
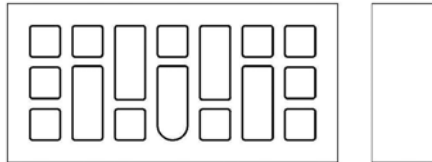


HD CLAY MASONRY UNITS CAT I (UNITS FOR UNPROTECTED MASONRY) TECHNICAL FORM N° 0830130

MANUFACTURER: CERÁMICA MALPESA, S.A.	 AENOR Producto Certificado
MADE IN: VILLANUEVA DE LA REINA (JAÉN)	
PRODUCT DESCRIPTION: HD CLAY MASONRY UNIT R-40 OF 238 x 114 x HEIGHT	
HEIGHTS (mm): 49-75	
BRAND NAME: EBONY COAL - KLINKER AZABACHE	
MASS COLORATION: DARK MARRON	

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		≤ 1 cracked piece			
		Visual over 6 pieces	≤ 1 piece with m.i.d. between 7-15 mm			
		UNE 67039 EX	≤ 1 piece with m.i.d. between 7-15 mm			
			0 pieces with mean individual value > 15 mm			
Dimensional tolerances (mm)	Mean value	length (l)	T2	± 4	T2	± 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)	UNE-EN 772-16	± 5	R2	± 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		≥ 15,0			
	protected face shells		≥ 10,0			
	webs		≥ 5,0			
Plane parallelism of bed faces (mm)		N/A				
Flatness of bed faces (mm)	Diagonal	l > 300 mm	N/A			
		300 ≥ l ≥ 250 mm	UNE-EN 772-20			
		l ≤ 250 mm	≤ 3			
Percentage of voids (%)	Declared value (%)		41			
	Tolerance (%)		≤ 45			
			Min: 37 - Máx: 45			
Volume of the largest void (% of gross)		UNE-EN 772-9	≤ 12,5			
Combined thickness of webs and shells (%)		UNE-EN 772-16	≥ 20			
Water absorption (%)		Annex C UNE-EN 771-1	≤ 6			
Damp proof courses (%)		UNE-EN 772-7	N/A			
Initial rate of water absorption (Kg/(m² x min))		UNE-EN 772-11	≤ 0,9			
Characteristic normalized compressive strength (N/mm²)		UNE-EN 772-1	≥ 40			
			Bearing face: Bed			
Density	Gross dry (Kg/m ³)		2.200			
	Net dry (Kg/m ³)		1.340			
	Tolerance (%)		± 10			
Wight (g)	Reduction for density	NON	Annex D RP 34.01			
			Minimum value ensured per height: 1.450-2.150			
Efflorescences		UNE 67029 EX	Non efflorescence			
Durability (Freeze/thaw)		UNE 67028 EX	F2 (25 cycles)			
Thermal properties (Method)		Test carried out in cold store with forced ventilation				
		Tabulated value				
		0,35				
		0,180 - 0,180				
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	≤ 0,30			
Fire reaction		(%organic material < 1%) UNE-EN 13501-1	GRADE A1			
Bond strength (N/mm²)		Annex C UNE-EN 998-2	≥ 0,15			
Surface colours		Anexo D RP 34.01	YES			
Water repellent treatment			NON			
Accessory units			YES			
Remarks						

The combined thickness stated corresponds to the direction of heat flow in the wall. The model Red Klinker Grana can have superficial treatment (flashed). 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: (For the final qualification, this technical form should be stamped and signed by the manufacturer)