



GUIDE TO UPM Grada[®] Surface Veneer Appearance

S (II) – UPM Grada®

The S quality is suitable as a base for high quality painting or coating.

Categories of defect	Appearance class: S (II)
Pin knots	Allowed
Sound intergrown knots	Allowed max. Ø 12 mm, sum Ø 50 mm/m ²
Unsound or non-adhering knots and knot holes	Allowed repaired max. Ø 8 mm, sum Ø 25 mm/m ²
Other holes	
Close split	Permitted 2 pcs/m, max. length 200 mm
Open split	Allowed repaired 1 pcs/m, length 200 mm, width 2 mm
Open joints	Not allowed
Overlap on surface veneer	Not allowed
Uneven grain formation	Allowed
Discolouration	Allowed by 50% of surface area
Colour streaks/veins	Allowed
Dents and imprints	Not allowed
Roughness and torn grain	Not allowed
Sanding through	Allowed 5 mm from edge
Glue penetration	Allowed 5% of surface area
Repairs with wooden patches	Not allowed
Repairs with synthetic filler	Allowed
Joints at surface veneer (length wise)	Not allowed
Defects at the edges due to sanding or sawing	Allowed 5 mm from edge
Other defects	To be considered under the category which they most closely resemble

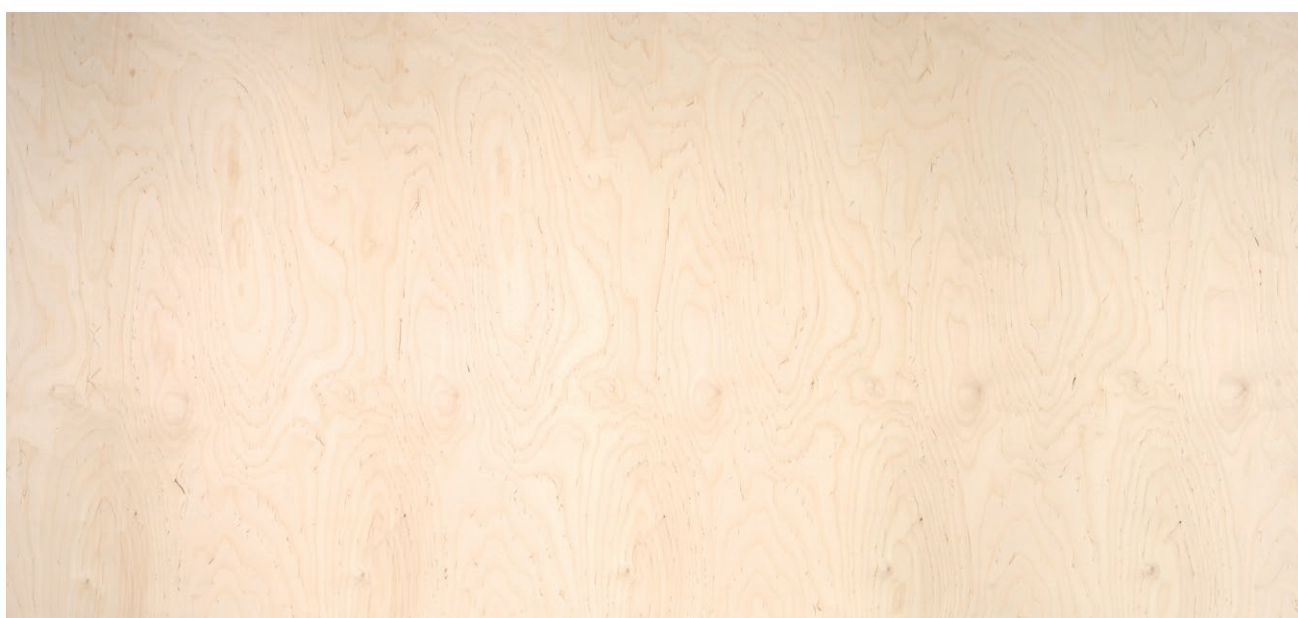
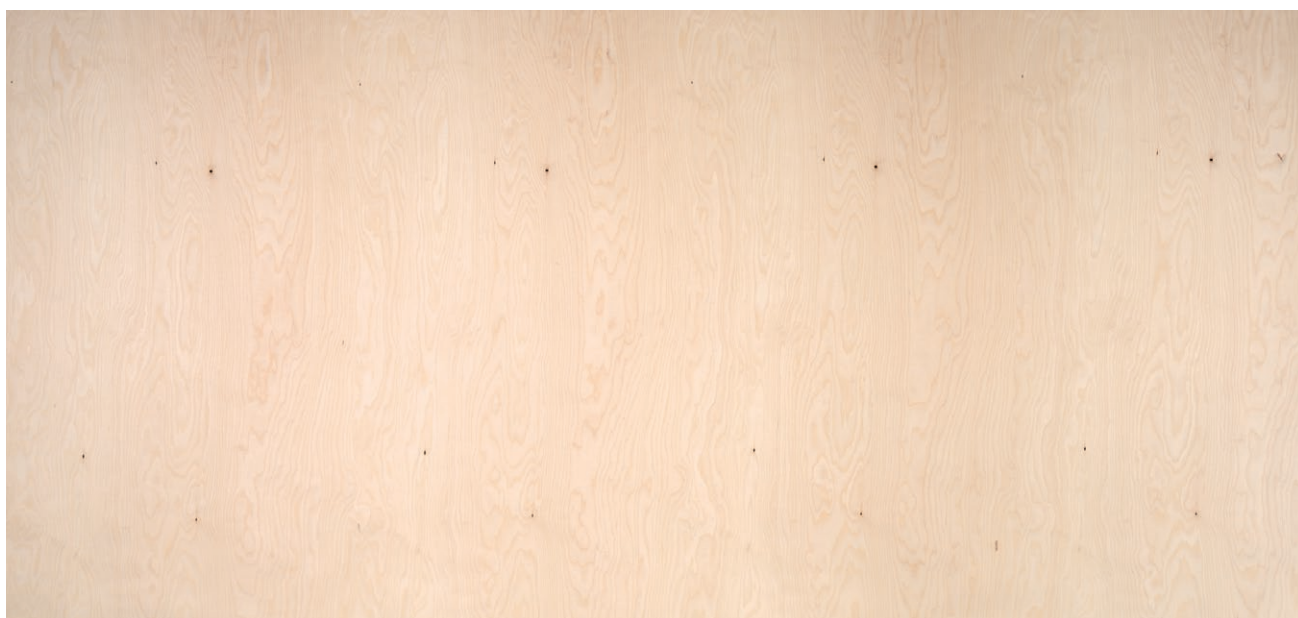
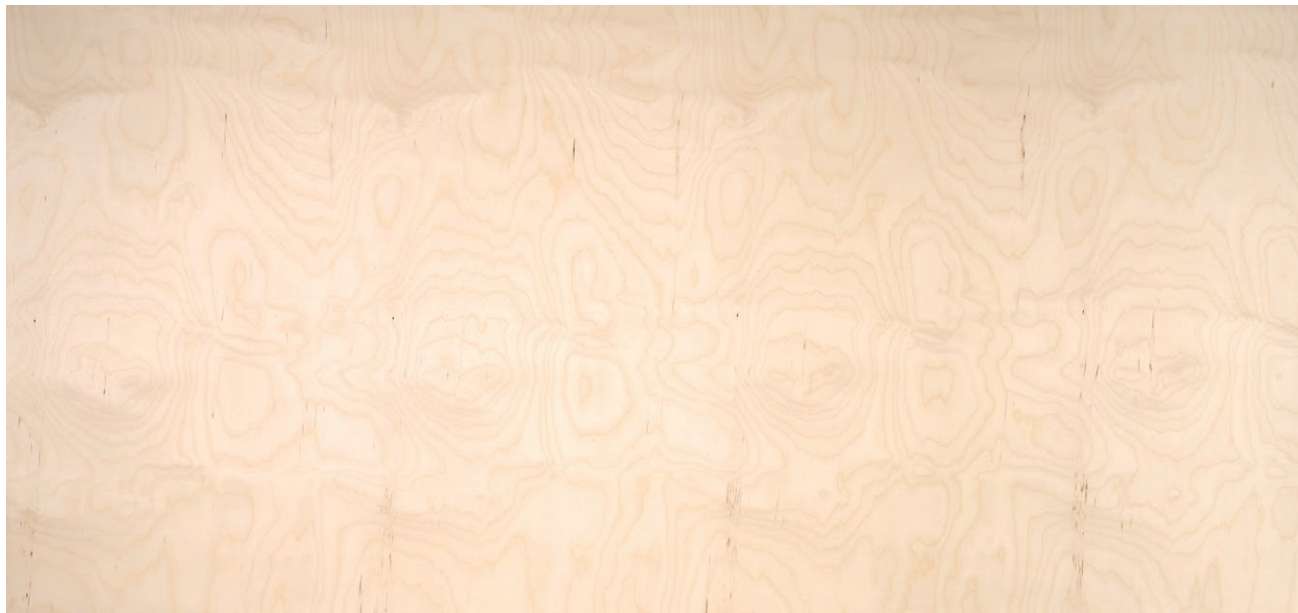
UPM Plywood birch surface appearance classification is based on former Finnish national standard SFS 2413. Classification comply with requirements of European Standard EN 635-2:1995 *Plywood – Classification by surface appearance – Part 2: Hardwood* and are in part stricter.

