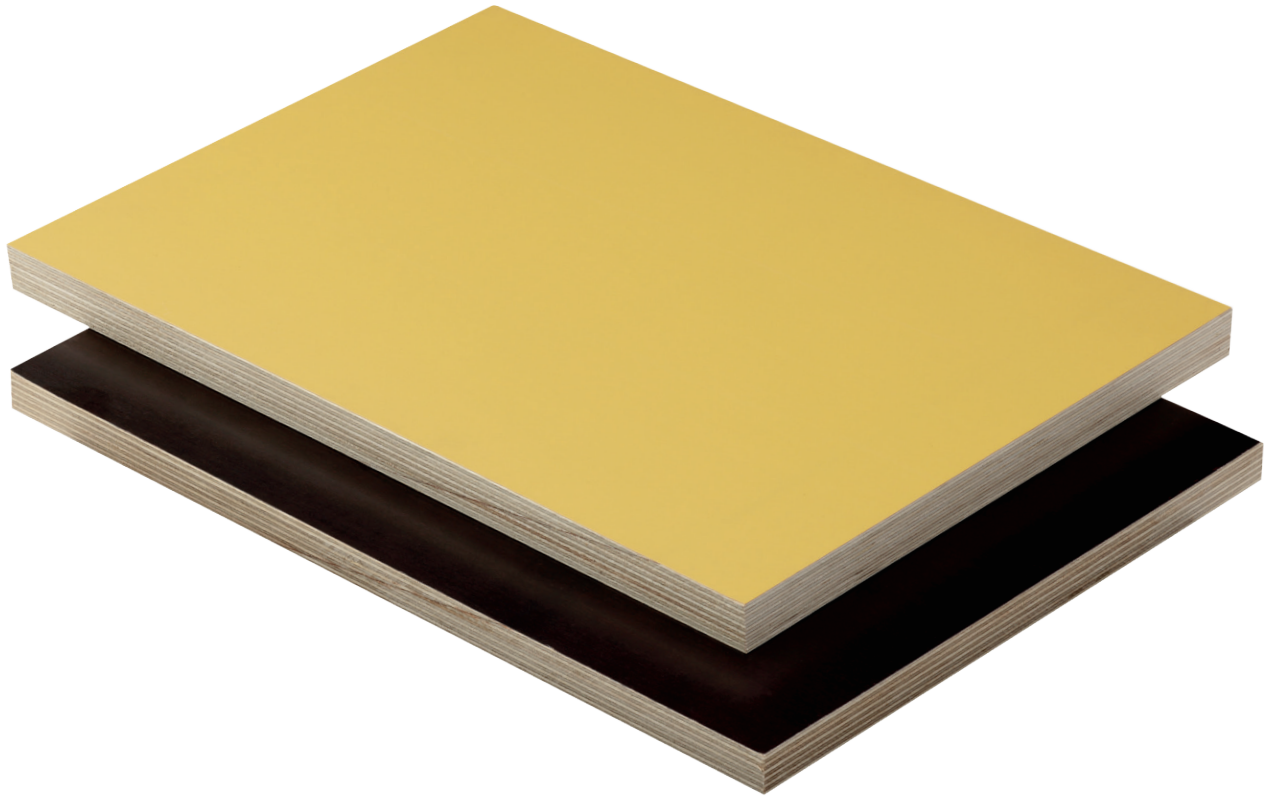


Birch Ply

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
- Environmentally friendly
- Weather- and boil-proof bonding

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/m² yellow and 220 g/m² 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 WEAR RESISTANCE*

	TABER REVOLUTIONS**
Form XL 220 (dark brown)	700
Form XL 450 (yellow)	1,000

* 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. The standard colour of the edge sealing is dark brown for brown overlay and transparent for yellow overlay. Even though edge sealing slows down the absorption of moisture into the panel, it does not eliminate it completely.

Panel sizes

Metsä Wood Form XL is available in sizes:

- 6,000 mm x 2,000 / 2,200 mm
- 5,400 mm x 2,000 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

THICKNESSES, STRUCTURES AND THICKNESS TOLERANCES OF THE FORM XL PANELS *

NOMINAL THICKNESS (mm)	NUMBER OF PLIES (pcs)	THICKNESS TOLERANCE		WEIGHT (kg/m ²)
		min. (mm)	max. (mm)	
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 Form XL 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 scarf joint is glued with weather-resistant 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.

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Panel strength 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.

MECHANICAL PROPERTIES*

THICKNESS* (mm)	MEAN MODULUS OF ELASTICITY** (N/mm ²)		CHARACTERISTIC BENDING STRENGTH** (N/mm ²)	
		⊥		⊥
15	10,316	7,184	26.8	33.8
18	10,048	7,452	26.1	34.1
21	9,858	7,642	25.6	34.3
24	9,717	7,783	25.3	34.4

* Moisture content 12 %

** Properties determined according to EN 789 standard

The Concrete formwork design data (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.

Packing

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
5,400 x 2,000	25	25	20	15
6,000 x 2,200	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

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