

# Swisspearl Construction

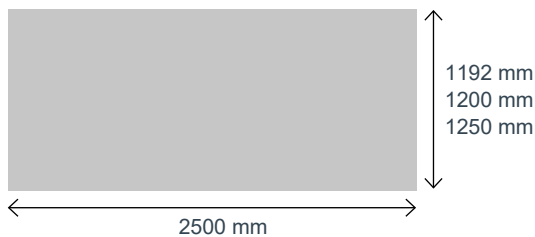
## Datasheet - Build Boards

Swisspearl Construction is an untreated fibre cement board that allows the authentic appearance of the rough fibre-cement to stand out. In nature, Swisspearl Construction is a building board which can be installed for cladding purposes, when a natural and rough expression is desired.

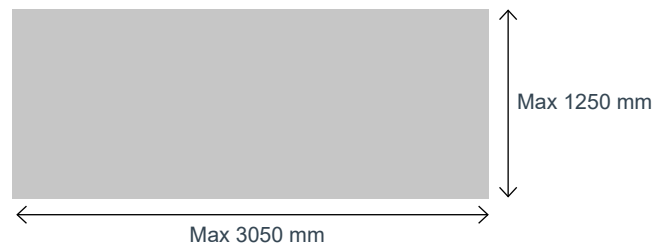
Swisspearl Construction is a natural material and variations may occur in the individual boards and from board to board, adding a lively expression to your facade. Swisspearl Construction is a high quality fibercement building board used as both a building board as well as a part of a ventilated facade solution.

Dimensions (nominal)		Thickness	Width	Length
Size	mm	6	1200 1250	2500
Size	mm	8	1192 1200 1250	2500/3050 2500/3050 2500
Size	mm	10	1192 1200	3050

### Standard sizes



### Project sales



[www.swisspearl.com](http://www.swisspearl.com)

Please visit the local website for contact details and further information.

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<b>Dimension</b>						
Thickness	mm	3.2	4.0	6.0	8.0	10.0
<b>Tolerances (ref. EN 12467)</b>						
Thickness	mm	±0.6	±0.6	±0.6	±0.8	±1.0
Length	mm	+ <sub>3</sub>	+ <sub>3</sub>	+ <sub>3</sub>	+ <sub>3</sub>	+ <sub>3</sub>
Width	mm	+ <sub>2</sub>	+ <sub>2</sub>	+ <sub>2</sub>	+ <sub>2</sub>	+ <sub>2</sub>
<b>Physical properties</b>						
Density, dry, average (EN 12467)	Kg/m <sup>3</sup>	1800	1800	1800	1800	1800
Density, dry, minimum (EN 12467)	Kg/m <sup>3</sup>	1550	1550	1550	1550	1550
Weight (Average incl. 5% moisture)	Kg/m <sup>2</sup>	6.1	7.6	11.3	15.1	18.9
<b>Mechanical properties (EN 12467)</b>						
Bending modulus of elasticity						
Ambient E-module with grain	GPa	21	21	21	21	21
Ambient E-module across grain	GPa	20	20	20	20	20
Wet E-module with grain	GPa	13	13	13	13	13
Wet E-module across grain	GPa	9	9	9	9	9
<b>Bending strength (EN 12467)</b>						
Ambient with grain	MPa	26	26	26	26	26
Ambient across grain	MPa	22	22	22	22	22
Wet with grain	MPa	20	20	20	20	20
Wet across grain	MPa	15	15	15	15	15
<b>Interlaminar bond</b>						
Dry	MPa	-	-	min. 0.5	min. 0.5	min. 0.5
<b>Impacts strength (Charpy)</b>						
Ambient with grain	kJ/m <sup>2</sup>	-	-	2.7	2.7	2.7
Ambient across grain	kJ/m <sup>2</sup>	-	-	2.0	2.0	2.0
<b>Thermal properties</b>						
Coefficient of thermal expansion	mm/m °C	0.008	0.008	0.008	0.008	0.008
Temperature range	°C	max. 105	max. 105	max. 105	max. 105	max. 105
Frost resistance (EN 12467)	Cycles	>100	>100	>100	>100	>100
Thermal conductivity (ISO 8301, EN 12667)	λ <sub>10</sub> W/(mK)	-	-	-	0.48	-

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<b>Hygrothermal properties</b>						
Water absorption (wet over dry)	%	12.0	12.0	12.0	12.0	12.0
Wet-dry-wet (max)	mm/m	3	3	3	3	3

<b>Water vapour transmission properties (EN 12572-C)</b>						
Vapour transmission resistance (Z-value)	Gpa • m <sup>2</sup> • s/kg	1.93	2.2	4.23	5.21	3.15
Vapour transmission resistance	s/m	14146	16130	31023	38185	23106
Vapour diffusion equivalent air layer thickness	Sd (m)	0.37	0.43	0.82	1.01	0.61
Vapour resistivity	MNs/(g • m)	596	522	653	651	307
Vapour resistance factor	μ	116	102	127	127	59.4
Vapour resistance	MNs/g	1.9	2.2	4.2	5.2	3.2
Vapour transmission	USPerm	9.1	8	4.1	3.4	5.6

<b>Fire performance</b>						
Reaction to fire (Wooden subconstruction) EN 13501	-	A2-s1, d0*	A2-s2, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0
ASTM E136	Flaming test	Pass	Pass	Pass	Pass	Pass
ASTM E84	Flame spread index	-	-	-	0	-
	Smoke development index	-	-	-	10	-
	Flame spread rating	-	-	-	0	-
CAN/ULC-S102-10	Smoke development classification	-	-	-	5	-

<b>Other properties</b>						
pH surface		11	11	11	11	11
Category, Class	EN 12467	NT A3 I	NT A3 I	NT A3 I	NT A3 I	NT A3 I

\*Metal subconstruction

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<b>Soft- and hard body impact resistance (ETAG 034, ISO 7892), 8 mm</b>					
<b>Type of impact</b>	<b>Energy</b>	<b>Category IV</b>	<b>Category III</b>	<b>Category II</b>	<b>Category I</b>
Hard body	1 Joule	passed	-	-	-
	3 Joule	-	passed	passed	passed
	10 Joule	-	-	passed	passed
Soft body	10 Joule	passed	passed	-	-
	60 Joule	-	-	passed	not passed
	300 Joule	-	-	passed	-
	400 Joule	-	-	-	not passed

<b>Soft- and hard body impact resistance (ETAG 034, ISO 7892), 10 mm</b>					
<b>Type of impact</b>	<b>Energy</b>	<b>Category IV</b>	<b>Category III</b>	<b>Category II</b>	<b>Category I</b>
Hard body	1 Joule	passed	-	-	-
	3 Joule	-	passed	passed	passed
	10 Joule	-	-	passed	passed
Soft body	10 Joule	passed	passed	-	-
	60 Joule	-	-	passed	passed
	300 Joule	-	-	passed	-
	400 Joule	-	-	-	not passed