Other defects to be considered under the category which they most closely resemble (in the table above).

Classification is according to characteristics inherent in the wood species.

Measuring of the defects according to EN 635-5.

Surface grade has no influence on the panel's strength properties.



BB (III) – UPM Grada®

BB is meant to be used in applications where the surface is not visible as such or there are no special requirements, for example under veneering, in structures and components.

Categories of defect	Appearance class: BB (III)
Pin knots	Allowed
Sound intergrown knots	Allowed max. Ø 25 mm, sum Ø 60 mm/m ²
Unsound or non-adhering knots and knot holes	Allowed repaired max. Ø 6 mm, sum Ø 25 mm/m ²
Other holes	
Close split	Allowed 2 pcs/m, max. length 200 mm
Open split	Allowed repaired 1 pcs/m, length 200 mm, width 2 mm
Open joints	Allowed repaired 1 pcs/m, length 200 mm, width 2 mm
Overlap on surface veneer	Allowed 1 pcs/m, length 200 mm
Uneven grain formation	Allowed
Discolouration	Allowed
Colour streaks/veins	Allowed
Dents and imprints	Allowed slight
Roughness and torn grain	Allowed slight
Sanding through	Allowed max. 10 cm ² /m ²
Glue penetration	Allowed 5% of surface area
Repairs with wooden patches	Allowed max. 17 pcs/m ²
Repairs with synthetic filler	Allowed
Joints at surface veneer (length wise)	Allowed
Defects at the edges due to sanding or sawing	Allowed 5 mm from edge
Other defects	To be considered under the category which they most closely resemble

