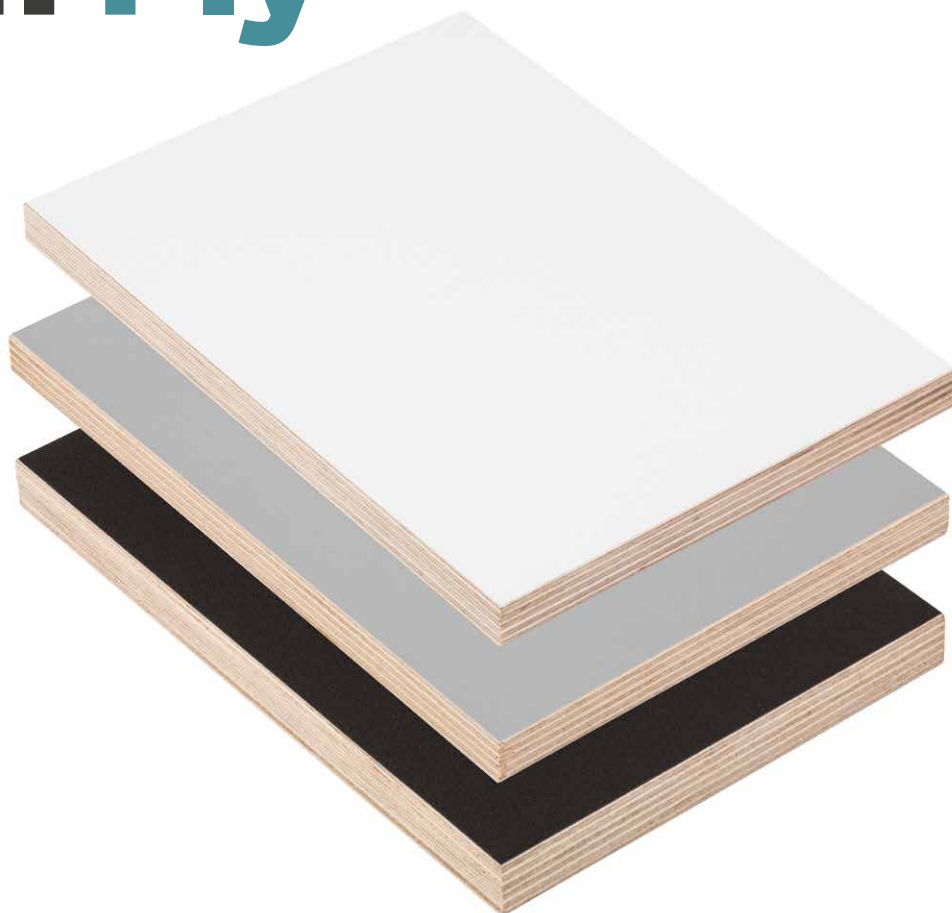


# Birch Ply

## Flex



Metsä Wood Flex is a birch plywood panel overlaid with a coloured thermoplastic overlay. Flex is available in range of colours and ready finished surfaces. The combination of technical properties with high class surfaces makes Flex an excellent panel for various interior and transportation applications. Metsä Wood Flex is available in various sizes: standard, L and XL.

### Applications

Metsä Wood Flex provides an easy ready finished surface solution.

- **Transport industry:** Side walls for horse and box trailers, side walls for light and medium size trucks, doors bulk heads, van linings and transit and flight cases
- **Building industry:** Furniture, shop, kitchen and sanitary fittings, playground equipment, fencing and rebound walls

### Major advantages

- High quality surfaces
- Excellent impact and crack resistance
- Easy to fix and cut
- Good wear resistance
- Easy to clean
- Good resistance against most chemicals
- Strong and rigid panel
- Excellent strength-to-weight ratio
- Dimensionally stable
- Environmentally friendly

### Base plywood

The base plywood of Metsä Wood Flex 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.

### Flex 02 overlay

The panel is overlaid with coloured, 0.2 mm thick lightly structured (miniburl) polypropylene overlay.

The overlay is bonded to plywood with water resistant glue. Metsä Wood Flex is available in range of colours: e.g. White02 (RAL 9016), Black02 (RAL 9004), Grey02 (RAL 7040). Flex 02 overlay is not recommended for exterior use.

### Flex 06 overlay

The panel is overlaid with white 0.6 mm thick structured (burl) polypropylene overlay. Flex 06 is available in colour White06 (RAL 9016).

### Surface properties

The surface of the overlay is slightly structured to improve wear and scratch resistance. Overlay is elastic, tough and does not crack easily. The overlay is safe to use and 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 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

- Taber value is approx 2,000 R depending on overlay\*
- Colour stability 6-7 according to DIN 54404
- Colour change  $\Delta E < 1$  according to ISO 4892-2 (600 h)
- Crack resistance EN13696 no cracks
- Impact resistance Class IC3 according to EN438-2

\* Abrasion resistance is tested according to EN 438-2 / DIN 53799

### Edge sealing

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

### Panel sizes

		WIDTH (mm)						
		LENGTH (mm)	2,400	2,440	2,500	3,000	3,050	4,100
Flex 02	1,200*		■	■	■	■	■	
	1,220*		■	■	■	■	■	
	1,250*		■	■	■	■	■	
	1,500*		■	■	■	■	■	■
	1,525*		■	■	■	■	■	■
Flex 06	1,500*		■	■	■	■	■	■
	1,525*		■	■	■	■	■	■

\* The measurement indicates the orientation of the surface veneer grain.

- = standard panel size
- = available on request

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

### Thicknesses, 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 PLIES (pcs)	THICKNESS TOLERANCE		WEIGHT (kg/m <sup>2</sup> )
		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
24	17	22.9	23.7	16.3

\* Moisture content of the product affects its dimensions

\* Average density of Metsä Wood birch plywood is 680 kg/m<sup>3</sup> (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 Flex falls far below the Class E1 requirement of  $\leq 0.100$  ppm and fulfils also the most stringent requirements in the world ( $\leq 0.030$  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 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](http://www.metsawood.com/dop).

### Packaging

Metsä Wood Flex 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	24
1,500 / 1,525 x 2,400-4,100	65	50	40	35	30	25
1,200 / 1,220 / 1,250 x 3,000-4,100						
1,500 / 1,525 x 1,500-2,135	100	75	60	50	45	40
1,200 / 1,220 / 1,250 x 1,200-2,750						

### Further information

- Metsä Wood Birch Declaration of Performance ([www.metsawood.com/dop](http://www.metsawood.com/dop))
- Metsä Wood Flex Smooth Product Data Sheet

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