AENOR
Confía

AENOR Product Certificate

034/001950

AENOR certifies that the organization

CERAMICA MALPESA, S.A.

registered office	AUTOVIA A-4, KM 303 23730 VILLANUEVA DE LA REINA (Jaen - España)
supplies	**U Units Category I for unprotected masonry**
in compliance with	UNE-EN 771-1:2011+A1:2016 (EN 771-1:2011+A1:2015)
N° Technical Form	0830140 (see annex)
Production site	AUTOVIA A-4, KM 303 23730 VILLANUEVA DE LA REINA (Jaen - España)
Certification scheme	This Certificate has been granted in accordance with the stipulations of the Specific Rules RP 034.01
	This certificate supersedes 034/001950, dated 2021-09-29
First issued on	2017-06-27
Modified on	2022-07-20
Validity date	2027-07-20

Rafael GARCÍA MEIRO
Chief Executive Officer

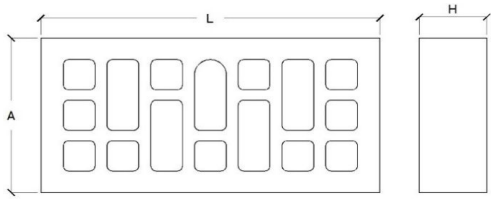
AENOR INTERNACIONAL S.A.U.
Génova, 6. 28004 Madrid. España
Tel. 91 432 60 00.- www.aenor.com

Product certification body accredited by ENAC, number 1/C-PR271

U UNITS CATEGORY I FOR UNPROTECTED MASONRY
TECHNICAL FORM Nº: 0830140

MANUFACTURER - MADE IN:	CERÁMICA MALPESA S.A. - VILLANUEVA DE LA REINA (JAÉN), SPAIN
PRODUCT DESCRIPTION:	U CLAY UNIT (G2) CLINKER R-40 OF 235 x 113 x 36-49-73
DESIGNATION CODE:	CL - U - I - 40 - 1240(D1) - 235x113x36-49-73 - C - L0,350 - T2 - R2 - E(3, 2) - N2080(D1) - G2 - FR41 - B0,15 - W≤6 - I≤0,6 - M≤0,6
BRAND NAME:	FROST KLINKER, ANDALUSIA WHITE KLINKER, SILVER GREY KLINKER
SURFACE COLOURS:	Applicable to models: FROST KLINKER
MASS COLOURS:	WHITE AND GREY

PIECE SKETCH



TECHNICAL CHARACTERISTICS

Characteristic			Test method	Manufacturer ensured values		AENOR required values	
Appearance and structure	flakings and delaminations		Visual over 6 pieces	No pieces with flakings/delaminations			
	cracked units			≤ 1 cracked piece		≤ 1 cracked piece	
	chip units		UNE 67039 EX	≤ 1 piece with m.i.d between 7/15 mm		≤ 1 piece with m.i.d between 7/15 mm	
				No pieces with chips upper to 15 mm			
Dimensional tolerances	Mean value	lenght (l)	EN 772-16	T2	± 4	T2	± 4
		widht (w)			± 3		± 3
		height (h)			± 2, ± 2, ± 2		± 2, ± 2, ± 2
	Range	lenght (l)		R2	± 5	R2	± 5
		widht (w)			± 3		± 3
		height (h)			± 2, ± 2, ± 3		± 2, ± 2, ± 3
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)	Diagonals	l > 300 mm	EN 772-20	N/A		N/A	
		300 ≥ l ≥ 250 mm		≤ 3		≤ 3	
		l ≤ 250 mm		≤ 2		≤ 2	
Percentage of voids (%)	Stated value (%)		EN 772-3	41		≤ 45	
	Tolerance (%)			Mín: 37 - Máx: 45			
Volume of the largest void (% of (l x w x h))			EN 772-9	≤ 12,5		≤ 12,5	
Combined thickness of webs and shells (%)			EN 772-16	≥ 20		≥ 20	
Water absorption (%)			EN 772-21	≤ 6		≤ 6	
Water repellent treatment				NO			
Initial rate of water absorption (Kg/(m² x min))			EN 772-11	≤ 0,6			
Damp proof courses (%)			EN 772-7	N/A			
Characteristic normalized compressive strength (N/mm²)			EN 772-1	≥ 40,0 Orientation loading: Bed		≥ 10,0	
Density	Net dry (Kg/m³)		EN 772-13	2.080			
	Gross dry (Kg/m³)			1.240			
	Tolerance (%)			± 10		± 10	
Weight (g)	Reduction for density:	NO	Annex D.2 RP 34.01	Minimum value ensured: 1.065 - 1.450 - 2.095		Minimun value required: 1.065 - 1.450 - 2.095	
Efflorescences			UNE 136029	No efflorescent		Slightly efflorescent	
Durability (Freeze/thaw)			UNE 67028 EX	N/A			
			EN 722-22	N/A			
Thermal properties (Method)			Catalog CTE	Constructive Elemens Catalog 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 EN 1745	50/100			
Content of active soluble salts			EN 772-5	S2			
Moisture movement (mm/m)			UNE 67036	≤ 0,60			
Fire reaction perfomance	(% organic materials < 1 %)		EN 13501-1	CLASS A1			
Bond strength (N/mm²)			Annex C EN 998-2	≥ 0,15			
SURFACE COLOURS:			Annex D.3 RP 34.01	Applicable to models: FROST KLINKER			
Accessory units				YES			
Remarks:							

Combined thickness declared corresponding at heat flow direction in the masonry
Different surface finishes are made (smooth, dragfaced, rough, sandfaced, etc). They may have a notch in one or both headers and/or other types of perforations. Only plaquettes are certified as special shaped bricks.

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)

Stamp and signature: