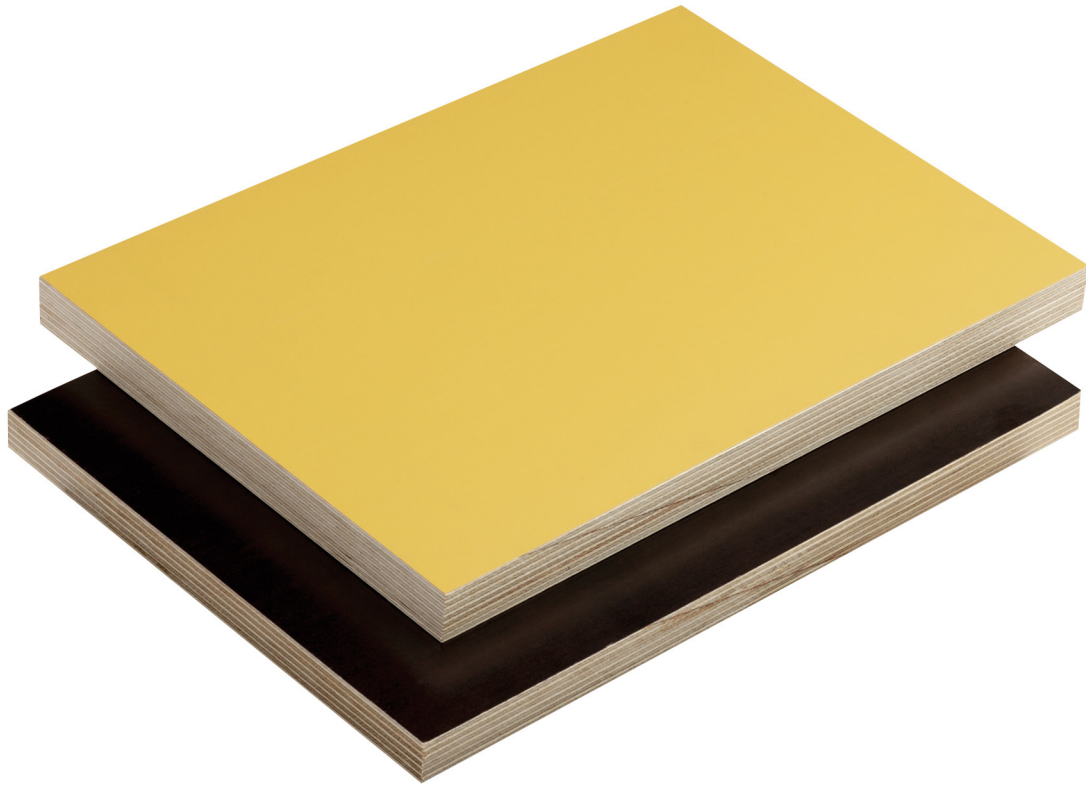


# Birch Ply

## Form XL



Metsä Wood Form XL is a larger size birch plywood panel with smooth phenolic overlay. Form XL is a tough-surfaced, durable shuttering panel for demanding formwork applications. The durable overlays and large panel sizes ensure multiple uses and a high quality concrete finish with fewer joints. XL panels enable larger one piece components.

### APPLICATIONS

#### Concrete formwork

Metsä Wood Form XL is suitable for highly demanding concrete formwork applications:

- Shuttering systems
- Concrete element industry
- Girder formwork

#### Transport industry

High quality large size Form XL panels can be used in various transport industry applications:

- Trailer bulkheads, side panels and back boards, agricultural trailers
- Bus floor constructions, luggage area floors

### MAJOR ADVANTAGES

- Larger sizes with invisible joints
- Durable and weather resistant overlay
- Strong and rigid
- Easy to clean and re-use
- Good chemical resistance
- Dimensionally stable
- Easy to machine and fasten using conventional woodworking tools and fasteners
- Withstands impacts and other forms of bruising
- Weather- and boil-proof bonding
- Made of sustainable Nordic wood and PEFC (PEFC/02-31-03) certified

# Birch Ply

## Form XL

### BASE PLYWOOD

The base plywood of Metsä Wood Form XL 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.

The core panel of the large size Form XL is scarf-jointed from standard size birch plywood panels using weather-resistant adhesive.

