

Birch Ply

Flex Smooth



Metsä Wood Flex Smooth is a birch plywood overlaid with a smooth and glossy ABS based overlay. Flex Smooth has ready finished surface which is UV-resistant and therefore suitable for interior and exterior applications.

Applications

Metsä Wood Flex Smooth provides a larger size ready finished surface solution for the transport industry such as side walls for horse- and box trailers, light and medium size truck side walls, doors and bulk heads.

Major advantages

- High quality smooth and glossy surface
- Ideal surface for stickers and decals
- Excellent UV and weather resistance
- Easy to fix and cut
- Easy to clean
- Excellent strength-to-weight ratio
- Dimensionally stable
- Environmentally friendly

Base plywood

The base plywood of Metsä Wood Flex Smooth is Metsä Wood Birch. Birch plywood is made of cross-bonded 1.4 mm thick birch veneers bonded with weather- and boil-resistant phenol formaldehyde adhesive.

Overlay

The panel is overlaid with smooth and glossy ABS based overlay. The overlay has UV-additives to make it resistant against the sunlight.

The overlay is bonded to plywood with water resistant glue. Metsä Wood Flex Smooth is available in white colour. Flex Smooth surface is covered with blue protection foil in order to avoid damages during transportation and handling.

Surface properties

The surface of the overlay is smooth and glossy. Overlay is elastic and does not crack easily. It is also moisture and UV-resistant. The overlay is safe to use and dispose. It is free of chlorine, halogens, plasticizer, formaldehyde and heavy metals.

The surface is easy to clean with water and normal detergents. Strong acids, alkalis and e.g. acetone may cause visual changes on the surface.

Metsä Wood Flex Smooth plywood products have very high surface quality and the surface is susceptible to scratches due to its softer appearance, extra caution has to be practised in handling and storing the panels to prevent damage. Extreme moisture penetration may cause visible changes on the appearance of the product.

Technical properties of surface

- Colour stability 2 according to EN ISO 3668
- Colour change $\Delta E < 1.5$ according to ISO 4892-2 (600 h)

Edge sealing

Panel edges are sealed against moisture absorption with edge sealing paint. The colour of the edge sealing is transparent. Even though edge sealing slows down the absorption of moisture into the panel, it does not eliminate it completely.

Panel sizes

Metsä Wood Flex Smooth is available in sizes:

- 1,500 / 1,525 mm x 2,500 / 3,000 / 3,050 / 3,660 mm

The first measurement indicates the orientation of the surface veneer grain.

Other sizes are available on request. Larger size L size and scarf-jointed XL panels are also available by special order.

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

Thicknesses, structures and thickness tolerances

THICKNESSES, STRUCTURES AND THICKNESS TOLERANCES OF THE PANELS*

NOMINAL THICKNESS	NUMBER OF PLIES	THICKNESS TOLERANCE		WEIGHT
(mm)	(pcs)	min. (mm)	max. (mm)	kg/m ²
11	7	10.3	11.6	8.2
14	9	13.0	14.6	9.5
17	11	15.8	17.4	12.2

* 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

Metsä Wood plywood panels are bonded with a weather- and boil-resistant phenol formaldehyde adhesive. The gluing meets the requirements of the standard EN 314-2 / Class 3 (exterior).

The overlay is bonded to plywood with weather resistant adhesive (EN 204 class D4).

Formaldehyde emissions

Determined according to EN 717-1, the formaldehyde emitted by Metsä Wood Birch falls far below the Class E1 requirement of ≤ 0.100 ppm and fulfils also the most stringent requirements in the world (≤ 0.030 ppm). The formaldehyde emission of Metsä Wood Birch is approximately 0.013 ppm. Thermoplastic overlay does not contain any formaldehyde.

Mechanical properties

Metsä Wood Flex Smooth 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 Birch Declaration of Performance (DoP). DoP documents can be downloaded from www.metsawood.com/dop.

Machining

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

Packaging

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

PACKING QUANTITIES

PANEL SIZE (mm)	NUMBER OF PANELS PER PALLET BY THICKNESS		
	11	14	17
1,500 / 1,525 x 2,400-3,660	50	40	35
1,500 / 1,525 x 1,500-2,135	75	60	50
1,800/1,900 x 2,400-3,050	Packet sizes agreed case by case		
6,000 x 1,800/1,900	Packet sizes agreed case by case		

Further information

- Metsä Wood Birch Declaration of Performance (www.metsawood.com/dop)
- Metsä Wood Flex Product Data Sheet

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