

Cembrit Additional Data

The values given are representative, average values.  
Tolerances are given to certain control properties.

Property	Unit	Cembrit Raw 3,2 mm	Cembrit Raw 5 mm	Cembrit Raw 6 mm	Cembrit Raw 8 mm	Cembrit Raw 10 mm
Density, dry	kg/m <sup>3</sup>	1675+-125	1675+-125	1675+-125	1675+-125	1675+-125
Weight/m <sup>2</sup> (with nominal moisture content)	kg/m <sup>2</sup>	5,6	8,8	10,6	14,1	17,6
<b>Bending strength</b>						
dry, with grain	MPa, MN/m <sup>2</sup>	24 (21-27)	24 (21-27)	24 (21-27)	24 (21-27)	24 (21-27)
dry, across grain	MPa, MN/m <sup>2</sup>	18 (16-20)	18 (16-20)	18 (16-20)	18 (16-20)	18 (16-20)
wet, with grain	MPa, MN/m <sup>2</sup>	15	15	15	15	15
wet, across grain	MPa, MN/m <sup>2</sup>	12	12	12	12	12
<b>Bending modulus of elasticity</b>						
dry, with grain	GPa, GN/m <sup>2</sup>	8 (6-10)	8 (6-10)	8 (6-10)	8 (6-10)	8 (6-10)
dry, across grain	GPa, GN/m <sup>2</sup>	7 (5-9)	7 (5-9)	7 (5-9)	7 (5-9)	7 (5-9)
wet, with grain	GPa, GN/m <sup>2</sup>	7	7	7	7	7
wet, across grain	GPa, GN/m <sup>2</sup>	5	5	5	5	5
<b>Bending toughness</b>						
dry, with grain	kJ/m <sup>3</sup>	3,5	3,5	3,5	3,5	3,5
dry, across grain	kJ/m <sup>3</sup>	2,5	2,5	2,5	2,5	2,5
wet, with grain	kJ/m <sup>3</sup>	14	14	14	14	14
wet, across grain	kJ/m <sup>3</sup>	8	8	8	8	8
Compressive strength (compression perpendicular to the board surface)	MPa, MN/m <sup>2</sup>	60	60	60	60	60
<b>Tensile strength (30 - 50 % RH)</b>						
with grain	MPa, MN/m <sup>2</sup>	16	16	16	17	17
across grain	MPa, MN/m <sup>2</sup>	11	11	11	11	11
Interlaminar strength, dry	MPa, MN/m <sup>2</sup>	min 0,5	min 0,5	min 0,5	min 0,5	min 0,5
Interlaminar strength, wet	MPa, MN/m <sup>2</sup>	NA	NA	NA	NA	NA
<b>Impact strength (Charpy)</b>						
dry, with grain	kJ/m <sup>2</sup>	3,5	3,5	3,5	3,5	3,5
dry, across grain	kJ/m <sup>2</sup>	2,5	2,5	2,5	2,5	2,5
wet, with grain	kJ/m <sup>2</sup>	NA	NA	8	9	9
wet, across grain	kJ/m <sup>2</sup>	NA	NA	5	6	6
Hardness (Brinell)	MPa, MN/m <sup>2</sup>	80	80	80	80	80
<b>Thermal</b>						
Heat conductivity	W/mK	0,4	0,4	0,4	0,4	0,4
Coefficient of thermal expansion	°C <sup>-1</sup> 10 <sup>-6</sup>	8	8	8	8	8
Specific heat	kJ/kg °C	0,9	0,9	0,9	0,9	0,9
Temperature range	°C	max 150	max 150	max 150	max 150	max 150
Frost resistance	cycles	>100	>100	>100	>100	>100
<b>Moisture movement</b>						
Moisture content	%	5 (3-7)	5 (3-7)	5 (3-7)	5 (3-7)	5 (3-7)
Water absorption	%	12 (6-18)	12 (6-18)	12 (6-18)	12 (6-18)	12 (6-18)
wet-0 %-wet (max)	mm/m	3	3	3	3	3
for 30 - 50 % RH	mm/m	0,5	0,5	0,5	0,5	0,5
for 50 - 90 % RH	mm/m	1,5	1,5	1,5	1,5	1,5
Thickness swelling after 24 h in water	%	0,1	0,1	0,1	0,1	0,1
Vapour permeance	ng/m <sup>2</sup> sPa	700	500	400	300	230
Vapour transmission resistance	s/m	10000	15000	18000	25000	32000
Vapour resistivity	MNs/gm	446	400	417	417	435
Surface pH-value	0 - 14	11	11	11	11	11
<b>Mechanical</b>						
Screw holding against pulling	N	NS	300	500	700	800
Screw holding against hanging, load	N	NS	600	800	1000	1500
<b>Tolerances</b>						
in thickness	mm	+0,6/-0,6	+0,6/-0,6	+0,6/-0,6	+0,8/-0,8	+1,0/-1,0
outer dimensions, length	mm					
outer dimensions, width	mm					
trimmed boards, length	mm	+/- 3	+/- 3	+/- 3	+/- 3	+/- 3
trimmed boards, width	mm	+/- 2	+/- 2	+/- 2	+/- 2	+/- 2
Euroclass (EN 13501)	A - F	A2, s2-d0	A2, s2-d0	A2, s2-d0	A2, s1-d0	A2, s1-d0
Category, class (EN 12467)	A-D, 1-5	NT A3 I	NT A3 I	NT A3 I	NT A3 I	NT A3 I

NS = Not suitable with this product

NA = Data not available, either irrelevant or not tested

Changes on shaded background

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