
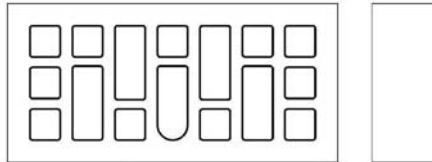


HD CLAY MASONRY UNITS CAT I (UNITS FOR UNPROTECTED MASONRY) TECHNICAL FORM N° 0830112

MANUFACTURER: CERÁMICA MALPESA, S.A.	 AENOR Producto Certificado
MADE IN: VILLANUEVA DE LA REINA (JAÉN)	
PRODUCT DESCRIPTION: HD CLAY MASONRY UNIT R-40 OF 235 x 113 x HEIGHT	
HEIGHTS (mm): 36-49-73	
BRAND NAME: CAMBRIDGE PEMBROKE - KLINKER FLASEADO ALTAMIRA	
MASS COLORATION: BLACK, NUTBROWN & MINK	

PIECE SKETCH



TECHNICAL CHARACTERISTICS

Characteristic		Test Method	Manufacturer ensured values	AENOR required values		
Appearance & structure	exfoliations and stratifications		None			
	cracked units		≤ 1 cracked unit			
	chip units		UNE 67039 EX	≤ 1 cracked piece		
Dimensional tolerances (mm)	Mean value	length (l)	T2	≤ 1 piece with m.i.d. between 7-15 mm		
		width (w)		≤ 1 piece with m.i.d. between 7-15 mm		
		height (h)		0 pieces with mean individual value > 15 mm		
	Range	length (l)	UNE-EN 772-16	R2	± 4	
		width (w)			± 3	
		height (h)			0,25 x h ^{1/2}	
Wall thickness (mm)	unprotected face shells		R2	± 5		
	protected face shells			± 3		
	webs			0,3 x h ^{1/2}		
Plane parallelism of bed faces (mm)			N/A			
Flatness of bed faces (mm)	Diagonal	l > 300 mm	UNE-EN 772-20	N/A		
		300 ≥ l ≥ 250 mm		≤ 3		
		l ≤ 250 mm		≤ 2		
Percentage of voids (%)	Declared value (%)		UNE-EN 772-3	40		
	Tolerance (%)			≤ 45		
Volume of the largest void (% of gross)		UNE-EN 772-9	Min: 36 - Máx: 44			
Combined thickness of webs and shells (%)		UNE-EN 772-16	≤ 12,5			
Water absorption (%)		UNE-EN 772-16	≥ 20			
Damp proof courses (%)		Annex C UNE-EN 771-2	≤ 6			
Initial rate of water absorption (Kg/(m ² x min))		UNE-EN 772-7	N/A			
Characteristic normalized compressive strength (N/mm ²)		UNE-EN 772-11	≤ 0,6			
Density	Gross dry (Kg/m ³)		UNE-EN 772-1	≥ 40		
	Net dry (Kg/m ³)			Bearing face: Bed		
	Tolerance (%)			≥ 40		
Wight (g)	Reduction for density	NON	Annex D RP 34.01	2.290		
				1.430		
Efflorescences		UNE-EN 772-13	± 10			
Durability (Freeze/thaw)		Annex D RP 34.01	Minimum value ensured per height: 1.065- 1.450-2.095			
Thermal properties (Method)		UNE 67029 EX	Non efflorescence			
		UNE 67028 EX	Slightly efflorescence			
		CTE Catalogue	F2 (25 cycles)			
		Annex A UNE-EN 1745	Test carried out in cold store with forced ventilation			
		UNE-EN 772-5	Tabulated value			
		UNE 67036	0,35			
		UNE-EN 13501-1	0,180 - 0,180 - 0,210			
		Annex C UNE-EN 998-2	50/100			
		Anexo D RP 34.01	S2			
		UNE-EN 13501-1	≤ 0,30			
		Annex C UNE-EN 998-2	GRADE A1			
		Annex C UNE-EN 998-2	≥ 0,15			
		Annex C UNE-EN 998-2	≥ 0,15			
		Annex C UNE-EN 998-2	NON			
		Annex C UNE-EN 998-2	NON			
		Annex C UNE-EN 998-2	YES			

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

Details from the construction where it's placed the material named in this technical form:

Stamp and signature: