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ANGIRUS®

Sustainable construction materials



Awarded and
Recognized By-



Ministry of Housing
and Urban Affairs
Government of India



WORLD
ECONOMIC
FORUM



Presenting **WRICKS** - An Intelligent Solution for Construction



DAMPPROOF AND 2X STRONGER



90%
More Waterproof



100%
More Strength



76%
Better Insulation

Government lab-tested, and Proven by Field trials.

A Monsoon Tested Villa- Clad entirely in exposed brick work



Biome Environmental Solutions

Farm villa — exposed brickwork walls & roof tiles
Bangalore

15,000	3,400
Wricks bricks	Roof tiles
13.4T	Plastic waste recycled
31.2T	C&D waste recycled
9.55 tCO2e	Emissions avoided vs. clay brick

“The damp-proofing properties of Wricks play an important role here, as this is a monsoon-prone area.”

Six Projects, Six Climates- Zero Compromises



Water Tank

Udaipur

8,000 Wricks

3-Years



Community Center

Mumbai

15,000 Wricks

1 Years



Material Recovery center

Bangalore

4,000 Wricks

6 Months



Sports Center

Chennai

12,000 Wricks

3 Years



Pavement Road

Leh

6,000 Wricks

2 Years



Sewage Treatment Plant

Bangalore

40,000 Wricks

1 Years

Product Details – Four Formats, one system



Wricks Solid

Load-Bearing

Size: 9"×4"×3" (230×100×75mm)

Specs: 2.5–2.8 kg

Strength: 16–18 MPa

Use: Residential walls, STP/UGT tanks, pools, footpaths, villas, institutional



Wricks Cavity

Load / Non-Load Bearing

Size: 9"×4"×3" (230×100×75mm)

Specs: 2.2–2.5 kg

Strength: 12–16 MPa

Use: Residential walls, external facades, institutional & commercial interiors



Wricks Paver

Load Bearing

Size: 9"×4" (230×100mm)

Specs: ~4 kg, **Depth:** 60, 75, 80mm

Strength: M20 & M25,

Use: Footpaths, gardens, parking areas, landscaping



Wricks Brick Tile

Non-Load bearing

Size: 9"×4"×1" (230×100×25mm)

Specs: ~1 kg

Use: Flooring, roofing, cladding, landscaping

Technical Details

PROPERTIES	WRICKS	CEMENT BRICK	CLAY BRICK
Compressive Strength IS 3495 (Part 1):1992	16-20 MPa	5- 15 MPa	3.5–12 MPa (Class D to Class A)
Water Absorption IS 3495 (Part 1):1992	< 2%	5-10%	15–20%
Efflorescence Test IS 3495 (Part 1):1992	Nil	Slight to Moderate	Moderate to Heavy
Dimensional Tolerance IS 1077:1992	Highly uniform	± 3 mm	Variable, often uneven
Thermal Conductivity* ASTM C177 / IS 3346:1980	0.12 W/mK	1- 1.8 W/m·K	0.5–1 W/m-K
Density IS 3495 (General)	~1600–1800 kg/m³	1800 – 2200 kg/m³	~1800–2000 kg/m³
Soaking Required**	Not Required	~ 7 to 14 Days	~ 7 Days

2X The compressive strength

10X Less water absorption

Zero Soaking or curing time

Environment Safe & Certification-ready.

PROPERTIES	WRICKS	CLAY BRICK	DIFFERENCE
Life Cycle Analysis (LCA), As per ISO Standard	0.19 kg CO2e/unit	0.74 kg CO2e/unit	-0.54 kg CO2e/unit
Water Footprint Internal audit	0.04 L/unit	1.35 L/unit	-1.31 L/unit
Energy Audit Based on plant data & GIZ benchmarks	1.18 MJ/unit	23 MJ/unit	-21.82 MJ/unit

FIRE & SAFETY TESTS

- ✓ **Flammability / Burning Rate — UL 94** Passed (self-extinguishing)
- ✓ **Leaching of Heavy Metals — US EPA 1311** Below permissible limits
- ✓ **Total VOC — ISO 16000-6** Within safe indoor air quality limits

GREEN BUILDING ALIGNMENT

Wricks supports certification pathways builders and architects already target:

LEED

IGBC

GRIHA

Economics: Cost Comparison per Sq Ft Wall Construction

COST COMPONENT (PER SQ FT WALL)	WRICKS®	CLAY BRICK
Brick Cost	₹ 90 / sq. ft	₹ 70 to 135 (Class A, B Brick)
Cement mortar	₹ 20 – 30 / sq. ft	₹ 20 – 30 / sq. ft
Cement Plaster	₹ 0 to Rs 50 / sq. ft. (optional)	₹ 40 – 50 / sq. ft.
Waterproofing	₹ 0	₹ 50 – 60
Paint (Optional)*	₹ 20 – 30 / sq. ft (optional)	₹ 20 – 30
Total Wall Cost / Sq Ft	₹ 130-200 / sq. ft	₹ 200 - 260 / sq. ft



₹ 130–200
Total wall cost / sq ft.

v/s



₹ 200–260
Total wall cost / sq ft.

Up to ₹60–70 / sq ft saved on
waterproofing + plastering alone

The math behind one 2-BHK home



Built with 10,000 Wricks®

5.4 tCO₂e

CO₂ reduction

30 tons

Waste recycled

10 tons

Water saved

12

Direct jobs created

₹100/sq ft

Cost saved

5°C

Cooler interiors

**=Saves Rs 40-50/Sq ft in Plastering and Rs 60/Sq ft in waterproofing cost.*

***=Thermal conductivity is 76% more, keeping the inside temperature around 5 °C Less*

Why Now – Conventional Brick Can No Longer Meet Tomorrow's Demands

STRUCTURAL



35–50% of annual maintenance cost sit in wet areas.

