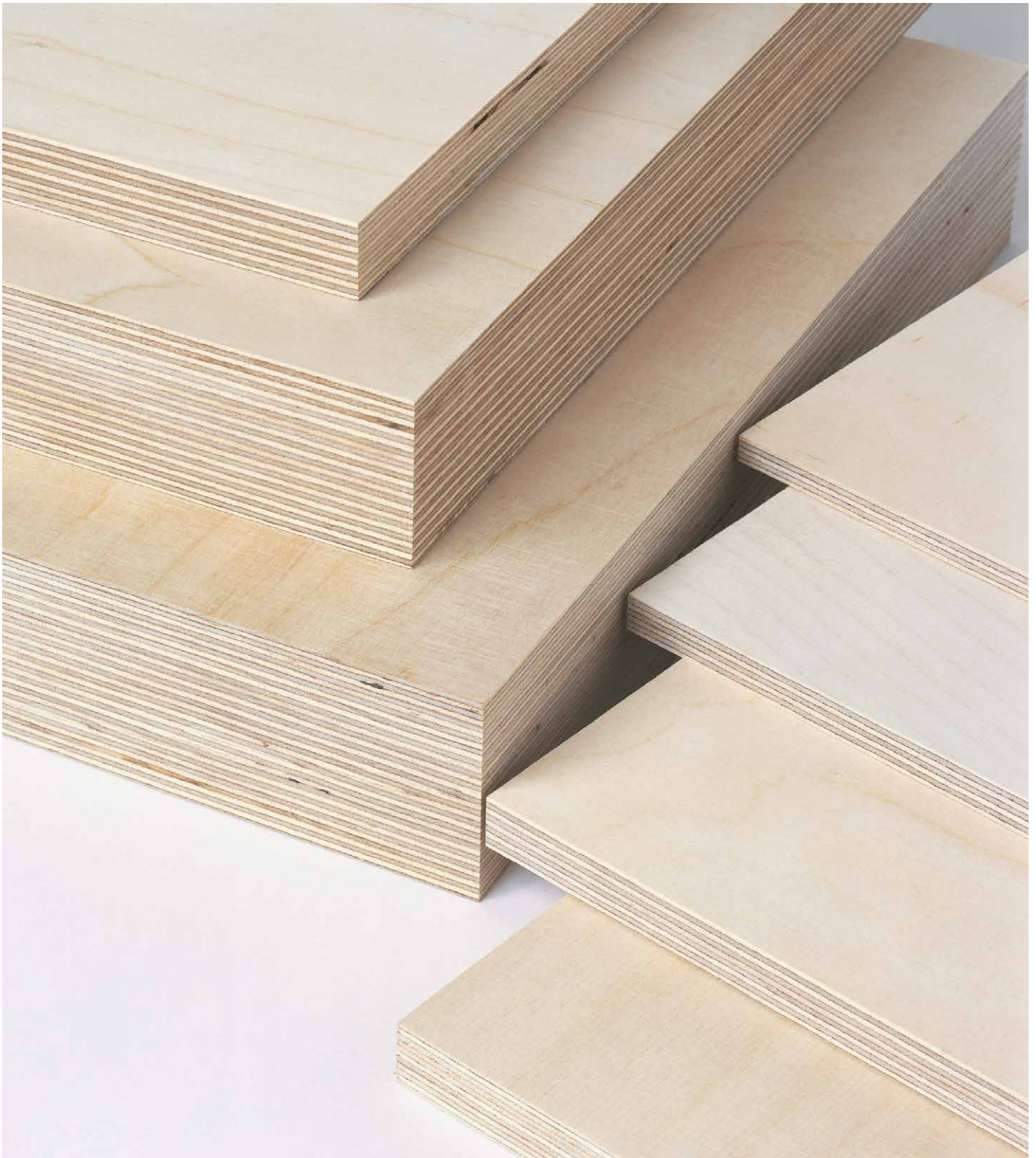


Birch Ply

Guide to Birch plywood
surface qualities



Metsä Wood Birch Plywood

– Durable birch plywood for demanding applications

Metsä Wood Birch is a high-quality multipurpose panel for mostly constructive applications. It is characterised by excellent strength and stiffness properties, and it therefore performs very well in applications demanding high strength and rigidity. Available in standard, L, XL and King Size panels and with several surface qualities as presented in this manual.

Applications for example

- Vehicle floors and walls for road transport
- Floor and roof structures in building
- Floor elements
- Furniture elements
- Doors elements
- LNG carriers



Surface properties

Metsä Wood Birch plywood panels are sanded on both sides and their surface is smooth, hard and durable. The surface can be treated with standard paints, lacquers, varnishes and protection treatments applicable on wood products. The surface grades are determined by the grade of the sanded surface veneers as below more detailed described in general, typical level, but not with presenting total possible characteristics of wood raw material, that can occur on final products.