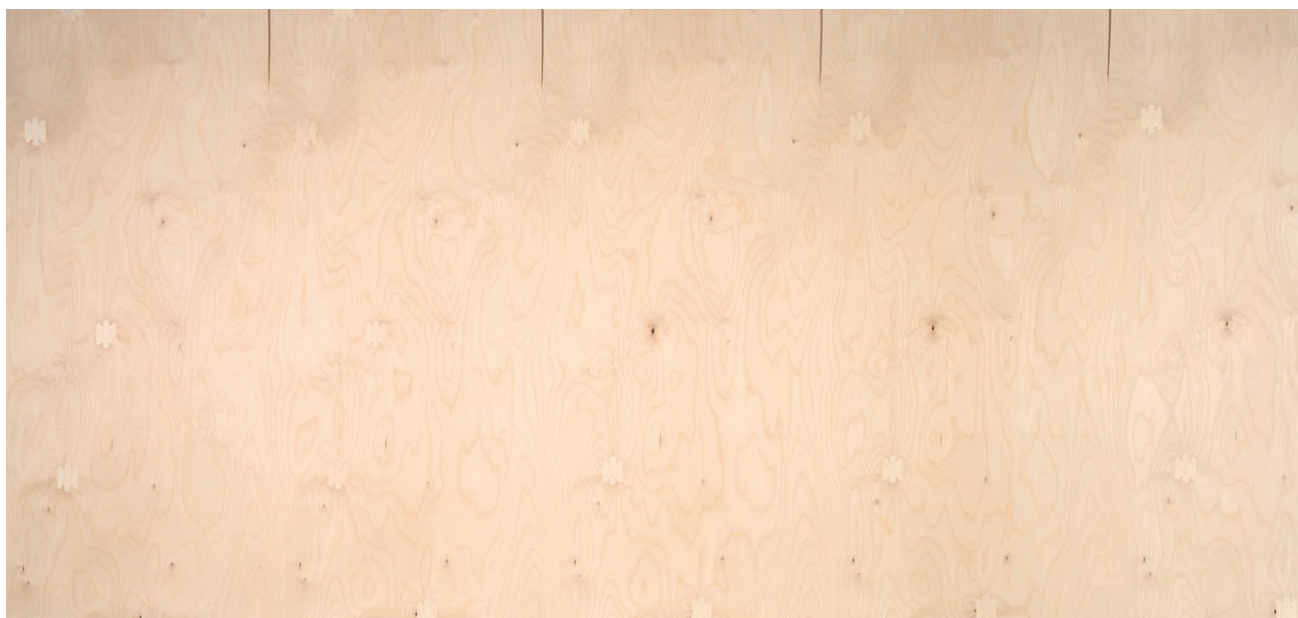
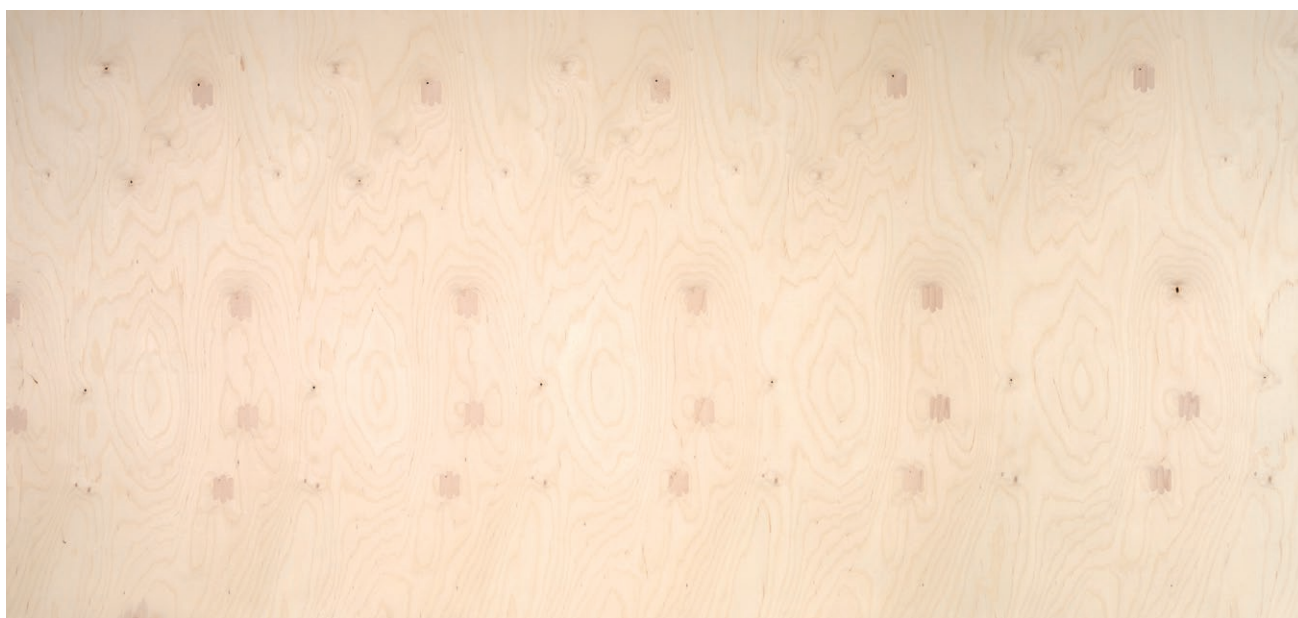
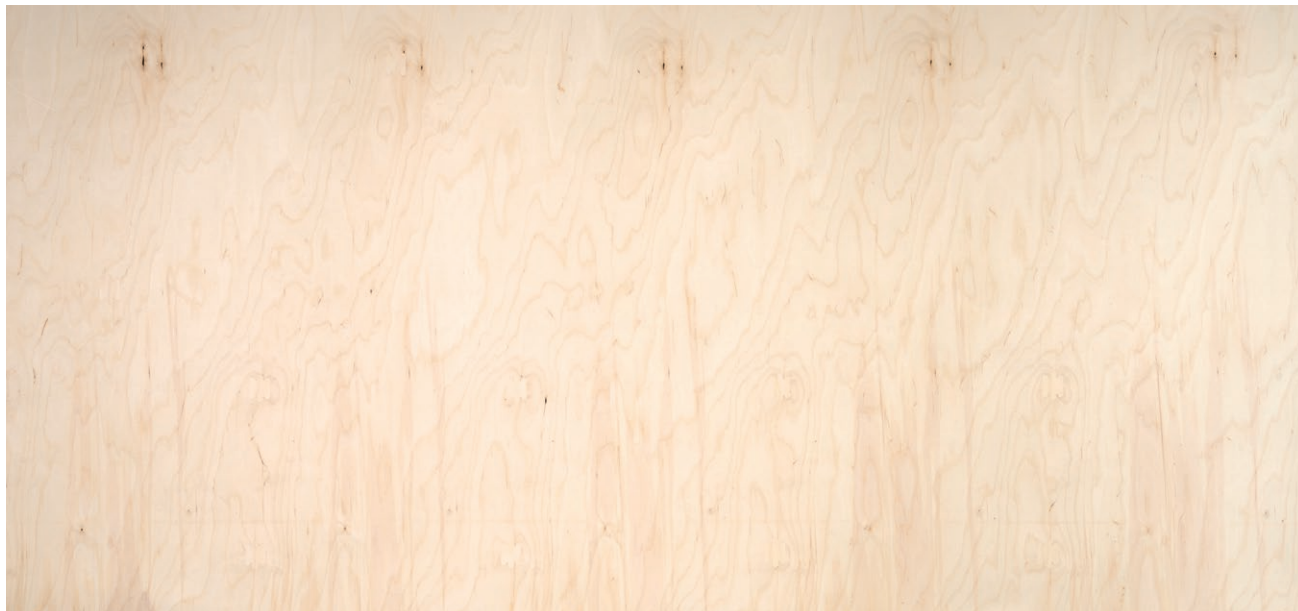
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Other defects to be considered under the category which they most closely resemble (in the table above).

