

# WISA®-Form Spruce

WISA-Form Spruce is a coated special plywood for use in loose panel concrete formwork.

## Base board

Spruce plywood made solely from spruce (softwood) veneers bonded together in a cross banded construction.

## Bonding

Weather resistant glueing according to EN 314-2/class 3 Exterior.

## Surface and edges

Face and reverse: Dark or light brown phenolic film 120 g/m<sup>2</sup>.

Edge sealing: Water resistant paint.

## Constructions and thicknesses

Nominal thickness (mm)	Min. thickness (mm)	Max. thickness (mm)	Weight kg/m <sup>2</sup> (MC 10 %)
12	11.5	12.5	6.3
15	14.3	15.3	7.1
18	17.1	18.1	8.7
21	20.0	20.9	10.1

## Panel size

Standard panel sizes:

1200/1220/1250 x 2400/2440/2500/3000 mm

1500/1525 x 2400/2440/2500/3000/3050 mm

2400/2440/2500 x 1200/1220/1250 mm

Size tolerance (length/width)  $\pm 1$  mm per metre

Squareness tolerance  $\pm 1$  mm per metre length of diagonal

Cut to sizes at customer's request.

## Reuses

Typical number of reuses is likely to be in the range of 10–15 times. However, this will vary according to many different factors including good site practice, the required concrete finish, the amount of care taken when compacting the concrete, handling and storage of the forms, type and quality of release agent.





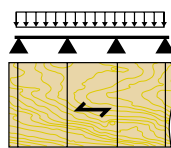
### Design Data

Mechanical properties of WISA-Form Spruce, in standard thicknesses, moisture content 10±2%.

Nominal thickness (mm)	Mean modulus of elasticity bending (N/mm <sup>2</sup> )		Characteristic strength bending (N/mm <sup>2</sup> )	
	E <sub>mll</sub>	E <sub>ml-</sub>	f <sub>mll</sub>	f <sub>ml-</sub>
18	5395	6605	13.5	18.8
21	5226	6774	13.1	18.9

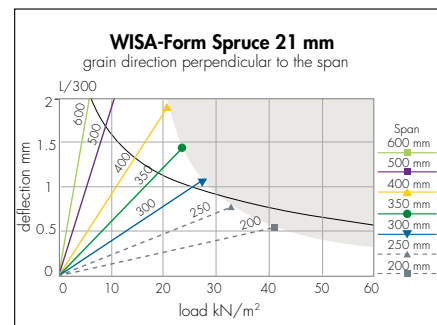
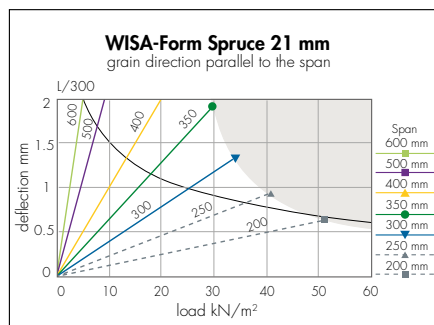
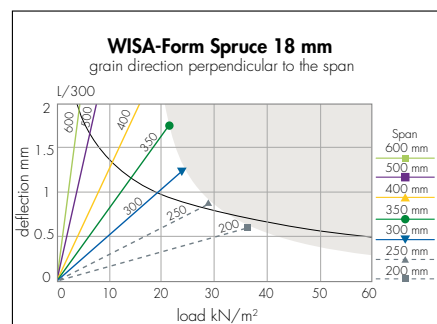
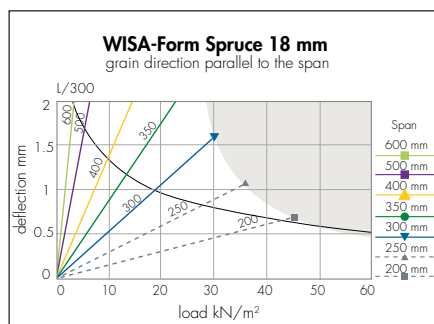
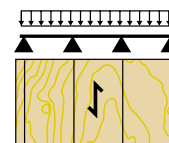
Face grain parallel to the span (||)

← grain direction of surface veneers



Face grain perpendicular to the span (I-)

← grain direction of surface veneers



### UPM Plywood

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[www.wisaplywood.com](http://www.wisaplywood.com)  
[www.upm.com](http://www.upm.com)

Moisture content 27 %, short time loading

Partial safety factor for the material is 1.3. Partial safety factor for the loads is 1.2.

Deflection limit L/300 of the span

Support width is not taken into account in calculations

For all detailed technical values, please see DoP (Declaration of Performance) UPM002CPR on [www.wisaplywood.com/dop](http://www.wisaplywood.com/dop).

### Instructions for use

See "Guide to Good Site Practice" available from UPM.

UPM policy is one of continuous development. We reserve the right to amend specifications without notice or obligation.