BIRCH PLYWOOD SURFACES - TYPICAL PROPERTIES

S (II)	Painting, finishing grade
BB (III)	Standard grade (patched & repaired)
EWG	Constructive, coating grade (patched & repaired)
WG (IV)	Reverse grade

Metsä Wood Birch plywood XL and KingSize surface properties

As XL and KingSize panels are scarf-jointed together from standard panels, the scarf-joints appear as thin, visible lines on both sides of the panel, running perpendicularly to the panel length. Metsä Wood Birch XL and Kingsize panels have the same surface properties as original panels, possibly with slight differences in coloration and gloss between the jointed panels. Depending on panel size, the location of scarf-joint can differ between panels.

Quality descriptions are not full lists and other possible defects will belong under the category which they most closely suited. Classification is according to characteristics inherent in the wood species and list in this document is not full list, but does guide to best suited general quality.

Size and shape of wooden patches can vary between mills. Surface veneer can be combined from 2 or more sheets (jointed sheets) and color variation between raw materials can appear and is allowed concerning surface qualities BB, EWG and WG. Classification of Metsä Wood Birch surface grade meets EN 635 requirements. Surface grade does not influence panel's strength properties.

Wood as raw material

Traceability and forest certification

Our main material is traceable wood from sustainably managed and certified northern forests. Wood species used in Birch plywood is 100% (Birch Betula spp), that origins from Finland.

All the used wood is traceable and comes from certified or controlled forests. We comply with legislation in all our operations. Metsä Group's wood tracing systems are certified and verified according to PEFC and FSC® Chain of Custody requirements. Metsä Group ensures responsible forest management through the PEFC and FSC forest certification processes. Likewise, the responsibility of our wood suppliers is always assured through the PEFC or FSC Chain of Custody systems. Metsä Groups principles for forest use and management assure that biodiversity and sustainable management of commercial forests are taken care. In 2022, the proportion of certified wood used by Metsä Group was 92.2%.

Metsä Wood fulfils the obligations of European Union Regulation No. 995/2010 (EU Timber Regulation), the UK Timber Regulation, the US Lacey Act and the Australian Illegal Logging Prohibition Act, which all prohibit the placing and trading of illegally harvested timber and timber products on the market. As all the wood is covered by Chain of Custody certification, Metsä Wood knows the origin of all the wood it uses. PEFC ensures that 100% of the wood raw material is legally harvested.

We are constantly searching better ways to use wood for our engineered wood products. As the contribution for sustainable future, our target is to use only fossil-free raw materials by 2030.

You can find more information from our website and Origin of Wood-declaration document.

MANAGEMENT SYSTEM AND CHAIN-OF-CUSTODY CERTIFICATES

Quality	ISO 9001
Environment	ISO 14001
Occupational health and safety	ISO 45001
Energy efficiency	ISO 50001
FSC license number	FSC-C014476
PEFC license number	PEFC/02-31-03
PEFC CoC	BV-PEFC-COC-200774
FSC CoC	BV-COC-897631 (limited availability)
FSC CW	BV-CW-897631

You can find more information and above certificates from our website.



BB (III)

Metsä Wood Birch Plywood

BB is for technical and constructive end uses, for even surface requirements. Well suited for further overlaying applications.

DEFECTS	BB (III)
Pin Knots	Allowed
Sound intergrown knots	$\varnothing \leq 25$ mm sum $\leq \varnothing 60$ mm/m ²
Sound knots and other holes repaired with putty	Allowed
Knots and other holes	$\varnothing \leq 6$ mm sum $\leq \varnothing 25$ mm/m ²
Unsound or non-adhering knots	Not allowed
Uneven grain formation	Allowed
Open splits	1 pcs/m 200 x 2 mm repaired with putty
Close split	2 pcs/m 200 mm
Colour streaks / veins	Allowed
Discoloration	Allowed
Open joints	Repaired 1 pcs/m 200 x 2mm
Overlap on surface veneer	1 pcs/m 200 mm
Dents and imprints	Allowed, if slight
Roughness and torn grain	Allowed, if slight
Repairs with wooden patches	3% of surface area
Sanding through	10 cm ²
Glue penetration	5% of surface area
Defects at the edges due to sanding or sawing, from edge	5 mm
Other defects	Will be considered to most close category

Example pictures only present some of the possible defects and are only indicative of the general quality classes.