Classification is according to characteristics inherent in the wood species.

Measuring of the defects according to EN 635-5.

Surface grade has no influence on the panel's strength properties.



PREMIUM – UPM Grada® Premium

Premium is recommended for visually demanding applications, such as surfaces that are treated with wood stain or varnish.

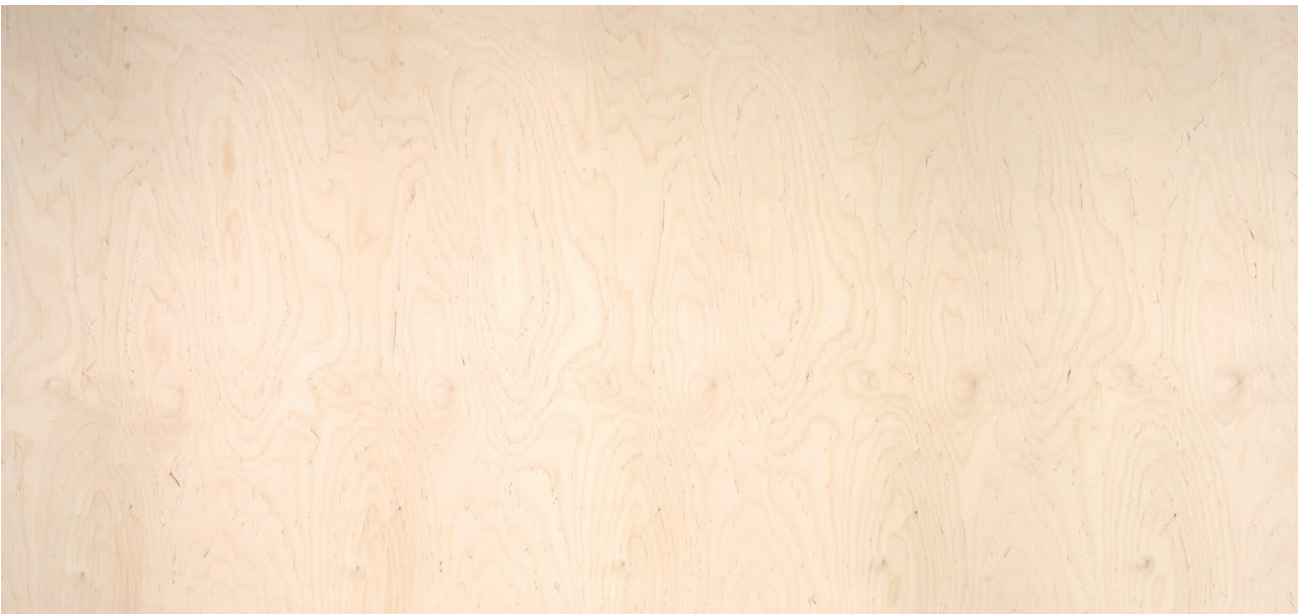
Categories of defect	Appearance class: Premium
Pin knots	Allowed
Sound intergrown knots	Allowed max. Ø 12 mm, sum Ø 50 mm/m ²
Unsound or non-adhering knots and knot holes	Allowed repaired max. Ø 8 mm, sum Ø 25 mm/m ²
Other holes	
Close split	Allowed 2 pcs/m, max. length 200 mm
Open split	Allowed repaired 1 pcs/m, length 200 mm, width 2 mm
Open joints	Not applicable
Overlap on surface veneer	Not allowed
Uneven grain formation	Allowed
Discolouration	Not allowed
Colour streaks/veins	Allowed slight
Dents and imprints	Not allowed
Roughness and torn grain	Not allowed
Sanding through	Allowed 5 mm from edge
Glue penetration	Not allowed
Repairs with wooden patches	Not allowed
Repairs with synthetic filler	Allowed
Joints at surface veneer (length wise)	Not allowed
Defects at the edges due to sanding or sawing	Allowed 5 mm from edge
Other defects	To be considered under the category which they most closely resemble

UPM Plywood birch surface appearance *Premium* is developed to better serve customers who want a light-coloured, high quality birch plywood surface for lacquering or varnishing. *Premium* is defined by using the same natural characteristics inherent in wood as described by European Standard EN 635-2:1995 *Plywood – Classification by surface appearance – Part 2: Hardwood*.

Other defects to be considered under the category which they most closely resemble (in the table above).

Measuring of the defects according to EN 635-5.

Surface grade has no influence on the panel's strength properties.



WG (IV) – UPM Grada® UnderCover

The WG quality is used in applications where the surface will not be visible or does not have high visual requirements. It is also used in applications where the technical qualities of birch, such as strength and hardness of the surface, are more important than the appearance of the panel.

Categories of defect	Appearance class: WG (IV)
Pin knots	Allowed
Sound intergrown knots	Allowed max. Ø 65 mm, sum Ø 600 mm/m ²
Unsound or non-adhering knots	Allowed max. Ø 20 mm, sum Ø 200 mm/m ²
Knots and other holes	Allowed max. Ø 15 mm, sum Ø 100 mm/m ²
Close split	Allowed
Open split	Allowed max. 2 pcs/m, width 4 mm
Open joints	Allowed, max. width 3 mm
Overlap on surface veneer	Allowed 2 pcs/m, length 500 mm
Uneven grain formation	Allowed
Discolouration	Allowed
Colour streaks/veins	Allowed
Dents and imprints	Allowed
Roughness and torn grain	Allowed
Sanding through	Allowed moderate
Glue penetration	Allowed
Repairs with wooden patches	Allowed
Repairs with synthetic filler	Allowed
Joints at surface veneer (length wise)	Allowed
Defects at the edges due to sanding or sawing	Allowed 5 mm from edge
Other defects	To be considered under the category which they most closely resemble

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Other defects to be considered under the category which they most closely resemble (in the table above).

Classification is according to characteristics inherent in the wood species.

Measuring of the defects according to EN 635-5.

Surface grade has no influence on the panel's strength properties.



