

Birch Ply

Laser



Metsä Wood Laser is interior bonded birch plywood. Laser plywood is available in two options: high quality uncoated, sanded plywood or plywood overlaid with a melamine film.

Applications

Metsä Wood Laser is specially developed for laser cutting applications and is mostly used as die cutting plates in the packaging industry. Laser plywood is suitable also for other indoor uses and for applications requiring a colourless glue line with a protective, easy maintenance film surface. Laser is not suitable for outdoor use, because the base plywood bonding is not resistant to weather.

Major advantages

- Easy to machine with laser cutting devices
- Colourless glueline
- Strong and rigid
- Excellent strength-to-weight ratio
- Dimensionally stable
- Easy to work with using conventional woodworking tools and fasteners
- Environmentally friendly
- Easy maintenance film surface

Base plywood

The base plywood of Metsä Wood Laser is made of cross-bonded 1.4 mm thick birch veneers bonded with melamine modified urea formaldehyde adhesive.

Surface grades and overlay

Metsä Wood Laser is available as sanded and uncoated product and as overlaid product with transparent or transparent grey melamine film on both sides.

Metsä Wood Laser uncoated:

Both surfaces are sanded. The grade of surface veneer is BB quality. Uncoated Laser surface grades follow the classification presented in standard EN 635. The uncoated panel surface can be treated with standard paints, lacquers, varnishes and protection treatments applicable on wood products. Confirm the compatibility of a surface treatment from the supplier.

Metsä Wood Laser overlaid:

A smooth melamine film is hot-pressed on both panel surfaces to enhance surface durability.

Surface properties

With colourless and transparent film, the colour of overlaid Metsä Wood Laser is similar to natural colour of the birch surface. The film surface and BB veneer grade is sufficient for technical applications, but not for visually demanding applications such as furniture. Laser plywood is also available with a transparent grey film.

The film surface is semi glossy, smooth, hard and slippery. It withstands abrasion, is moisture-resistant and can tolerate commonly used chemicals as well as diluted acids and alkalis. The Laser film surfaces are well suited for laser cutting.

Edges

Metsä Wood Laser product edges are not painted or otherwise sealed.

Panel sizes

	LENGTH (mm)	WIDTH (mm)					
		2,400	2,440	2,500	3,000	3,050	3,300
	1,200*	■	■	■	■	■	■
	1,220*	■	■	■	■	■	■
Laser	1,250*	■	■	■	■	■	■
	1,500*			■	■	■	■
	1,525*			■	■	■	■

* The measurement indicates the orientation of the surface veneer grain.
 ■ = standard panel size

Other sizes are available on request.

Size tolerances

Measured in accordance with standard EN 324, the plywood size and squareness tolerances meet EN 315 requirements.

PANEL TOLERANCES

LENGTH / WIDTH	TOLERANCE
< 1,000 mm	±1 mm
1,000-2,000 mm	±2 mm
> 2,000 mm	±3 mm
Squareness	±0.1 % or ±1 mm/m
Edge straightness	±0.1 % or ±1 mm/m

Thickness, structures and thickness tolerances

The thickness tolerances fulfil the requirements of standard EN 315 and are in part more stringent than the official requirements.

THICKNESSES, STRUCTURES AND THICKNESS TOLERANCES OF THE PANELS *

NOMINAL THICKNESS (mm)	NUMBER OF PLYS (pcs)	THICKNESS TOLERANCE		WEIGHT (kg/m ²)
		min. (mm)	max. (mm)	
9	7	8.8	9.5	6.1
12	9	11.5	12.5	8.2
15	11	14.3	15.3	10.2
18	13	17.1	18.1	12.2
21	15	20.0	20.9	14.3

* Moisture content of the product affects its dimensions
 * Average density of Metsä Wood birch plywood is 680 kg/m³ (at relative humidity of RH 65 %)
 * Special structures and thicknesses are available on request
 * Customised tolerances are possible but must be agreed separately

Bonding classes

Melamine modified urea formaldehyde adhesive is used in the production of interior bonded Metsä Wood Laser plywood. The melamine additive improves the moisture resistance of the glue line compared to that of a standard interior bonding. The gluing meets the requirements of the standard EN 314-2 / Class 1 (interior).

Formaldehyde emissions

Determined according to EN 717-1, the formaldehyde emitted by Metsä Wood Laser falls far below the Class E1 requirement of ≤ 0.100 ppm. The formaldehyde emission of Metsä Wood Laser uncoated is approximately 0.034 ppm and Metsä Wood Laser overlaid is approximately 0.023 ppm.

Panel strength properties

Metsä Wood Laser is a CE marked product and its strength and elasticity properties are identical with the Metsä Wood Birch standard plywood properties. The properties are specified according to standards EN 789 and EN 1058 and can be found in the Metsä Wood Laser Declaration of Performance (DoP). DoP documents can be downloaded from www.metsawood.com/dop.

Machining

Metsä Wood Laser plywood panels can be machined according to customer specification on request.

Packing

Metsä Wood Laser panels are packed in moisture-resistant plastic wrapping.

PACKING QUANTITIES

PANEL SIZE (mm)	NUMBER OF PANELS PER PALLET BY THICKNESS				
	9	12	15	18	21
1,500 / 1,525 x 2,400-3,300					
1,200 / 1,220 / 1,250 x 3,000-3,300	65	50	40	35	30
1,500 / 1,525 x 1,500-2,135					
1,200 / 1,220 / 1,250 x 1,200-2,700	100	75	60	50	45

Panel handling instructions

As wood is a hygroscopic material, the relative humidity of surrounding conditions affects the moisture content of the plywood and therefore the dimensions and flatness of the panel.

Metsä Wood Laser panels should be conditioned properly to the moisture content of the end use application before final use.

Further information

- Metsä Wood Laser Declaration of Performance (www.metsawood.com/dop)

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