

# SPRUCE NORDIC

## A/B / 15 MM

### CHARACTERISTICS

- Tongue and groove all round, mini bevel all round, surface sanded with 150 grit, in accordance with EN standard 13990
- Standard finish: 2 x natural oiled
- Fixed lengths: 1973 mm, 1453 mm on request
- FSC® (C074686) on request
- Wood moisture 9 % +/- 2 %



**Surface treatment**  
see extra datasheet

Thickness▼	Width ►							135 mm	Pcs./package
15 mm		●		●	●		○	●	8

● suitable installation; ○ conditionally suitable for underfloor heating. Depending on the additional system elements used, the recommended thermal resistance may be exceeded. Slower reaction time during heating/cooling must be expected! ● = standard programme

**Packing:** 8 pcs./package

**DiBT:** building authority approval

**Cracks:** Non-continuous cracks are permitted, provided the overall impression is not affected. Continuous end cracks up to the length of the plank width may occur. Open cracks may be partially filled.

**Bark pockets:** Up to a size of 2 cm<sup>2</sup> are permitted in 25 % of the number of pieces.

**Knots:** Any number of knots up to a maximum size of half a board width and a maximum of 50 % of the number of pieces are permitted. Black point knots up to 15 mm are permitted. Black-edged knots up to 25 mm in diameter are permitted up to a maximum of 15 % of the total quantity, provided they are firmly attached to the wood structure on one side of the plank. Broken knots,

edge knots and cracks are permitted! Loose and fallen-out knots may be plugged with an end-grain dowel made from a branch of the same species of wood, in unlimited number. Larger open spots may be partially filled.

**Discolouration:** Natural discolouration is permissible. Blue stain is not permitted.

**Resin pockets:** A maximum of 5 per plank, up to a size of 2 cm<sup>2</sup> and 25 % of the number of pieces, are permitted. Resin pockets are not repaired, resin leakage is possible.

**Pith ray:** Permitted for 25 % of the total number of pieces. The length of the pith ray may be present over the entire length of the plank.

**Pest infestation:** Not permissible

### Extract from standard EN 13990\_2004-06-01

Based on a reference moisture content of 9 %.

**Thickness:** ± 1,0 mm (according to chart 1)

**Thickness of top groove side:** ± 0,25 mm (according to chart 1)

**Width 135 mm:** ± 1,5 mm (according to chart 2)

Additional voluntary limitations of the manufacturer (based on EN 13629 for hardwood)

**Length:** ± 2,0 mm

**Transverse curvature:** ≤ 1,5%

**Longitudinal curvature horizontal up to 1 m length:** 2 ‰ based on total length

**Horizontal longitudinal curvature from 1 m length:** 4 ‰ based on total length

**Longitudinal curvature vertical:** 1 ‰ based on total length

**Perpendicularity:** max. 0,5 % of the plank width

#### Declaration of performance for solid wood flooring for interior use

No. FW85510500: Surface oil-Kneho | Bending resistant floor elements - components wood flooring system 3 | EPH Desden -TPC No. W-12-010 | EN 14342 : 2013

No. FW85510001: Surface unfinished | Bending resistant floor elements - components wooden flooring system 4 | EN 14342 : 2013 EN 2013

No. FW85510200: Surface lacquer-Kneho | Bending-resistant floor elements - components wooden flooring system 4 | EN 14342 : 2013

Main features	Performance	Harmonised technical specification
Behaviour in fire	Cfl-s1 spruce, beech, oak Dfl-s1 other wood species	
Emission (content) of formaldehyde	E1	
Emission of (content of) pentachlorophenol	PCP ≤ 5 x 10 <sup>-6</sup> n	EN 14342:2013
Emission of other dangerous substances	no performance requirement defined	
Breaking strength, sliding resistance, thermal conductivity	no performance requirement defined	
Natural durability against fungal infestation	according to EN 335	
Technical characteristics		
Thermal resistance m <sup>2</sup> K/W = 0,12		Lambda value (thermal conductivity) λ-value = 0,13

Sorting is carried out by our experienced staff and according to fixed rules. However, occasional sorting errors cannot be entirely excluded. Provided that this does not affect more than 5 % of the order quantity, this does not constitute grounds for complaint. For wood as a natural product, differences in colour and structure are always a sign of guaranteed authenticity.

