ARKAY MUDBLOCKS

Engineered Earth for Sustainable Architecture

High-strength Compressed Stabilized Earth Blocks (CSEB) driving low-carbon, thermally efficient modern construction.

About Arkay Mudblocks

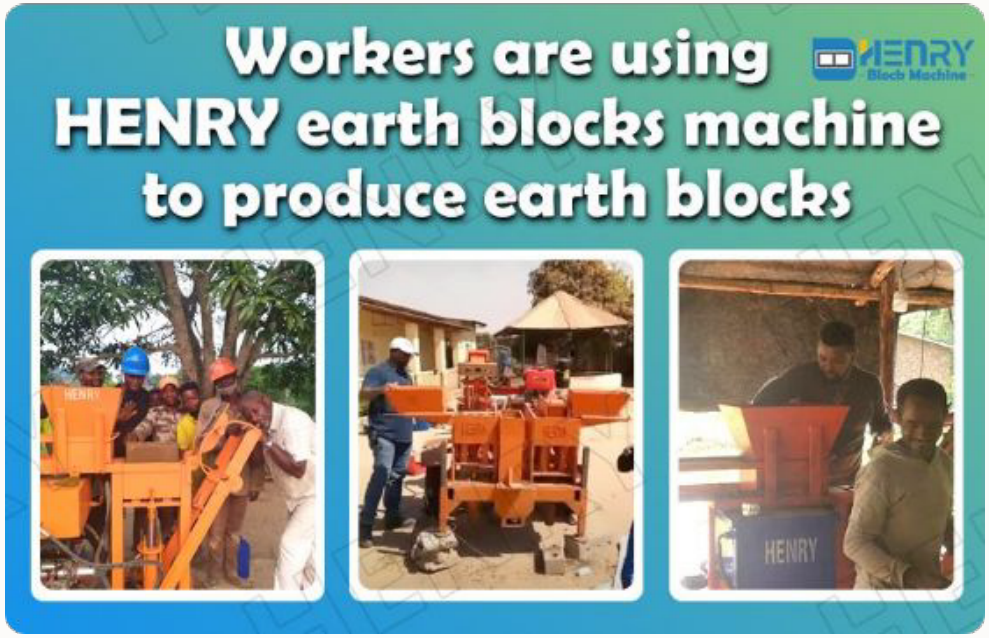
Pioneering Eco-Friendly Masonry Units

High Precision Engineering

Factory-manufactured soil blocks exceeding Indian and global structural standards.

Circular Building Solutions

Utilizing natural local soil with minimal stabilizer to eliminate kilns and high emissions.



Material Science

Understanding Earth Block Technology

Optimized Soil Matrix

Balanced composition of sand, silt, and clay blended for peak density.

Eco-Stabilization

Addition of 5% to 8% cement or lime binding agent for water resistance.

High Compaction

Hydraulic press compaction eliminates voids and enhances structural strength.

Decarbonization

Unmatched Ecological Footprint

10.7×

Lower Embodied Energy

Requires a fraction of energy compared to traditional kiln-fired bricks.

11.8×

Lower Carbon Emissions

Drastically cuts CO_2 output by eliminating wood and coal burning.

Energy Efficiency

Superior Thermal Comfort

High Thermal Mass

Absorbs heat during the day and releases it gradually during cooler hours.

Lower HVAC Operating Costs

Reduces heating and cooling power consumption by up to 30% annually.

Natural Breathability

Regulates indoor humidity for comfortable living environments.



33°C vs 44°C

Interior ambient temperature vs conventional concrete structures in summer peak.

Engineering Quality

Proven Durability & Load Capacity

High Compressive Strength

Exceeds standard 5.0 MPa crushing load test guidelines for load-bearing walls.

Dimensional Precision

Sharp 90-degree edges ensuring uniform joints and minimal mortar consumption.

Fire & Pest Resistance

100% non-combustible earthen structure resistant to termites and decay.

Economic Value

Smart Cost Efficiency

15 – 20%

Savings on Finished Masonry

Lower walling costs compared to conventional burnt clay brick construction.

