
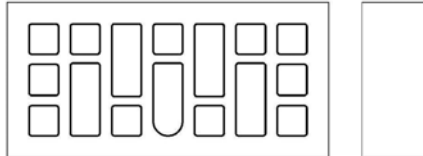


HD CLAY MASONRY UNITS CAT I (UNITS FOR UNPROTECTED MASONRY) TECHNICAL FORM N° 0830107

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): 37-50-75	
BRAND NAME: LUMINATE ALUMINIUM - LUMINATE SNOW - VENTURE WHEAT - VENTURE SHAPPIRE - VENTURE BURGUNDY	
EBONY SMOKE - VENTURE JADE / SEVILLA ESMALTADO	
MASS COLORATION: LIGHT SALMON	

PIECE SKETCH



TECHNICAL CHARACTERISTICS

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	≤ 1 piece with m.i.d. between 7-15 mm	
Dimensional tolerances (mm)	Mean value	UNE 67039 EX	0 pieces with mean individual value > 15 mm		
			length (l)	± 4	± 4
	width (w)		± 3	± 3	
	height (h)		0,25 x h ^{1/2}	máx of (0,25 x h ^{1/2}) ó 2	
	Range		length (l)	± 5	± 5
			width (w)	± 3	± 3
height (h)	0,3 x h ^{1/2}	0,3 x h ^{1/2}			
Wall thickness (mm)	unprotected face shells	UNE-EN 772-16	≥ 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	N/A		
			l > 300 mm	≤ 3	≤ 3
			300 ≥ l ≥ 250 mm	≤ 2	≤ 2
I ≤ 250 mm			≤ 2	≤ 2	
Percentage of voids (%)	Declared value (%)	UNE-EN 772-3	Min: 36 - Máx: 44		
	Tolerance (%)		≤ 45	≤ 45	
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	≤ 16	≤ 16	
Damp proof courses (%)		UNE-EN 772-7	N/A		
Initial rate of water absorption (Kg/(m ² x min))		UNE-EN 772-11	≤ 0,9		
Characteristic normalized compressive strenght (N/mm ²)		UNE-EN 772-1	≥ 20,0	≥ 10,0	
Density	Gross dry (Kg/m ³)		1.810		
	Net dry (Kg/m ³)		1.120		
	Tolerance (%)		± 10		
Weight (g)	Reduction for density	NON Annex D RP 34.01	Mimimun value ensured per height: 1.065-1.450-2.150	Minimum value per height: 1.065-1.435-2.150	
Efflorescences		UNE 67029 EX	Non efflorescence	Slightly efflorescence	
Durability (Freeze/thaw)		UNE 67028 EX	F2 (25 cycles) Test carried out in cold store with forced ventilation		
Thermal properties (Method)		CTE Catalogue	Tabulated value		
λ _{piece} (W/m x k)			0,35		
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		UNE-EN 13501-1	GRADE A1		
Bond strenght (N/mm ²)		Annex C UNE-EN 998-2	≥ 0,15	≥ 0,15	
Surface colours		Anexo D RP 34.01	YES		
Water repellent treatment			YES		
Accesory units			YES		

Remarks
Different colours available (white, blue, green, grey, aluminium, cream, etc). Different surface finishes available (flat, cork, rough, etc). Bricks can be manufactured in one or two widths, or other kind of perforations.

Stamp and signature:
Details from the construction where it's placed the material named in this technical form:
(For the final qualification, this technical form should be stamped and signed by the manufacturer)