# SPRUCE NORDIC

## A/B / 19 MM

### CHARACTERISTICS

- Tongue and groove all round, mini bevel all around, surface sanded with 150 grit, in accordance with EN standard 13990
- Standard finish: 2 x natural oiled
- Fixed lengths: 1973 mm, 1453 mm on request
- FSC® (C074686) on request
- Wood moisture 9 % +/- 2 %



**Surface treatment**  
see extra datasheet

Thickness▼	Width ►							135 mm	Pcs./package
19 mm		●	●	●	○	●	○	●	6

• suitable installation; ○ conditionally suitable for underfloor heating. Depending on the additional system elements used, the recommended thermal resistance may be exceeded. Slower reaction time during heating/cooling must be expected! ● = standard programme

**Packing:** 6 pcs./package

**DiBT:** building authority approval

**Cracks:** Non-continuous cracks are permitted, provided the overall impression is not affected. Continuous end cracks up to the length of the plank width may occur. Open cracks may be partially filled.

**Bark pockets:** Up to a size of 2 cm² are permitted in 25 % of the number of pieces.

**Knots:** Any number of knots up to a maximum size of half a board width and a maximum of 50 % of the number of pieces are permitted. Black point knots up to 15 mm are permitted. Black-edged knots up to 25 mm in diameter are permitted up to a maximum of 15 % of the total quantity, provided they are firmly attached to the wood structure on one side of the plank. Broken

knots, edge knots and cracks are permitted! Loose and fallen-out knots may be plugged with an end-grain dowel made from a branch of the same species of wood, in unlimited number. Larger open spots may be partially filled.

**Discolouration:** Natural discolouration is permissible. Blue stain is not permitted.

**Resin pockets:** A maximum of 5 per plank, up to a size of 2 cm² and 25 % of the number of pieces, are permitted. Resin pockets are not repaired, resin leakage is possible.

**Pith ray:** Permitted for 25 % of the total number of pieces. The length of the pith ray may be present over the entire length of the plank.

**Pest infestation:** Not permissible

### Extract from standard EN 13990\_2004-06-01

Based on a reference moisture content of 9 %.

**Thickness:** ± 1,0 mm (according to chart 1)

**Thickness of top groove side:** ± 0,25 mm (according to chart 1)

**Width 135 mm:** ± 1,5 mm (according to chart 2)

Additional voluntary limitations of the manufacturer (based on EN 13629 for hardwood)

**Length:** ± 2,0 mm

**Transverse curvature:** ≤ 1,5 %

**Longitudinal curvature horizontal up to 1 m length:** 2 ‰ based on total length

**Horizontal longitudinal curvature from 1 m length:** 4 ‰ based on total length

**Longitudinal curvature vertical:** 1 ‰ based on total length

**Perpendicularity:** max. 0,5 ‰ of the plank width

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No. FW85510001: Surface unfinished | Bending resistant floor elements - components wooden flooring system 4 | EN 14342 : 2013 EN 2013

No. FW85510200: Surface lacquer-Kneho | Bending-resistant floor elements - components wooden flooring system 4 | EN 14342 : 2013

Main features	Performance	Harmonised technical specification
Behaviour in fire	Cfl-s1 spruce, beech, oak Dfl-s1 other wood species	
Emission (content) of formaldehyde	E1	
Emission of (content of) pentachlorophenol	PCP ≤ 5 x 10-6n	EN 14342:2013
Emission of other dangerous substances	no performance requirement defined	
Breaking strength, sliding resistance, thermal conductivity	no performance requirement defined	
Natural durability against fungal infestation	according to EN 335	
Technical characteristics		
Thermal resistance m²K/W = 0,15		Lambda value (thermal conductivity) λ-value = 0,13

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# SPRUCE NORDIC

## A/B / 25 MM

### CHARACTERISTICS

- Tongue and groove all round, mini bevel all around, surface sanded with 150 grit, in accordance with EN standard 13990
- Standard finish: 2 x natural oiled
- Fixed lengths: 1973 mm, 1453 mm on request
- FSC® (C074686) on request
- Wood moisture 9 % +/- 2 %



**Surface treatment**  
see extra datasheet

Thickness▼	Width▶									135 mm	Pcs./package
25 mm		●	●	●						●	5

- suitable installation; ● = standard programme

**Packing:** 5 pcs./package

**DiBT:** building authority approval

**Cracks:** Non-continuous cracks are permitted, provided the overall impression is not affected. Continuous end cracks up to the length of the plank width may occur. Open cracks may be partially filled.

**Bark pockets:** Up to a size of 2 cm² are permitted in 25 % of the number of pieces.

**Knots:** Any number of knots up to a maximum size of half a board width and a maximum of 50 % of the number of pieces are permitted. Black point knots up to 15 mm are permitted. Black-edged knots up to 25 mm in diameter are permitted up to a maximum of 15 % of the total quantity, provided they are firmly attached to the wood structure on one side of the plank. Broken

knots, edge knots and cracks are permitted! Loose and fallen-out knots may be plugged with an end-grain dowel made from a branch of the same species of wood, in unlimited number. Larger open spots may be partially filled.

