

Birch Ply

Form
Form L



Metsä Wood Form is birch plywood, in which both sides are overlaid with phenol film and the edges are sealed. Form plywood is an ideal formwork panel for smooth surfaced concrete elements. It can also be used as a multipurpose, maintenance-free panel for various other uses. Metsä Wood Form is available in sizes standard, L, XL and KingSize.

APPLICATIONS

Concrete Formwork:

Metsä Wood Form is a smooth surface maintenance-free panel for different concrete formwork uses: system shuttering, girder formwork, regeneration panels, element industry and concrete block industry.

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.

Other Applications:

Metsä Wood Form is a general panel used in variety of applications

- Transport industry: Transport equipment, containers, sliding doors, vehicle and flight cases and other transport boxes, bus floor constructions etc.
- Building applications: Agricultural structures, general interior and covered exterior building applications
- Other applications: Packaging applications, sport arenas and equipment

MAJOR ADVANTAGES

- **Smooth durable overlay**
- **Excellent strength-to-weight ratio**
- **Dimensionally stable**
- **Strong and rigid**
- **Easy to clean and re-use**
- **Easy to machine and fasten using conventional woodworking tools and fasteners**
- **Can withstand impacts and other forms of bruising**
- **Weather- and boil-proof bonding**
- **Made of sustainable Nordic wood and PEFC (PEFC/02-31-381) certified**

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BASE PLYWOOD

The base plywood of Metsä Wood Form 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.

Designed and tailor-made to serve in demanding applications, birch plywood can be ordered with special oriented veneer structures to provide even higher strength and stiffness properties.

OVERLAY

A smooth and durable phenolic film is hot-pressed onto the panel surface. The film consists of special base papers impregnated with phenolic resin. A film with a basis weight of 120 g/m² is normally used. With Form L minimum film weight is 220 g/m². Thicker overlays are available on request. Standard film colour for Form and Form L is dark brown. Light brown, yellow and black colours are available for Form on request. The phenol film is not UV resistant and the colour may change when exposed to sunlight over prolonged periods.

SURFACE PROPERTIES

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 surface is easy to clean with water or steam. Moisture absorption is minimal.

ABRASION RESISTANCE*

	OVERLAY WEIGHT	TABER REVOLUTIONS**
Form (dark brown)	120 g/m ²	350
Form (dark brown)	220 g/m ²	700
Form (dark brown)	440 g/m ²	1500

* 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

		WIDTH (mm)							
		LENGTH (mm)	2400	2440	2500	3000	3050	3660	4110
Form	1200*	■	■	■	■	■	■	■	
	1220*	■	■	■	■	■	■	■	
	1250*	■	■	■	■	■	■	■	
	1500*	■	■	■	■	■	■	■	■
	1525*	■	■	■	■	■	■	■	■
Form L	1870	■	■	■	■	■	■	■	■
	2020	■	■	■	■	■	■	■	■

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

■ = standard panel size with dark brown overlay

■ = available on request

Other sizes are available on request. Larger size scarf-jointed XL and KingSize 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

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	NUMBER OF PLYS	THICKNESS TOLERANCE		WEIGHT
(mm)	(ant.)	min. (mm)	max. (mm)	kg/m ²
6.5	5	6.1	6.9	4.4
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
27	19	25.2	26.8	18.4
30	21	28.1	29.9	20.4
35	25	33.5	35.5	23.8

* 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).

FORMALDEHYDE EMISSIONS

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

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APPROVALS AND DESIGN PROPERTIES

Metsä Wood Form is CE and UKCA marked and the design properties are determined according to standard EN 13986. The design properties given in the Declaration of Performance (DoP) and in the UK Declaration of Conformity (UK DoC) are to be used for structural calculations with EN 1995 (Eurocode 5). The DoP documents can be downloaded from www.metsawood.com/dop and the UK DoC documents can be downloaded from www.metsawood.com/ukdoc.

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.

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.

MACHINING

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

PACKAGING

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

PACKING QUANTITIES

PANEL SIZE (mm)	NUMBER OF PANELS PER PALLET BY THICKNESS									
	6.5	9	12	15	18	21	24	27	30	
1500 / 1525 x 2400 - 3660 1200 / 1220 / 1250 x 2850 - 3660	90	65	50	40	35	30	25	25	20	
1500 / 1525 x 1500 - 2135 1200 / 1220 / 1250 x 1200 - 2800	140	100	75	60	50	45	40	35	30	
1500 / 1525 x 3670 - 4110 1870 / 2020 x 1870 - 4110	70	50	35	30	25	20	15	15	15	
1870 / 2020 x 1870 / 2020	140	100	70	60	50	40	30	30	30	

FURTHER INFORMATION

- Metsä Wood Form Declaration of Performance (www.metsawood.com/dop)
- Metsä Wood Form UK Declaration of Conformity (www.metsawood.com/ukdoc)
- Metsä Wood Concrete Formwork brochure
- Metsä Wood Concrete Formwork technical data
- Metsä Wood Form XL and KingSize Product Data Sheets

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