

# Birch Ply

## Metsä Wood DURAForm®



Metsä Wood DURAForm® is a high performance formwork panel choice for smooth surfaced concrete elements. Metsä Wood DURAForm plywood has a special treatment to resist the surface rippling that ensures smooth high quality concrete finish from the first pour. Metsä Wood DURAForm panel surface is a multi-material composite that is harder and more scratch and wear-resistant than standard formwork panels.

### Applications

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

The hard composite surface of Metsä Wood DURAForm ensures smooth concrete finish and multiple uses. The number of uses can rise up to 200 but is highly dependent on the 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.

### Major advantages

- Extra hard and wear-resistant surface
- Surface resists rippling
- Smooth durable multi-material composite surface
- Easy to clean and re-pour up to 200 times
- Can withstand impacts and other forms of bruising
- Dimensionally stable
- Strong and rigid
- Environmentally friendly

### Base plywood

The base plywood of Metsä Wood DURAForm 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.

### Panel surfaces

The outermost smooth and durable surface of the multi-material composite is created by hot pressing special impregnated paper onto the panel surface. The composite is moisture-resistant and therefore reduces surface rippling and provides a smooth concrete cast from the first use. The composite structure for casting is applied only to the concrete side of the panel.

On the backside of the panel, the overlay has Metsä Wood DURAForm logo imprinted into the panel surface. Film colour is dark brown. The phenol film is not UV resistant and the colour may change when exposed to sunlight over prolonged periods.

### ABRASION RESISTANCE\*

TABER REVOLUTIONS**	
Metsä Wood DURAForm	1,750

\* 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

	LENGTH (mm)	WIDTH (mm)				
		2,440	2,500	3,000	3,050	3,660
	1,200*	■	■	■	■	■
Metsä	1,220*	■	■	■	■	■
Wood	1,250*	■	■	■	■	■
DURA-	1,500*	■	■	■	■	■
Form	1,525*	■	■	■	■	■

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

■ = standard panel size

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

### Thickness, 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 (mm)		WEIGHT (kg/m <sup>2</sup> )
		min. (mm)	max. (mm)	
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

\* 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).

### Panel strength properties

Metsä Wood DURAForm strength and elasticity properties are identical with the Metsä Wood Birch standard plywood properties. The properties are specified according to standard EN 13986 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).

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 DURAForm plywood panels can be machined according to customer specification on request.

### Packing

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

### PACKING QUANTITIES

PANEL SIZE (mm)	NUMBER OF PANELS PER PALLET BY THICKNESS			
	12	15	18	21
1,500 / 1,525 x 2,440-3,660	50	40	35	30
1,200 / 1,220 / 1,250 x 3,000-3,660				
1,500 / 1,525 x 1,500-2,135	70	60	50	45
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 Concrete Formwork brochure
- Metsä Wood Concrete Formwork technical data

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