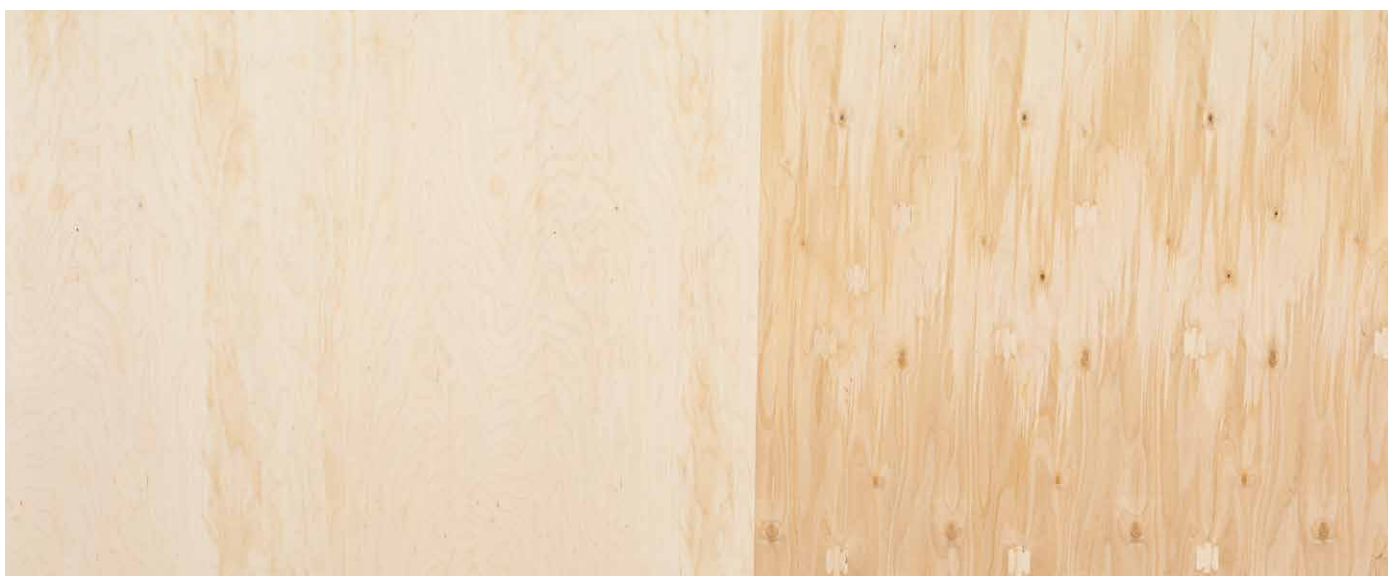


Metsä Wood Birch Plywood

Constructive, coating grade (patched & repaired)

DEFECTS	EWG
Pin Knots	Allowed
Sound intergrown knots	Allowed
Sound knots and other holes repaired with putty	Allowed
Knots and other holes	Repaired with putty max Ø 20 mm, as also split wooden patches (1/3 split).
Unsound or non-adhering knots	Allowed max Ø ≤ 20 mm sum ≤ Ø 200 mm/m ²
Uneven grain formation	Allowed
Open splits	20mm width, when repaired with putty
Close split	2 pcs/m 200 mm
Colour streaks / veins	Allowed
Discoloration	Allowed
Open joints	20 mm width, when repaired with putty
Overlap on surface veneer	Allowed repaired ≤ 20 mm width
Dents and imprints	Allowed, puttied
Roughness and torn grain	Allowed, if slight
Repairs with wooden patches	Allowed
Sanding through	Allowed, if moderate
Glue penetration	Allowed
Defects at the edges due to sanding or sawing, from edge	5 mm
Detached wooden patches (EWG)	1 pcs/surface, when repaired with putty and sanded evenly
Other defects	Will be considered to most close category

Example pictures only present some of the possible defects and are only indicative of the general quality classes.



WG (IV)

Metsä Wood Birch Plywood

Reverse grade

DEFECTS	WG (IV)
Pin Knots	Allowed
Sound intergrown knots	$\varnothing \leq 65$ mm sum $\leq \varnothing 600$ mm/m ²
Sound knots and other holes repaired with putty	Allowed
Knots and other holes	$\varnothing \leq 15$ mm sum $\leq \varnothing 100$ mm/m ²
Unsound or non-adhering knots	$\varnothing \leq 20$ mm sum $\leq \varnothing 200$ mm/m ²
Uneven grain formation	Allowed
Open splits	2 pcs/m 4 mm width without putty
Close split	Allowed
Colour streaks / veins	Allowed
Discoloration	Allowed
Open joints	3 mm width without putty
Overlap on surface veneer	2 pcs/m 500 mm
Dents and imprints	Few allowed
Roughness and torn grain	Allowed
Repairs with wooden patches	Allowed
Sanding through	Allowed, if moderate
Glue penetration	Allowed
Defects at the edges due to sanding or sawing, from edge	5 mm
Other defects	Will be considered to most close category

Example pictures only present some of the possible defects and are only indicative of the general quality classes.



The use of technically superior Nordic wood material allows to optimize the use of wood to produce economical, dimensionally stable components with excellent strength-to-weight ratio.



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