

SUGARCRETE

BIOMASS BASED BUILDING BLOCKS

Chemical Systems Technologies, a global leader with over 35 years of experience, delivers sustainable and innovative solutions to the sugar industry. In collaboration with the University of East London, UK, we produce Sugarcrete blocks in India. Our vision is to replace the traditional clay bricks, fostering positive social and environmental impact.

Sugarcrete is an ultra-low carbon biomaterial construction block, featuring an interlocking shape, made from upcycled sugarcane waste, bagasse

Bagasse is combined with mineral binders to create Sugarcrete blocks with varying degrees of structural strength.

OVERALL BENEFITS

- The manufacturing process is carbon negative
- Sequesters CO₂ from the atmosphere
- Prevents topsoil erosion done by the traditional brick industry
- Designed to be four times lighter than bricks
- Proven to exhibit stronger insulating properties.
- Create rural employment, specifically focused on women

PERFORMANCE VALUES

Life Cycle Assessment A1-A3:

0.48 kgCO₂e / standard block

Thermal Conductivity:

0.07 W/m.k DIN 52612 / 52616

Fire Rating:

Class B-s1 d0 UNE-EN ISO 1182:2021

Compressive Strength:

1-2 MPa ASTM D-1621

Density:

500-600 kg/m³ ASTM D-1622

Moisture Buffer Value:

MBV 3.11 g/m²R

Please note these values are for guidance only and will need to be tested by accredited laboratories local to where the material will be implemented.

BLOCK TYPOLOGIES

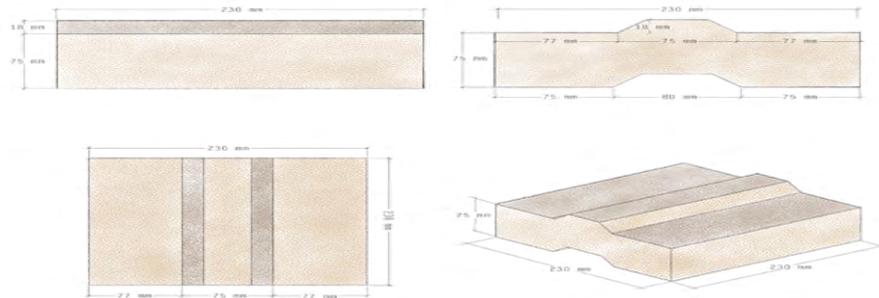
Utilizing two block typologies, standard (equivalent to two clay bricks) and corner (equivalent to three clay bricks) all the required details such as corner conditions, windows and doors can be addressed.

The blocks interlock minimizing wall displacement in case of **seismic** activity. The groove **minimizes lime mortar** required for wall assembly.



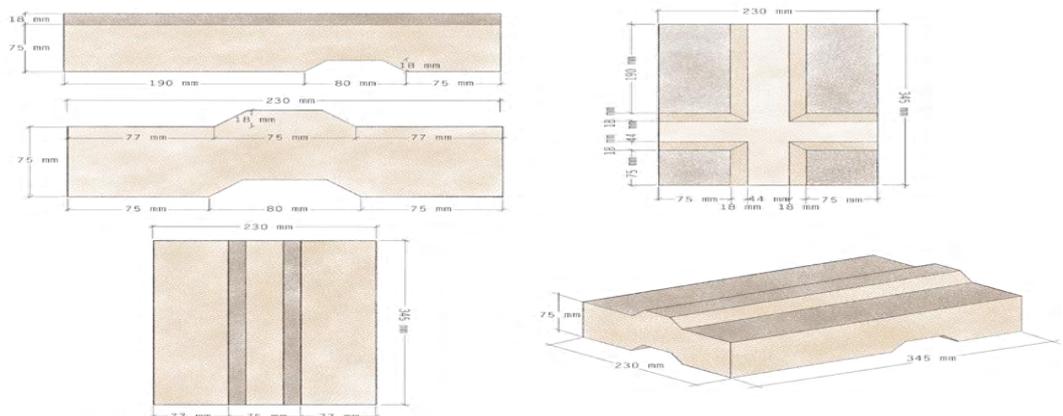
1. Standard block

Size: 230x230x75mm / Volume: 0.00397 m³ / Weight: 1.95 ± 0.1 kg

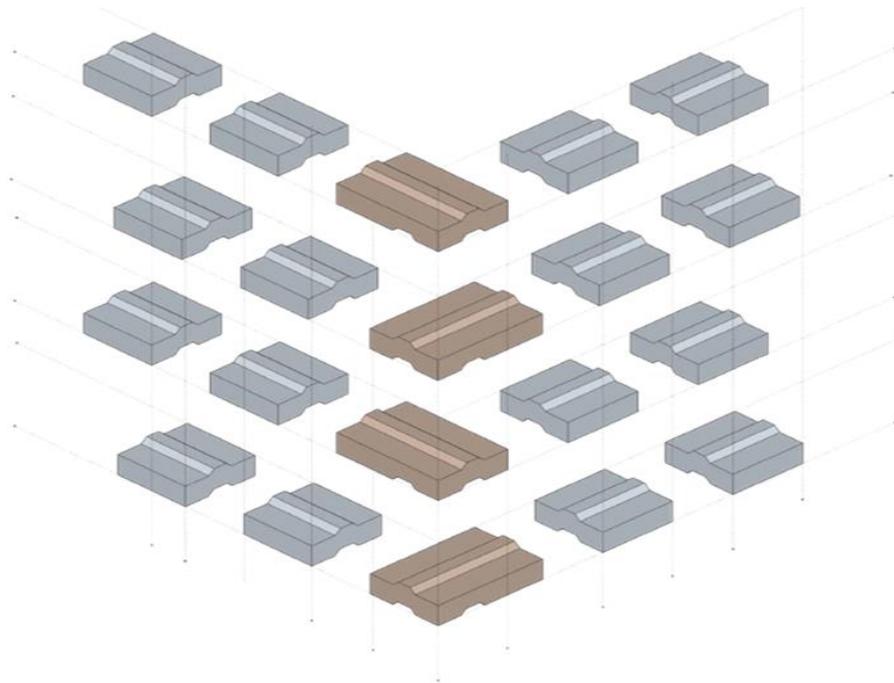


2. Corner block

Size: 230x345x75mm / Volume: 0.00595 m³ / Weight: 3.30 ± 0.15 kg



TYPICAL BLOCKS' CONFIGURATION



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