
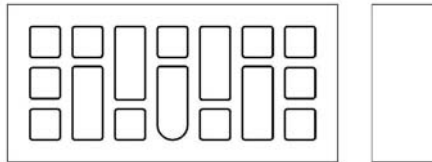


HD CLAY MASONRY UNITS CAT I (UNITS FOR UNPROTECTED MASONRY)

TECHNICAL FORM N° 0830111

| | |
|---|---|
| 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): 37-51-76 | |
| BRAND NAME: EBONY CAMEL - BRIGHT KARRATHA / ROJO BAILEN Y CUERO | |
| MASS COLORATION: RED & MARRON | |

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 | ≥ 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 | l > 300 mm | N/A | N/A |
| | | | 300 ≥ l ≥ 250 mm | ≤ 3 | ≤ 3 |
| | | | l ≤ 250 mm | ≤ 2 | ≤ 2 |
| Percentage of voids (%) | Declared value (%) | UNE-EN 772-3 | 38 | ≤ 45 | |
| | Tolerance (%) | | Min: 34 - Máx: 42 | | |
| 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 | ≥ 20 | ≥ 10 | |
| Density | Gross dry (Kg/m³) | | 1.950 | | |
| | Net dry (Kg/m³) | | 1.190 | | |
| | Tolerance (%) | | ± 10 | ± 10 | |
| Weight (g) | Reduction for density | NON | Annex D RP 34.01 | Minimum value ensured per height: 1.065-1.465-2.180 | |
| Efflorescences | | UNE 67029 EX | Non efflorescence | Slightly efflorescence | |
| Durability (Freeze/thaw) | | UNE 67028 EX | F2 (25 cycles) Test carried out in cold store without 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 | 5/10 | | |
| Content of active soluble salts | | UNE-EN 772-5 | S2 | | |
| Moisture movement (mm/m) | | UNE 67036 | ≤ 0,50 | | |
| Fire reaction | (%organic material < 1 %) | UNE-EN 13501-1 | GRADE A1 | | |
| Bond strength (N/mm²) | | Annex C UNE-EN 998-2 | ≥ 0,15 | ≥ 0,15 | |
| Surface colours | | Anexo D RP 34.01 | NON | | |
| Water repellent treatment | | | YES | | |
| Accessory units | | | YES | | |
| Remarks | | | | | |

The combined thickness stated corresponds to the direction of heat flow in the wall. 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)