

Spruce Ply

WeatherGuard®



Metsä Wood Spruce WeatherGuard is a softwood plywood that has a hydrophobic surface. The surface rejects rainwater and therefore reduces the amount of water absorbed by the panel during construction work. At the same time, the surface allows the panel to breathe and water vapour to move freely.

APPLICATIONS

Metsä Wood Spruce WeatherGuard is a multi-purpose construction panel that is also suitable for various other applications.

- Building applications: floor, wall and roof structures, agricultural structures, pedestrian bridges, construction platforms etc.
- Renovation: repairing, improving and renovating buildings
- Other applications: packing applications, vehicle industry, fences, hoardings etc.

MAJOR ADVANTAGES

- **Temporary protection against rain**
- **Shorter drying period of structures**
- **Better dimensional stability under changing conditions**
- **Treatment does not block water vapour movements**
- **Strong, rigid and lightweight**
- **Easy to machine and install using conventional woodworking tools and fasteners**
- **Panel is impact resistant and does not crumble**
- **Good base for fasteners**
- **Weather- and boil-proof bonding**
- **Available with square edges and tongue-and-groove profiles**
- **Made of sustainable Nordic wood and PEFC (PEFC/02-31-381) certified**

BASE PLYWOOD

The base plywood of Metsä Wood Spruce WeatherGuard is Metsä Wood Spruce, which is made of cross-bonded 3 mm thick coniferous veneers and bonded with a weather- and boil-resistant phenol formaldehyde adhesive.

SURFACE PROPERTIES

Metsä Wood Spruce WeatherGuard panels can be unsanded or sanded on both sides. The WeatherGuard treatment is transparent and gives temporary protection against rain.

The surface can be further treated with standard paints, lacquers and protection treatments applicable to wood products. Compatibility of the surface treatment must be confirmed from the supplier. Before treating large areas, it is recommended to test with small sample.

The surface grades are determined by the grade of the surface veneers as follows:

Spruce plywood surfaces -Typical properties

II – sound surface, might be repaired with filler, unrepaired defects with Ø max. 5 mm are permitted.

III – standard quality, with open defects such as knotholes and veneer checks.

Primary grade combination is III/III.

Classification of Metsä Wood Spruce surface grade meets the requirements of EN 635.

PANEL SIZES

Metsä Wood Spruce WeatherGuard is available in sizes:

- 2400 / 2440 / 2500 mm x 1200 / 1220 / 1250 mm
- 2400 / 2440 mm x 600 / 610 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 the requirements of EN 315.

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 (mm)	NUMBER OF PLYS (no.)	THICKNESS TOLERANCE		WEIGHT (kg/m ²)
		min. (mm)	max. (mm)	
9	3	8.8	9.5	4.1
12	4	11.5	12.5	5.5
15	5	14.3	15.3	6.9
18	6	17.1	18.1	8.3
21	7	20.0	20.9	9.7
24	8	22.9	23.7	11.0
27	9	25.2	26.8	12.4
30	10	28.1	29.9	13.8

* The moisture content of the product affects its dimensions

* Average density of Metsä Wood Spruce plywood is 460 kg/m³ (at a relative humidity of 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).

FORMALDEHYDE EMISSIONS

Determined according to EN 717-1, the formaldehyde emitted by Metsä Wood Spruce falls far below the Class E1 requirement of ≤ 0.100 ppm and also fulfils the most stringent requirements in the world (≤ 0.030 ppm). The formaldehyde emission of Metsä Wood Spruce is approximately 0.018 ppm. WeatherGuard treatment does not contain any formaldehyde.

APPROVALS AND DESIGN PROPERTIES

Metsä Wood Spruce WeatherGuard 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 and the UK DoC documents can be downloaded from www.metsawood.com/ukdoc.

Metsä Wood Spruce WeatherGuard has also national approval in Norway.

Spruce 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 Spruce WeatherGuard plywood can be delivered with tongue-and-groove edge machining on either two sides or four sides. Tongue-and-groove panels are always sanded. Tongue-and-groove machining decreases net panel size by 10 mm. Tongue-and-groove machining is available for panel thicknesses ≥ 12 mm.

PACKAGING

Metsä Wood Spruce WeatherGuard 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
2400/2440/2500 x 1200/1220/1250	110	85	65	55	45	40	35	30

FURTHER INFORMATION

- Metsä Wood Spruce WeatherGuard Declaration of Performance (www.metsawood.com/dop)
- Metsä Wood Spruce WeatherGuard the UK Declaration of Conformity (www.metsawood.com/ukdoc)
- Metsä Wood Spruce Plywood Manual
- Metsä Wood Spruce Plywood for Construction brochure
- Metsä Wood Concrete Formwork brochure

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