

BEAMS AND WOOD BOARDS FOR FORMWORK

Quality for highest site demands



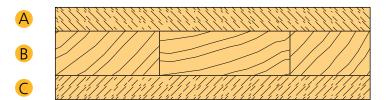
🔼 ULMA Trimax Board

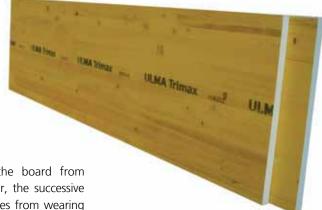
Product description

The 3-ply board as shuttering face offers many advantages:

- Great strength on building site
- High durability and dimensional stability
- Quality concrete finish

Trimax consists of three layers of glued spruce plies. The AW 100 glue is applied according to standard ÖNORM B3023. The first and third layer (A) have their grain at right angles to the second layer (B).





The direction of plies prevents the board from tearing or breaking apart. Moreover, the successive intermediate layers prevent the edges from wearing or getting damaged due to numerous uses.

The **outer surface is coated** with yellow-coloured synthetic melamine resin of 130 g/m². The resultant concrete finish has a light texture of wood and micro pores. **The panel edges are sealed** with polyurethane to prevent moisture absorption and concrete sticking.

Scope of application:

- Horizontal and vertical formwork
- Formwork for bridges and tunnels
- Working platforms

Number of uses approximately 20-30*.

* The number of uses is a reference value and non-binding. Variable value depending on the conditions of use and treatment of the material.

Product certifications:



Austrian standard B 3023three-layer wood boards

PEFC- Chain of Custody





Do not leave objects fall on, nor jump on the formwork panels.

Technical specifications

Product	3-ply concrete formwork panel with smooth surface and melamine coating according to Austrian stan- dard B 3023 «solid wood panels»			
Wood type	Spruce/fir			
Wood moisture	12% \pm 3% at the time of delivery			
Gluing	According to Austrian standard B 3023 (AW 100)			
Weight	21 mm, approx. 10.0 kg/m ² 27 mm, approx. 12.5 kg/m ²			
Layout	 Manufactured as large format panels; smaller formats are cut to exact specifications Locked and glued crosswise Top layers showing vertical growth rings, no knotholes Seamlessly glued intermediate layer ensures that the longitudinal edges do not tear off Resistant melamine coating Water repellent edge seal 			
Formats	2000 x 503 x 21 2000 x 503 x 27 2500 x 500 x 21 2500 x 500 x 27 1970 x 503 x 27 1000 x 503 x 27 1330 x 503 x 27			
Thickness	21 y 27 mm			
Surface quality	 Perfectly smooth surface Resistant yellow-coloured melamine coating of approximately 130 g/m² 			
Edge seal	PU water repellent edge seal, yellow			
Dimensional tolerances	Thickness21 & 27 mm \pm 1 mmWidths50 < 200 cm \pm 1 mmLengths100 < 250 cm \pm 1 mmLongitudinal100 < 300 cm \pm 1 mmcurvature301 < 600 cm \pm 1.5 mmAccording to Austrian standard B 3023			
Material properties	Material properties 21 mm 27 mm Bending strength 42 N/mm² 36 N/mm² Modulus of elasticity (average) 10400 N/mm² 9700 N/mm² The design values apply at a wood moisture content of 12 %. The bending strength and modulus of elasticity may			

The design values apply at a wood moisture content of 12 %. The bending strength and modulus of elasticity may be up to 30 % lower with heavy moisture penetration up to the fibre saturation point.





▲ 3-layer board Trimax in RAPID horizontal formwork



Phenolic Plywood

Product description

Plywood made of spruce and /or birch veneers, is coated with a **phenolic film resistant to wear** and to corrosion/the effect of chemicals. Each stage of manufacture conforms to **strict quality standards.** In fact, the gluing process of plies complies with standard BFU 100, EN 314-2 / class 3, exterior.

The phenolic plywood used in an appropriate way by following ULMA instructions can be repeatedly used with uniform result.

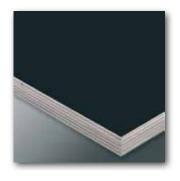


 Phenolic plywood as shuttering face in ENKOFORM H-120 formwork of a viaduct under construction

BIRCH PLYWOOD

BIRCH plywood is used for wall and slab surfaces that require a perfect concrete finishing, flat and without textures. Birch plywood with sealed edges retains all the properties regarding wear due to its phenolic film coating of 120 g/m² or 220 g/m².

THICKNESS	No. of LAYERS
9 mm	7 glued layers
12 mm	9 glued layers
15 mm	11 glued layers
18 mm	13 glued layers
21 mm	15 glued layers



Density: 680 kg/m³ Application: wall and slab formwork Number of uses: 20-80*



* The number of uses is a reference value and non-binding. Variable value depending on the conditions of use and treatment of the material.

BETO PLYWOOD

The arrangement of plies, outside birch and inside alternating layers of birch and spruce provide durability and resistance to the board. Plywood with all edges sealed and coated on both sides with a smooth and wear resistant phenolic film of 120 g/m².

THICKNESS	No. of LAYERS
18 mm	9 glued layers
21 mm	11 glued layers

Density: 570 kg/m³ Application: wall and slab formwork, for flat and smooth concrete finishing Number of uses: 15-30*





- High-quality finish of fair-faced concrete walls with phenolic plywood in ENKOFORM V-100 vertical formwork
- * The number of uses is a reference value and non-binding. Variable value depending on the conditions of use and treatment of the material.