Exposed Finish Aesthetics

Eliminates plastering requirements, preserving raw rustic beauty.

Thin Mortar Joints

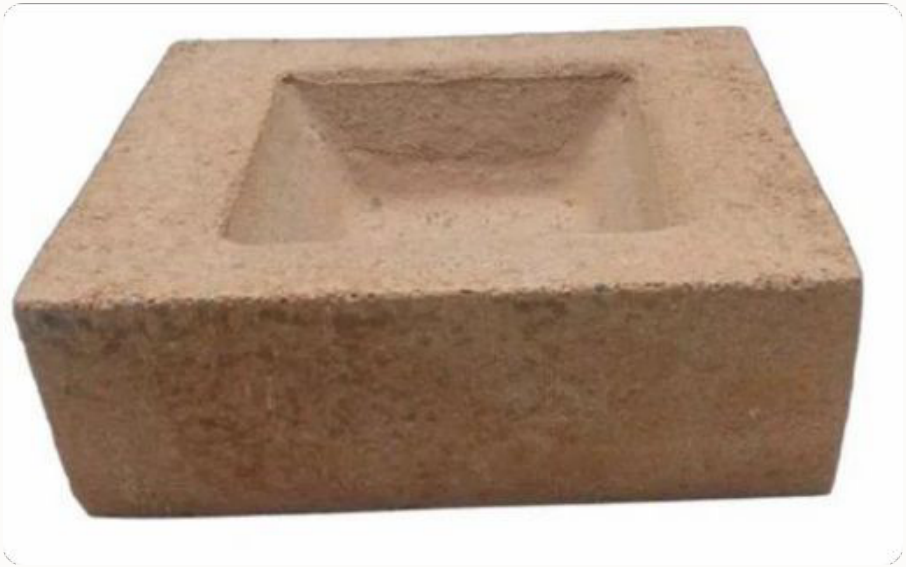
Saves cement slurry volume during wall construction.

Zero Maintenance Overhead

Requires no frequent painting when treated with protective sealant.

Product Catalog & Specifications

9" x 9" Mud Blocks & Modular Profiles



Signature 9" x 9" Heavy Structural Block

Precision-molded 9" x 9" square mud blocks engineered for thick high-capacity load-bearing walls.

Interlocking 9" Blocks

Self-aligning tongue-and-groove layout accelerating dry-stack construction speed.

Hollow-Core Service Channels

Built-in internal conduits for direct electrical and plumbing integration.

Applications

Exposed Mud Wall Architecture



Unplastered Earth Wall Finish

Natural terracotta hues highlighting organic textures and earthen craftsmanship.

Thermal Mass Load-Bearing Walls

9-inch thick mud block walls providing built-in sound dampening and thermal insulation.

Weatherproof Hydrophobic Seal

Protective clear sealers preserving structural longevity without altering natural earth aesthetics.

Performance Benchmarks

Arkay Mudblocks vs Traditional Materials

Feature	Arkay CSEB	Country Fired Bricks	AAC Concrete Blocks
Embodied Energy	**Ultra-Low (570 MJ/m³)**	Very High (6,100 MJ/m³)	Moderate
Thermal Comfort	**Excellent Thermal Mass**	Moderate	Low Thermal Mass
Finish Options	**Neat Exposed Masonry**	Requires Heavy Plaster	Requires Full Plaster
Toxicity & Off-gassing	**Zero VOC / 100% Natural**	Low	Chemical Additives

Craftsmanship

Natural Finishes & Structural Aesthetics



Tactile Warmth

Rich natural earth tones creating harmonious connections with surrounding landscapes.

Weather Shield Sealants

Transparent silicon coating option ensuring erosion protection against heavy rains.

ARKAY MUDBLOCKS

Build the World of Tomorrow, Sustainable Today

Partner with Arkay Mudblocks for eco-friendly, high-strength structural solutions.

www.arkaymudblocks.com contact@arkaymudblocks.com

Image Sources



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