

# Birch Ply

## Integra



Metsä Wood Integra is an 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 gluable floor components and concrete formwork panels. Integra panels are available in a wide range of thicknesses and sizes.

- **Transport:** Bus floors constructions (UN/ECE Regulation No. 118 certificate), 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**
- **Surface can be painted or glued**
- **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**
- **Weather- and boil-proof bonding**
- **Made of sustainable Nordic wood and PEFC (PEFC/02-31-03) certified**

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### BASE PLYWOOD

The base plywood of Metsä Wood Integra 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

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.

### SURFACE 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  
Test method: 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 TO TEKNOS

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	Tekno 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

	LENGTH (mm)	WIDTH (mm)					
		2400	2440	2500	3000	3050	3660
	1200*	■	■	■	■	■	■
	1220*	■	■	■	■	■	■
Integra	1250*	■	■	■	■	■	■
	1500*						
	1525*						

\* 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

### 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)	(no.)	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



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### 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 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.

### APPROVALS AND DESIGN PROPERTIES

Metsä Wood Integra 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](http://www.metsawood.com/dop) and the UK DoC documents can be downloaded from [www.metsawood.com/ukdoc](http://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.

### PACKAGING

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 Integra UK Declaration of Conformity ([www.metsawood.com/ukdoc](http://www.metsawood.com/ukdoc))
- Metsä Wood Concrete Formwork brochure
- Metsä Wood Concrete Formwork technical data
- Metsä Wood Plywood for transport industry brochure

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