REGULATORY



Carbon Rules are tightening & reshaping construction.

SUPPLY CHAIN

Close down all brick kilns, orders CPCB

Ashish Roy | Updated: Aug 4, 2012, 09:38 IST



NAGPUR: Bad days are ahead for brick kiln owners and workers as [Central Pollution Control Board \(CPCB\)](#) has directed closure of all kilns that do not have sanction of state pollution control boards (SPCBs). Very few kilns bother to take clearance from SPCBs and hence most of them will be affected.

Kiln shutdowns and Delays creating instability.

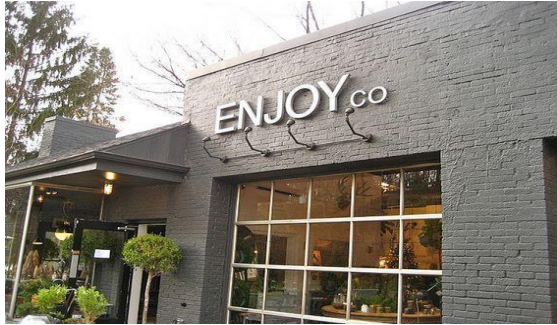
Regulatory pressure, structural failures and supply instability are converging — Wricks is built for exactly this moment.

Design Freedom for Architects & Designers

- 1 Custom dimensions**
Any brick size, from 9-inch walls to 1-inch tiles, with customizable thickness.
- 2 Mason-friendly installation**
Same tools, same technique as conventional brick — no special training.
- 3 Finish freedom**
Exposed or painted; bonds with cement mortar, lime, gypsum or ready-mix.
- 4 Sample kits & mock-ups**
Bricks, tiles and pavers delivered to your studio, with team support on site.
- 5 Technical helpline**
Direct access to our engineering team for detailing and site queries.
- 6 Impact reporting**
Project-level waste-recycled and CO2e numbers your clients can publish.

Zero VOC emissions · No microplastic release · No leaching of harmful substances

Applications- G+1 Load bearing and non-load bearing



Restaurants, cafes & hotels



Villas, residences & farmhouses



Institutes & recreational centers



Resorts, lounges & retreats



Pools, tanks & STPs



Sports centers & warehouses



Landscaping & walkthroughs



Commercial complexes & offices

Binds with cement, bond-joining, lime, gypsum and ready-mix mortar, Suitable for walls, flooring & footpaths.

Success Stories and Case Study

Project Overview: Green Mash-up

- **Location:** Chennai
- **Application:** Badminton Court in Exposed Brickwork
- **Units Deployed:** 12,000 Wricks

Environmental Impact:

- **Recycled;** 10 tons of single-use plastic waste
- **Recycled:** 30 tons of construction waste
- **Reduced:** 2.35 tCO₂eq emissions (compared to clay bricks)



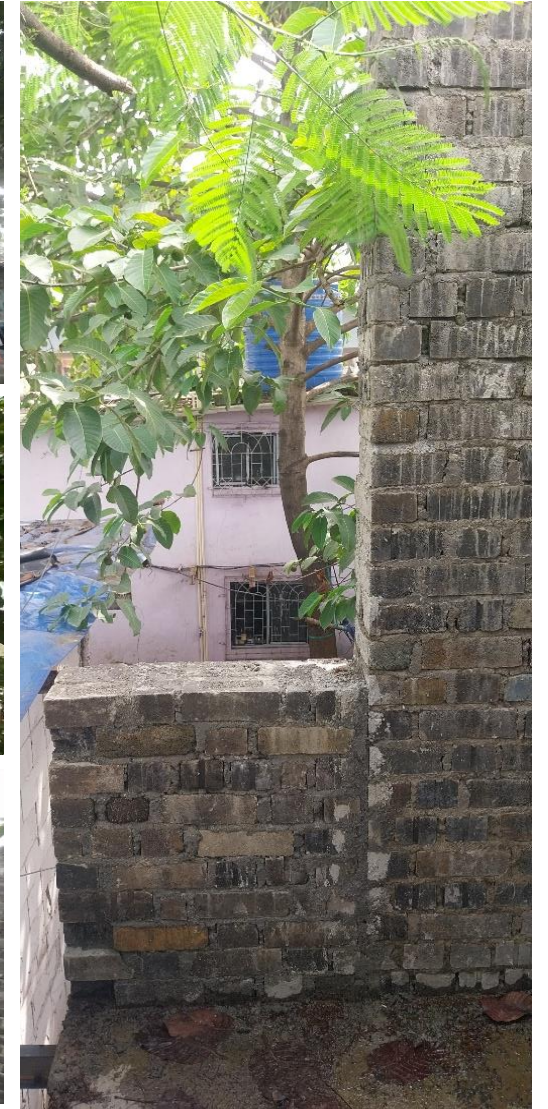
Success Stories and Case Study

Project Overview: Tata Institute of Social Science

- **Location:** Mumbai
- **Application:** Community center, M-Ward
- **Units Deployed:** 15,000 Wricks

Environmental Impact:

- **Recycled:** 12.6 tons of single-use plastic waste
- **Recycled:** 29.4 tons of construction waste
- **Reduced:** 8.1 tCO₂eq emissions (compared to clay bricks)



Success Stories and Case Study

Project Overview: Techno India NJR

- **Location:** Udaipur
- **Application:** Water Tank, Proving Waterproofing application
- **Units Deployed:** 8,000 Wricks

Environmental Impact:

- **Recycled:** 4.5 tons of single-use plastic waste
- **Recycled:** 13.5 tons of construction waste
- **Reduced:** 1.175 tCO₂eq emissions (compared to clay bricks)



TOGETHER, LET'S BUILD FOR A

Sustainable and Greener Future.

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