	Sound intergrown knots up to 50 mm Ø
	Filled unsound knots and knot holes up to 40 mm Ø
	Filled splits up to 20 mm width, 1/3 panel length, 3/m
	Plugs (repairs)
	Discoloration
	Glue penetration up to 5% panel surface
	Sanding through up to 1% panel surface
	Defects at the edges up to 5 mm
IV	Practically with many defects

SOFTWOOD - EN 635-3	
Class	Permissible characteristic and defects
E	Practically without defect
I	Sound intergrown knots up to 15 mm Ø, 30 mm cumulative Ø/m <sup>2</sup>
	Filled unsound knots up to 6 mm Ø, 2/m <sup>2</sup>
	Filled splits up to 3 mm width, 1/10 panel length, 3/m
	Colour matched plugs (repairs) 5/m <sup>2</sup>
	Discoloration if low contrast
	Defects at the edges up to 2 mm
II	Sound intergrown knots up to 50 mm Ø
	Filled unsound knots and knot holes up to 25 mm Ø, 6/m <sup>2</sup>
	Filled splits up to 10 mm width, 1/3 panel length, 3/m
	Plugs (repairs)
	Discoloration if low contrast
	Defects at the edges up to 5 mm
III	Sound intergrown knots up to 60 mm Ø
	Filled unsound knots and knot holes up to 40 mm Ø
	Filled splits up to 15 mm width, 1/2 panel length, 3/m
	Plugs (repairs)
	Discoloration
	Glue penetration up to 5% panel surface
	Sanding through up to 1% panel surface
	Defects at the edges up to 5 mm
IV	Practically with many defects