

PRODUCT DATA SHEET

Compressed Earth Block

Product Code: BL100

PRODUCT OVERVIEW

The Standard Compressed Earth Block (CEB) is Earth Blocks UK's core compressed earth block that is hydraulically pressed by machine. Can be used internally or externally and is suitable for new-build construction of both domestic and commercial buildings, cob wall repairs and the rebuilding of cob and earthen walls. This product is manufactured from naturally harmonised material, contains no additives or hardeners such as lime/cement and is non-fired. Product lines are tested for strength, durability and in-situ effectivity.

RAW MATERIAL SOURCE (CURRENTLY)

Natural, undisturbed geology from housing development site excavations.

RAW MATERIAL COMPOSITION (BY VOLUME)

Stone & Gravel	15 – 25%
Sands	26 – 36%
Clays/Silts	45 – 55%
Moisture	Variable

SPECIFICATIONS

	BL100 (100mm)
Manufacturing Equipment	3-phase electrically powered hydraulic press
Manufacturing Compression	Patented (PPI)
Manufacturing Time	34 seconds
Production Rate	1 – 100 per hour
Product Dimensions (green)	387mm x 217mm x 102mm
Product Dimensions (cured)	385mm x 215mm x 100mm
Manufacturing Weight	19kg
Dry Weight	16kg
Curing Shrinkage (overall)	2-3%
Compressive Strength (laid flat)	1.15N/mm ² +
Spread Load (laid flat)	10t +
Compressive Strength (laid on edge)	0.8N/mm ²
Spread Load (on edge)	1.8t
PSI	11.77kg/cm ² +
Density	1610kg/m ³
Thermal Conductivity (30mm)	0.606 W/mK
Thermal Resistivity (30mm)	0.0487 m ³ K/W
Embodied Carbon (Cradle to Gate)	0.013kg/CO ₂ e
Fire Resistance	Non-combustible
Product p/s/m (laid flat)	24 units
Product p/s/m (laid on edge)	15 units
Product (per pallet)	54 units
Pallet Weight	870kg
Mortar Required p/s/m (laid flat)	96kg
Mortar Required p/s/m (laid on edge)	38kg
Point of Use	Domestic & Commercial new builds. Cob & earth wall repairs/rebuilds

CONSTRUCTIONAL BONDING MORTARS

- Natural Hydraulic Lime (NHL2) and coarse sand mortar
- Earth mortar
- Non-hydraulic lime and coarse sand mortar

PREPARATION & INSTALLATION

A brick-line (or stringline) is recommended prior to installation. Bedding mortar to be spread onto a moistened surface at 15mm -18mm thickness. Lime mortar bed no longer than 900mm. Earth mortar bed: per block. Moisten any given facet of the block before applying mortar and lay blocks using the conventional technique.

PRODUCT STORAGE

Product to be stored off of the ground and be covered with a suitable weatherproof cover if kept outside. This product can get wet but must not get saturated.

PERFORMANCE & SUSTAINABILITY

- Embodied Carbon comparison with a conventional concrete block – over 90% less.
- Thermal Efficiency comparison with a conventional concrete block – over 33% more overall
- No specialist skills required for installation other than competent brick/block laying ability
- Compatible with conventional concrete products/fired bricks.

SURFACE CLADDINGS

This product will accept natural lime plasters and renders. For interior cladding/s, clay plasters may be used. These blocks will accept conventional screws for fixing timber/other cladding/s.

ABOUT THE FOUNDER

Earth Blocks Ltd was founded by Leslie Cornell in 2020, an IHBC-accredited cob specialist with 28 years of continuous, practice-based experience in cob and earthen construction. He is also founder of The Cob Specialist, an active Cornwall-based conservation company specialising in all aspects of cob in construction. He is a founding member of Earth Building UK and Ireland (EBUKI), a cob advisor to the Society for the Protection of Ancient Buildings (SPAB) and a former South-West representative of the Federation of Master Builders (FMB). Leslie Cornell is also a national committee member for the British Standards Institute (BSI) for masonry testing.

His product and technical data inform supplier relationships with UK-based building conservation companies and architectural practices specialising in the built environment and organisations including; the National Trust, the Eden Project, Innovate UK, Welsh School of Architecture (Cardiff University) and is currently liaising with environmental sustainability experts from local council.

Earth Blocks Ltd manufacture and supply a wide range of compressed earth products for a conscious-led consumer within an expanding sector of construction material awareness. In addition to the manufacture and supply of earth-based products, Earth Blocks Ltd manufacture & supply mobile and static compressed earth block making machines.

Manufacturer

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