

DATA SHEET

Technical plywood

A wood-based board of improved properties (resistance to adverse atmospheric conditions, sanding through) specially for boarding and shuttering systems, platforms of scaffoldings, in means of transport for interior, and as floors of vehicles, containers, ships, platforms and floors of industrial halls and public utility facilities, in the shipbuilding industry and boatbuilding. Technical plywood is produced on the basis of phenol-formaldehyde resin as water-resistant, for use in exterior conditions (according to PN-EN 636), meeting the requirements of 3 gluing class quality according to PN-EN 314-2.

Depending on the way of improving exterior surfaces there are the following types of plywood:

- **a**) bakelized shuttering plywood,
- **b**) foliated shuttering plywood (brown and transparent),
- **c**) plywood foliated with a phenol film:
 - one side foliated smooth,
 - one side foliated with wire mesh imprint,
 - one side foliated with ring imprint,
 - both sides foliated smooth,
 - both sides foliated with one side wire mesh imprint,
 - both sides foliated with one side ring imprint,
- **d**) laminated plywood.

I Bakelized shuttering plywood (plywood for boarding)

- a wood-based board composed of glued plies of wood (outer and middle veneers), whereat the directions of fibre of adjacent plies are staggered by 90°. Face veneers (outer veneers) are made of birch, alder or beech. Plywood surface is covered with hardened phenol-formaldehyde resin.

II Foliated shuttering plywood (plywood for boarding)

– a wood-based board composed of glued plies of wood (outer and middle veneers), whereat the directions of fibre of adjacent plies are staggered by 90° . Face veneers (outer veneers) are made of birch, alder, beech or pine. Plywood surface is covered with phenol film.

III Plywood foliated with a phenol film

- a wood-based board composed of glued plies of wood (outer and middle veneers), whereat the directions of fibre of adjacent plies are staggered by 90°. Face veneers (outer veneers) are made of birch, alder, beech or pine. Plywood surface is covered with paper impregnated with phenol-formaldehyde resin. Surface could be smooth or with imprint, that is being characterized by a great coarseness.

Depending on the type of film, there are the following types of weight:

- a. Plywood foliated with a phenol film
 (standard): 160 g/m²
- b. Plywood foliated with a phenol film with the improved resistance to grindability
 320 g/m²
- ^{c.} Plywood foliated with a phenol film with the improved resistance to grindability -480 g/m^2

IV Plywood to architectural concrete (plywood for boarding)

– a wood-based board composed of glued plies of wood (outer and middle veneers), whereat the directions of fibre of adjacent plies are staggered by 90° . Face veneers (outer veneers) are made of birch, alder or beech. Plywood surface is covered with laminate.

Quality of the technical plywood and acceptable defects (acc. to ZN-2011 BZS-ST-2)

Type of film:

- phenol transparent film weight 150 g/m²
- phenol dark brown film weight 160 g/m^2
- colourful or wood-like laminate,

Static bending strength along fibres (II)	55-75 MPa
Static bending strength across fibres (\perp)	45-65 MPa
Modulus of elasticity at bending along fibres (II)	6500-8000 MPa
Modulus of elasticity at bending across fibres (\bot)	5500-7000 MPa

Mechanical properties (acc. to PN-EN 310):

Selected parameters on the example of technical plywood: thicknesses and

		Thicknes	s tolerance		Mechanical properties				
Nominal	Number of	 [1	nml	Density Stati		oending	Modulus of elasticity [MPa]		
thickness	layers	L,]	[kg/m ³]	[MPa]				
		min.	max.		II	T	II	Т	
4	3	3,5	4,3	-	-	-	-	-	
6	5	5,4	6,4	-	-	-	-	-	
9	7	8,3	9,5	-	-	-	-	-	
10	7	9,3	10,5	-	-				
12	9	11,2	12,6	697	70	71	8000	6000	
15	11	14,1	15,7	677	60	65	7000	6500	
18	13	17,1	18,7	696	70	60	7000	6500	
21	15	20,0	21,8	725	50	60	6500	7000	
24	17	22,9	24,9	687	58	60	6500	7000	
28	21	26,2	29,4	_	_	_	_		
30	21	28,7	31,5	771	62	60	7000	7000	

acceptable tolerance (acc. to ZN-2011 BZS-ST-2)

Humidity: 10±5% (acc. to EN 322), **density:** do 800 kg/m³ (acc. to EN 323)

Standard sizes:

2500×1250 mm
2440×1220 mm
2130×1220 mm
1530×1530 mm

or acc. to arrangements with the customer.

- length and widths tolerance: \pm 3,5 mm (acc. EN 315),
- edge tolerance: $\pm 1,0$ mm/m lengths of the side (acc. EN 315).

Thickness range: 4-50 mm

Possibilities of additional processing and finishes

Cutting to smaller sizes, straight and profiled finishing of the edges, drilling, milling of grooves, slots, rabbets - in CNC centres. Protecting narrow plains (edges) with waterproof acrylic paint. Protection narrow plains is to reduce the absorption of moisture during storage and transport. The recipient after additional treatment plywood must, as appropriate, to secure a narrow plane (edges, holes, etc.).

Application

Boarding and shuttering systems, platforms of scaffoldings, in means of transport for interior, and as floors of vehicles, containers, ships, platforms and floors of industrial halls and public utility facilities, where improved durability of materials is required.

Advantages of technical plywood

High stair of the resistance of surface to sanding, the increased resistance to damp and water, high temperature and adverse weather conditions, leveled durability of material to bending in longitudinal and crosswise direction, convenient dimensions, appropriate stiffness, flat surface with great smoothness.

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