

Mechanical properties of clay units, mortar, and masonry of the infills.

Mechanical properties	Symbol	Mean	c.o.v.	N. specimens	Standard
Vertical compression strength of units	f_b	2.67 MPa	20%	10	EN 772-1
Vertical elastic modulus of the units	E_{bm}	2970 MPa	32%	3	-
Lateral compression strength of units	f'_b	6.16 MPa	6%	10	EN 772-1
Lateral elastic modulus of the units	E'_{bm}	2788 MPa	52%	3	-
Flexural strength of mortar	f_{fl}	1.21 MPa	37%	20	EN 1015-11
Compression strength of mortar	f_m	4.18 MPa	25%	40	EN 1015-11
Vertical compression strength of masonry ¹	f_{vert}	2.26 (1.93) MPa	4% (18%)	3 (3)	EN 1052-1
Vertical elastic modulus of masonry ¹	E_{vert}	4717 (2642) MPa	6% (27%)	3 (3)	EN 1052-1
Lateral compression strength of masonry ¹	f_{lat}	3.55 (4.07) MPa	20% (19%)	3 (3)	EN 1052-1
Lateral elastic modulus of masonry ¹	E_{lat}	3168 (3176) MPa	0.8% (19%)	2 (3)	EN 1052-1
Diagonal tensile strength of masonry ²	f_t	0.21 MPa	14%	3	ASTM E519
Shear modulus of masonry	G	922 MPa	24%	2	ASTM E519
Initial shear strength of bed-joints	f_{v0}	0.15 MPa	-	9	EN 1052-3
Friction coefficient	μ	0.98	-	9	EN 1052-3
Vertical flexural strength of masonry ³	f_{x1}	0.663 (0.274) MPa	20% (6%)	3 (3)	EN 1052-2
Horizontal flexural strength of masonry ³	f_{x2}	0.677 (0.525) MPa	4% (13%)	3 (3)	EN 1052-2

¹ In brackets the results of specimens without plaster.

² The diagonal tensile strength f_t was computed as $F_{max}/[t(l_1+l_2)]$, where F_{max} is the force at failure, t is the thickness and l_1 and l_2 are the height and the length of the specimen.

³ Values with the plaster in tension (load applied on the unplastered face); in brackets values obtained with the plaster in compression (load applied on the plastered face).