Assembly of Table VR horizontal formwork with phenolic plywood and VM-20 timber beams

Do not leave objects fall on, nor jump on the formwork panels.



VM-20 Timber Beams

Product description

The design and the material used in the manufacture of the VM-20 Timber Beam guarantee a durable product, excellent as structural element for formwork.

The double T-section with a height of 200 mm and a width of 80 mm resists strong impacts due to protective plastic caps at the ends.

- There is a wide range of lengths available which allows of choosing the most appropriate in each case.
- Each beam is marked with the date of manufacture and ► length for traceability and identification.
- Certified Product that ensures quality.
- Scope of application: horizontal and vertical formwork, bridge and tunnel formwork, working platforms.

Product certifications:



Certificate of compliance ÜZ-BWU03 – I 14.24.27 (MPA Stuttgart)

PEFC- Chain of Custody







VM-20 beams in ENKOFORM V-100 vertical formwork A

Technical specifications

Product	Formwork timber beams	Formwork timber beams			
Wood type	Spruce/fir				
Wood moisture	$12\% \pm 3\%$ at the time of	$12\% \pm 3\%$ at the time of delivery			
Gluing	According to Austrian star	dard B 3023 (AW 100)			
Weight	4.6 kg/m				
Bonding	Melamine resin-based adhesive Type I acc. to EN 301 approved for gluing load-bearing timber components.				
Flange	Made of carefully selected S 10 spruce wood according to DIN 4074 Solid wood of 80 x 40 mm Finger-jointing of flanges according to DIN 68140-1 Planed and chamfered to approx. 0.4 mm				
Web	3-ply solid wood panel				
Design	The beam design complies with the criteria of the Z-9.1-146 Certificate in conjunction with DIN 1052 or Eurocode 5 and EN 12812				
Surface protection	The complete beam is wat	The complete beam is waterproofed using a water-repellent colour glaze			
Supports	Thanks to the 3-ply solid v	Thanks to the 3-ply solid wood webs, VM-20 beams can be cut into and loaded along its entire length			
	Beam height 2 Flange Height 4 Flange width 8 Web thickness 2 ' These values apply at a w	VM-20 Tolerances ² .00 mm ± 2.0 mm .15 %	6.		
	Properties Strains	DIN1052-1:1988-4 Permissible stress values	DIN1052:2008-12 / Eurocode 5 Characteristic values		
	Shear load	Q _{adm} = 11.0 kN	Vk = 23,9 kN		
	Bending moment	M _{adm} = 5.0 kNm	Mk = 10.9 kNm		
Material properties	Support		Rb,k = 47.8 kN		
	Section modulus	Wx = 461 cm ³			
	Moment of inertia	lx = 4.613 cm ⁴			
	Modulus of elasticity	E = 10.000 N/mm ²			
	Shear modulus The values apply to new o	G = 600 N/mm ² r used concrete formwork bea	ims in good working condition.		
Standard lengths	1.45 / 1.90 / 2.15 / 2.45 / 2.65 / 2.90 / 3.30 / 3.60 / 3.90 / 4.50 / 4.90 / 5.90 m / max. length 10 m				
Packaging	The packages are delivered suitable for the construction site and protected by integrated supporting timber.				







▲ VM-20 beams in Table VR horizontal formwork and for working platforms on climbing brackets



System components and accessories

	Weight (kg)	Item no.
WOOD PANELS 3 LAYER PLYWOOD 2000x503x21 3 LAYER PLYWOOD 2000x503x27 3 LAYER PLYWOOD 2500x500x21 3 LAYER PLYWOOD 2500x500x27 3 LAYER PLYWOOD 1970x503x27 3 LAYER PLYWOOD 1000x503x27 3 LAYER PLYWOOD 1330x503x27	11.4 15 14.7 18.9 13.4 7.2 9.6	7251131 7251132 2211029 7251136 1860650 7251130 1860512
PLYWOOD PLYWOOD 1.25x2.5x0.009 BIRCH PLYWOOD 1.25x2.5x0.012 BIRCH PLYWOOD 1.25x2.5x0.018 BIRCH PLYWOOD 1.25x2.5x0.021 BIRCH PLYWOOD 1.25x2.5x0.018 BETO PLYWOOD 1.25x2.5x0.021 BETO	19.1 25.5 38.2 44.6 34.9 40.7	1940157 1940161 1940155 1940151 1940198 1940166

	Weight (kg)	ltem no.
TIMBER BEAMS		
BEAM VM 20/1.45	7 25	1940191
BEAM VM 20/1.9	9.5	1940172
BEAM VM 20/2.15	10.75	1940197
BEAM VM 20/2.45	12.25	1950129
BEAM VM 20/2.65	13.25	1940196
BEAM VM 20/2.9	14.5	1940144
BEAM VM 20/3.3	16.5	1950130
BEAM VM 20/3.6	18	1940146
BEAM VM 20/3.9	19.5	1950112
BEAM VM 20/4.5	22.5	1940178
BEAM VM 20/4.9	24.5	1950113
BEAM VM 20/5.9	29.5	1940149









ULMA C y E, S. Coop.

Ps. Otadui, 3 - Apdo. 13 20560 OÑATI (Gipuzkoa) SPAIN Tel.: + 34 943 034900 Fax: + 34 943 034920 www.ulmaconstruction.com