### OVERLAY

The panel is overlaid with durable and hard phenolic overlay. Standard overlay are 450 g/m<sup>2</sup> yellow and 220 g/m<sup>2</sup> dark brown. The reverse side is overlaid with similar overlay than the top face.

The durable overlays ensure smooth concrete cast finish and multiple uses. The number of uses can rise up to 30 – 100 but is highly dependent on the used overlay, site practice, requirements of concrete finish, the quality of release agent and the maintenance, handling and storage practices.

Use high quality release agent to ensure easier and cleaner release. Make sure that the release agent is suitable with the panel overlay. Clean panels after each use to remove all concrete debris. Seal scratches with water proof paint and fill holes with water resistant filler. Afterwards, apply a fresh coat of release agent prior to each subsequent use.

### SURFACE PROPERTIES

Metsä Wood Form XL surface is smooth, hard and scratch-resistant and withstands abrasion. The surface is moisture-resistant and can tolerate commonly used chemicals as well as diluted acids and alkalis. The surface is easy to clean with water or steam.

### ABRASION RESISTANCE\*

	TABER REVOLUTIONS**
Form XL 220 (dark brown)	700
Form XL 450 (yellow)	1000

\* Values are indicative and valid for new unused panels

\*\* 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. Even though edge sealing slows down the absorption of moisture into the wood, it does not eliminate it completely.

### PANEL SIZES

Metsä Wood Form XL is available in sizes:

- 6000 mm x 2000 / 2200 mm
- 5400 mm x 2000 mm

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

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 OF THE PANELS\*

NOMINAL THICKNESS	NUMBER OF PLYS	THICKNESS TOLERANCE		WEIGHT
(mm)	(no.)	min. (mm)	max. (mm)	kg/m <sup>2</sup>
15	11	13.7	15.3	10.2
18	13	16.5	18.1	12.2
21	15	19.4	20.9	14.3
24	17	22.3	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 scarf joint is glued with weather-resistant melamine or resorcinol adhesive.

### FORMALDEHYDE EMISSIONS

Determined according to EN 717-1, the formaldehyde emitted by Metsä Wood Form XL 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 Form XL is approximately 0.017 ppm.

# Birch Ply

## Form XL

### APPROVALS AND DESIGN PROPERTIES

Due to the scarf jointed core plywood, the strength values of Metsä Wood Form XL in the longitudinal direction of the panel are ca. 65 % of standard Metsä Wood Birch plywood values. In the cross direction of the panel the strength values are similar to standard Birch plywood. Stiffness values in both directions are similar to standard Birch plywood.

Birch plywood production is managed according to the principles of standard ISO 9001. The quality and the constancy of performance of the product is controlled by regular third party inspections and audits.

### MECHANICAL PROPERTIES\*

THICKNESS* (mm)	MEAN MODULUS OF ELASTICITY** (N/mm <sup>2</sup> )		CHARACTERISTIC BENDING STRENGTH** (N/mm <sup>2</sup> )	
		⊥		⊥
15	10316	7184	26.8	33.8
18	10048	7452	26.1	34.1
21	9858	7642	25.6	34.3
24	9717	7783	25.3	34.4

\* Moisture content 12%

\*\* Properties determined according to EN 789 standard

The Concrete formwork design (permissible concrete pressure tables, design nomograms) for all Metsä Wood formwork panels can be found in Metsä Wood Concrete Formwork technical data.

### MACHINING

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

### PACKAGING

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

### PACKING QUANTITIES

PANEL SIZE (mm)	NUMBER OF PANELS PER PALLET BY THICKNESS			
	15	18	21	24
5400 x 2000	25	25	20	15
6000 x 2200	20	20	15	15

### FURTHER INFORMATION

- Metsä Wood Concrete Formwork brochure
- Metsä Wood Concrete Formwork technical data
- Metsä Wood Deck XL Product Data Sheet
- Metsä Wood KingSize Product Data Sheet

This leaflet is provided for information purposes only and no liability or responsibility of any kind is accepted by Metsä Wood or their representatives, although Metsä Wood has used reasonable efforts to verify the accuracy of any advice, recommendation or information. Metsä Wood reserves the right to alteration of its products, product information and product range without any notice.

02/2023

### METSÄ WOOD

P.O. Box 50, 02020 Metsä, Finland

Tel. +358 1046 05

[metsagroup.com/metsawood](https://metsagroup.com/metsawood)