**Discolouration:** Natural discolouration is permissible. Blue stain is not permitted.

**Resin pockets:** A maximum of 5 per plank, up to a size of 2 cm² and 25 % of the number of pieces, are permitted. Resin pockets are not repaired, resin leakage is possible.

**Pith ray:** Permitted for 25 % of the total number of pieces. The length of the pith ray may be present over the entire length of the plank.

**Pest infestation:** Not permissible

### Extract from standard EN 13990\_2004-06-01

Based on a reference moisture content of 9 %.

**Thickness:** ± 1,0 mm (according to chart 1)

**Thickness of top groove side:** ± 0,25 mm (according to chart 1)

**Width 135 mm:** ± 1,5 mm (according to chart 2)

Additional voluntary limitations of the manufacturer (based on EN 13629 for hardwood)

**Length:** ± 2,0 mm

**Transverse curvature:** ≤ 1,5 %

**Longitudinal curvature horizontal up to 1 m length:** 2 ‰ based on total length

**Horizontal longitudinal curvature from 1 m length:** 4 ‰ based on total length

**Longitudinal curvature vertical:** 1 ‰ based on total length

**Perpendicularity:** max. 0,5 % of the plank width

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No. FW85510200: Surface lacquer-Kneho | Bending-resistant floor elements - components wooden flooring system 4 | EN 14342 : 2013

Main features	Performance	Harmonised technical specification
Behaviour in fire	Cfl-s1 spruce, beech, oak Dfl-s1 other wood species	
Emission (content) of formaldehyde	E1	
Emission of (content of) pentachlorophenol	PCP ≤ 5 x 10-6n	EN 14342:2013
Emission of other dangerous substances	no performance requirement defined	
Breaking strength, sliding resistance, thermal conductivity	no performance requirement defined	
Natural durability against fungal infestation	according to EN 335	
Technical characteristics		
Thermal resistance m²K/W = 0,19	Lambda value (thermal conductivity) λ-value = 0,13	

Sorting is carried out by our experienced staff and according to fixed rules. However, occasional sorting errors cannot be entirely excluded. Provided that this does not affect more than 5 % of the order quantity, this does not constitute grounds for complaint. For wood as a natural product, differences in colour and structure are always a sign of guaranteed authenticity.

# THE INSTALLATION OPTIONS:



Floating installation with clips  
135/137 mm plank width



Installation with  
screws



Installation with  
glue



Full-surface bonding on  
underfloor heating



Dry construction elements with  
underfloor heating (screwed to  
intermediate battens)



Installation with clips on underfloor  
heating (screed or dry construction  
systems; floating "System FEEL  
WOOD")

Type of wood	$\lambda$ -Value	m <sup>2</sup> K/W	Thickness [mm]	Width [mm]						
Spruce Nordic	0,13	0,12	15	135	•		•	•		•
Spruce Nordic	0,13	0,15	19	135	•	•	•	○	•	○
Spruce Nordic	0,13	0,19	25	135	•	•	•			
Pine Nordic	0,13	0,15	19	135	•	•	•	○	•	○
Larch European	0,12	0,13	15	135	•		•	•		•
Larch European	0,12	0,16	19	135	•	•	•			
Larch Canadian	0,15	0,10	15	130	•		•	•		•
Larch Canadian	0,15	0,13	19	130	•	•	•	○	•	○
Larch Canadian	0,15	0,17	25	130	•	•	•			
Canadian Douglas fir	0,15	0,13	19	178		•	•			
Stone Pine	0,13	0,15	19	135	•	•	•	○	•	○
Oak European	0,17	0,09	15	137	•		•	•		•
Oak European	0,17	0,09	15	168			•	••		
Oak European	0,17	0,12	21	116		•	•	•	•	
Oak European	0,17	0,12	21	137	•	•	•	•	•	•
Oak European	0,17	0,12	21	168		•	•	••	••	
Oak European	0,17	0,12	21	198		•	•			
Oak European	0,17	0,16	27	188		•	•			
Red Oak European	0,17	0,09	15	137	•		•	•		•
Ash European	0,17	0,12	21	137	•	•	•	•	•	•
Oak Herringbone	0,17	0,09	21	137		•	•	•	•	

Glue (e.g. Sika 54)	0,08	0,03	2
Cork	0,08	0,04	3
Wood fibre board	0,07	0,04	3

m<sup>2</sup>K/W thermal resistance

$\lambda$ -Value Lambda value (thermal conductivity)

• suitable installation method

•• suitable for underfloor heating; in case of deviations of the room climate outside the optimal range joint formation or cupping to a small extent is to be expected

○ conditionally suitable for underfloor heating; depending on additionally used system elements, the recommended thermal resistance could be exceeded. Slower reaction time during heating/cooling is to be expected