

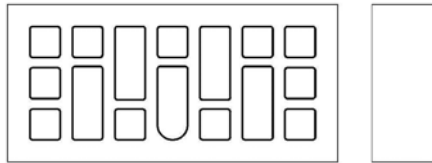
## HD CLAY MASONRY UNITS CAT I (UNITS FOR UNPROTECTED MASONRY) TECHNICAL FORM N° 0830127

MANUFACTURER:	CERÁMICA MALPESA, S.A.
MADE IN:	VILLANUEVA DE LA REINA (JAÉN)
PRODUCT DESCRIPTION:	HD CLAY MASONRY UNIT R-40 OF 236 x 113 x HEIGHT
HEIGHTS (mm):	36-49-73
BRAND NAME:	LUMINATE HOTHAM - TUROA / KLINKER BLANCO ANDALUCIA & EBONY DUBLIN - KLINKER GRIS PERLA
MASS COLORATION:	WHITE & GREY

AENOR

Producto  
Certificado

### 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 h½	máx of (0,25 x h½) ó 2	
	Range		length (l)	± 5	± 5
			width (w)	± 3	± 3
height (h)		0,3 x h½	0,3 x h½		
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	N/A	
			l > 300 mm	≤ 3	
			300 ≥ l ≥ 250 mm	≤ 2	
Percentage of voids (%)	Declared value (%)	UNE-EN 772-3	41	≤ 45	
	Tolerance (%)		Min: 37 - Máx: 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	≤ 6	≤ 6	
Damp proof courses (%)		UNE-EN 772-7	N/A		
Initial rate of water absorption (Kg/(m² x min))		UNE-EN 772-11	≤ 0,6		
Characteristic normalized compressive strength (N/mm²)		UNE-EN 772-1	≥ 40	≥ 40	
Density	Gross dry (Kg/m³)		2.080		
	Net dry (Kg/m³)		1.240		
	Tolerance (%)		± 10	± 10	
Weight (g)	Reduction for density	NON	Annex D RP 34.01		
			Minimum value ensured per height: 1.065- 1.450-2.095		
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		
λpiece (W/m x k)			0,35		
Rwall (m² x k/w)			0,180 - 0,180 - 0,210		
Water vapour permeability - μ		Annex A UNE-EN 1745	50/100		
Content of active soluble salts		UNE-EN 772-5	S2		
Moisture movement (mm/m)		UNE 67036	≤ 0,60		
Fire reaction		(%organic material < 1 %)	UNE-EN 13501-1		
Bond strength (N/mm²)		Annex C UNE-EN 998-2	≥ 0,15	≥ 0,15	
Surface colours		Anexo D RP 34.01	The piece is manufactured with or without surface colouration.		
Water repellent treatment			NON		
Accessory units			YES		
Remarks					

The combined thickness stated corresponds to the direction of heat flow in the wall. The models Klinker Blanco Andalucía and Klinker Gris Perla can 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.

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)