

# Birch Ply

## Integra



Metsä Wood Integra is a new generation overlaid plywood panel with excellent adhesion and painting properties. The durable surface allows the panel to be used in multiple end uses e.g. bonded floor constructions in vehicle frames, painted interior and exterior applications and concrete formwork.

### APPLICATIONS

Metsä Wood Integra with a tailor-made overlay ensures a durable finish with excellent adhesion and painting properties. Integra has a wide application range from paint-base panel to glueable floor components and concrete formwork panels. Integra panels are available in a wide range of thicknesses and sizes.

- **Transport:** Bus floors constructions, glued trailer floors, transport boxes
- **Concrete Formwork:** Smooth and maintenance-free panel for different formwork uses.
- **Building:** General interior and exterior building applications, hoarding panels, general paint-base panel, agricultural structures, showrooms and displays, stage constructions
- **Other:** Traffic signs, sports arenas and equipment, packaging applications

### MAJOR ADVANTAGES

- Versatile panel
  - Durable overlay
  - Surface can be painted or glued
  - Smooth surface formwork panel
  - Easy to machine and fasten by using conventional woodworking tools
  - Easy to clean
- Light and dimensionally stable
  - Strong and rigid
- Excellent adhesion
  - Good physical bonding for various adhesives
- Easy paintability
  - Smooth and uniform paint finish
  - Saves painting time and costs
  - Suitable for many commercial paint types
- Environmentally friendly
  - Low formaldehyde emissions
  - PEFC certified

### BASE PLYWOOD

The base plywood of Metsä Wood Integra is Metsä Wood Birch, which is made of cross-bonded 1.4 mm thick birch veneers and 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 AND SURFACE PROPERTIES

Metsä Wood Integra Form film surface is smooth, semi-matt, hard and slippery. The durable Integra Form overlay ensures matt, smooth concrete cast finish and multiple uses. Use high quality release agent to ensure easier and cleaner release.

Metsä Wood Integra Deck has a non-slippery wire mesh surface with excellent gluing properties.

Integra overlay withstands abrasion, is moisture resistant and can tolerate commonly used chemicals as well as diluted acids and alkalis. The surface is easy to clean. Moisture absorption is minimal. Colour of the overlay is red brown. There can be colour variation between the panels and different production lots. The compatibility of a surface coating or a glue type should be confirmed from the supplier. Additionally a test coating/gluing is recommended prior to use.

### GLUING AND PAINTING OPTIONS

#### POSSIBILITIES FOR STRUCTURAL GLUE - ACCORDING TO SIKA

PRE-TREATMENT NO SANDING	ADHESIVE	METSÄ WOOD INTEGRA	
		FORM	DECK
	Sikaflex® -221	X	X
	Sikaflex® -252		X
	Sikaflex® -263		X
	Sikaflex® -265		X
Sika® Aktivator	Sikaflex® -221		X
Sika® Aktivator	Sikaflex® -252	X	X
Sika® Aktivator	Sikaflex® -263	X	X
Sika® Aktivator	Sikaflex® -265	X	X
Sika® Coating Aktivator	Sikaflex® -221	X	X
Sika® Coating Aktivator	Sikaflex® -252	X	X
Sika® Coating Aktivator	Sikaflex® -263	X	X
Sika® Coating Aktivator	Sikaflex® -265	X	X

Technical Service Report 00010-FI-00001-JJA / Oy Sika Finland Ab / Industry 6/13  
Testmethod: CQP 033-1 – Bead Adhesion  
Substrate: Plywood: Metsä Wood Integra Form and Deck

#### POSSIBILITIES FOR TRANSPORTATION FLOORING - ACCORDING TO SIKA

Metsä Wood Integra was tested with Sika products for transport applications. SikaSense® - 4335 + SikaCure® - 4935, and SikaSense® - 4600 display good adhesion and strength levels. All the products need to be checked regarding suitability for production processes. Line trials with original customer equipment are recommended.

Technical Service Report  
01025-DE2-00001-AL / 27.11.2014 / MetsäWood-FIN

#### POSSIBILITIES FOR PAINTING - ACCORDING TEKNO

One of Europe's leading suppliers of industrial coatings Teknos recommends following painting systems with Metsä Wood Integra:

	1 C PRODUCTS	2 C PRODUCTS
TopCoat	Nordica Eco / AquaTop	Teknodur 150 / Teknodur Aqua
Primer	Teknol 3881	Teknodur Wood primer 5 / Teknodur primer 5

### 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 Integra is available in sizes:

- 1200 / 1220 / 1250 mm x 2400 / 2440 / 2500 / 3000 / 3050 / 3600 / 3660 mm
- 1500 / 1525 mm x 2500 / 3000 / 3050 / 3600 / 3660 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
< 1000 mm	±1 mm
1000-2000 mm	±2 mm
> 2000 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)	(pcs)	min. (mm)	max. (mm)	kg/m <sup>2</sup>
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

\* 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 (WBP, BFU, AW, exterior).

The gluing meets the requirements of the following international standards:

- EN 314-2 / Class 3 (exterior)
- DIN 68705-3 / BFU 100
- BS 6566 Part 8 / WBP

### FORMALDEHYDE EMISSIONS

Determined according to EN 717-1, the formaldehyde emitted by Metsä Wood Integra 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 Integra is approximately 0,017 ppm.

### PANEL STRENGTH PROPERTIES

Metsä Wood Integra is a CE marked product and its 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 Integra 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.

### PACKING

Metsä Wood Integra 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	27	30
1500 /1525 x 2400-3660								
1200/1220/1250 x 3000-3660	65	50	40	35	30	25	25	20
1500 /1525 x 1500-2135								
1200/1220/1250 x 1200-2750	100	75	60	50	45	40	35	30

### FURTHER INFORMATION

- Metsä Wood Integra Declaration of Performance ([www.metsawood.com/dop](http://www.metsawood.com/dop))
- Metsä Wood Concrete Formwork brochure
- Metsä Wood Concrete Formwork technical data
- Metsä Wood Transport brochure

### METSÄ WOOD

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