
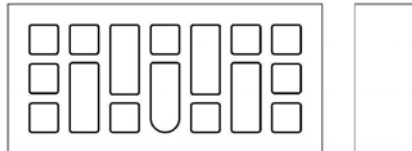


HD CLAY MASONRY UNITS CAT I (UNITS FOR UNPROTECTED MASONRY) TECHNICAL FORM N° 0830101

MANUFACTURER: CERÁMICA MALPESA, S.A.	 AENOR Producto Certificado
MADE IN: BAILÉN	
PRODUCT DESCRIPTION: HD CLAY MASONRY UNIT R-20 OF 239 x 117 x HEIGHT	
HEIGHTS (mm): 37-50-69-75	
BRAND NAME: LUMINATE HERON - KAITERITERI / LUMINATE COTTOSLOE - COROMANDEL / LUMINATE NOOSA - RAGLAN	
BLANCO LINO / BLANCO MALPESA / CAÑA	
MASS COLORATION: WHITE FLAX, WHITE & YELLOW	

PIECE SKETCH



TECHNICAL CHARACTERISTICS

Stamp and signature:

(For the final qualification, this technical form should be stamped and signed by the manufacturer)

Characteristic		Test Method	Manufacturer ensured values	AENOR required values	
Appearance & structure	exfoliations and stratifications	Visual over 6 pieces	None		
	cracked units		≤ 1 cracked unit	≤ 1 cracked piece	
	chip units		≤ 1 piece with m.i.d. between 7-15 mm 0 pieces with mean individual value > 15 mm	≤ 1 piece with m.i.d. between 7-15 mm	
Dimensional tolerances (mm)	Mean value	UNE-EN 772-16	T2	± 4	± 4
				± 3	± 3
	Range		0,25 x h ^{1/2}	max of (0,25 x h ^{1/2}) ó 2	
			± 5	± 5	
			± 3	± 3	
0,3 x h ^{1/2}	0,3 x h ^{1/2}				
Wall thickness (mm)	unprotected face shells	≥ 15,0	≥ 15,0		
	protected face shells	≥ 10,0	≥ 10,0		
	webs	≥ 5,0	≥ 5,0		
Plane parallelism of bed faces (mm)			N/A		
Flatness of bed faces (mm)	Diagonal	UNE-EN 772-20	l > 300 mm	N/A	N/A
			300 ≥ l ≥ 250 mm	≤ 3	≤ 3
			l ≤ 250 mm	≤ 2	≤ 2
Percentage of voids (%)	Declared value (%)	UNE-EN 772-3	36	≤ 45	
	Tolerance (%)		Min: 32 - Máx: 40		
Volume of the largest void (% of gross)		UNE-EN 772-9	≤ 12,5	≤ 12,5	
Combined thickness of webs and shells (%)		UNE-EN 772-16	≥ 20	≥ 20	
Water absorption (%)		Annex C UNE-EN 771-1	≤ 6	≤ 6	
Damp proof courses (%)		UNE-EN 772-7	N/A		
Initial rate of water absorption (Kg/(m ² x min))		UNE-EN 772-11	≤ 0,6		
Characteristic normalized compressive strength (N/mm ²)		UNE-EN 772-1	≥ 20	≥ 10	
Density	Gross dry (Kg/m ³)		1.720		
	Net dry (Kg/m ³)		1.130		
	Tolerance (%)		± 10		
Weight (g)	Reduction for density	NON	Annex D RP 34.01	Minimum value per height: 950-1.290-1.700-1.930	
Efflorescences		UNE 67029 EX	Non efflorescence	Slightly efflorescence	
Durability (Freeze/thaw)		UNE 67028 EX	F2 (25 cycles) Test carried out in cold store without forced ventilation		
Thermal properties (Method)		CTE Catalogue	Tabulated value		
λ _{piece} (W/m x k)			0,35		
R _{wall} (m ² x k/w)			0,180 - 0,180 - 0,210 - 0,210		
Water vapour permeability - μ		Annex A UNE-EN 1745	5/10		
Content of active soluble salts		UNE-EN 772-5	S2		
Moisture movement (mm/m)		UNE 67036	≤ 0,30		
Fire reaction		(%organic material < 1 %)	UNE-EN 13501-1	GRADE A1	
Bond strength (N/mm ²)		Annex C UNE-EN 998-2	≥ 0,15	≥ 0,15	
Surface colours		Anexo D RP 34.01	NON		
Water repellent treatment			YES		
Accessory units			YES		

Remarks
The combined thickness stated corresponds to the direction of heat flow in the wall. Different surface finishes available (flat, cork, rough, etc). Bricks can be manufactured in one or two widths, or other kind of perforations.