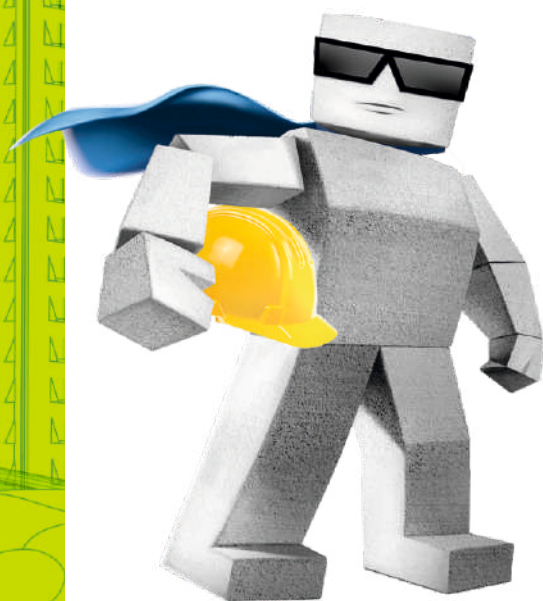


# WALLING SOLUTIONS



# Who We Are?

"We help people build their homes  
**better, faster and cheaper**  
by using innovative construction technologies".

## More than a decade of innovation and continuing.



The largest manufacturer of AAC Blocks  
in India (installed capacity of  
**18 lakh CBM/annum**) near high growth  
markets of West and North



**10 lacs+** homes built over the past  
decade using  
Magicrete products.



**Motilal Oswal Private Equity (2013) & India SME (2023)**  
invested in **Magicrete**.



Launch of **Magicrete AAC Wall Panels** –  
a significant shift in wall construction  
built using European Technology.



AAC Blocks

Block Joining  
Mortar

AAC Slabs

Putty Plus

Ready Mix  
Plaster

AAC Wall Panel

PrimeKote  
Anti-efflorescence primer

WallPRO  
protective coating for  
external wall



**magicrete**<sup>®</sup> Complete range of Walling Solutions  
magic behind happy homes

# Advantages



## Cost Effective

Save upto 15% in Foundation cost



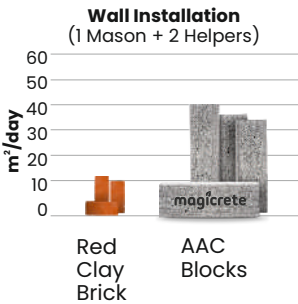
Building using Bricks

Building using **AAC Products**



## Wall Installation Speed

Bricks Vs AAC Blocks



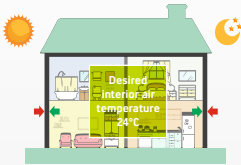
Red Clay Brick

AAC Blocks



## Thermal Control

Day time exterior temperature 33°C  
Night time exterior temperature 20°C



Building uses approx. 30% less energy for cooling and heating the interior air space



## Fire Resistance

Magicrete AAC Blocks provides a fire rating of 4 hours for Thickness of 150 mm.  
This makes it one of the best building materials available in the market.



## Acoustic Insulation

Magicrete AAC Blocks provides extraordinary defense against noise pollution.  
The sound reduction index is more than 40 dB.

Thickness (mm)	75	100	150
STC rating (dB)	40	43	46

- With 3-4 mm skim coat
- For 52 dB, install gypsum board (12.5mm) with stud framing on both sides.



## Space Saving

Better option to use thinner internal walls, 75mm instead of 100 mm and as a result there is an increase in floor space area upto 2%.



## Durable

Absorbs strong impacts.  
Withstand harsh weather conditions without cracking.



## Easy & Fast Installation

It is easy to chisel, cut & core the AAC Blocks, as per requirement.

# Why Magicrete AAC Blocks ?



Weights **1/3<sup>rd</sup>** of clay bricks,  
leads to steel structure  
reduction upto **15%**



High thermal insulation:  
Save upto **18%** on  
AC / Electricity cost.



**4X** faster construction



Honeycomb structure provides  
highest strength to weight ratio.  
Compressive strength: 4N / mm<sup>2</sup>

## Technical Specification

PARAMETER	VALUE
Density (Oven Dry)	550-650 kg/m <sup>3</sup>
Compressive Strength	4N/mm <sup>2</sup>
Modulus of Elasticity	2040 N/mm <sup>2</sup>
Coefficient of Thermal Expansion	8.1 x 10 <sup>-6</sup> K <sup>-1</sup>
Water Absorption (at equilibrium)	8%
Thermal Conductivity (K value)	~0.16 W/(m.K)
Drying Shrinkage	0.04%
Fire Resistance	4 Hrs. (for 150 mm wall)
Sound Transmission Class Rating	43db (for 100mm wall)



200 mm

600 mm

t : 75/100/150/200/225 mm

# Walling Material Comparison

			
Property	AAC Blocks	Concrete Blocks	Red Clay Bricks
Material Composition	Fly Ash + Gypsum + Lime + Cement+ Aluminium powder	Cement + Sand + Gravel	Top Soil
Speed of Installation (1 Mason + 2 Helpers)	35 m <sup>2</sup> /day	18 m <sup>2</sup> /day	10 m <sup>2</sup> /day
Water Absorption	Low	Average	High
Dry Density	550-650 Kg/m <sup>3</sup>	2400-2500 Kg/m <sup>3</sup>	1800-2000 Kg/m <sup>3</sup>
Earth Quake Resistance	High	Low	Low
Fire Rating (150 mm)	4 Hours	3 Hours	2 hours
Energy Saving	High	Low	Low
Thermal Conductivity	~0.16 W/m <sup>2</sup> K	~2 W/m <sup>2</sup> K	~0.81 W/m <sup>2</sup> K
Sound Reduction Index (100 mm)	43 dB	41 dB	40 dB
Pest & Termite	None	None	High
MEP Installation difficulty level	Minimal	Very High	Medium
Eligible For Green Points Under GRIHA/IGBC	Yes	Yes	No

## Quick Facts



AAC Blocks consists **80% air** by volume, making it lightest available walling material (**weighs 1/3<sup>rd</sup>** that of clay bricks).



It is further strengthened by high pressure steam curing in **Autoclaves**.



Formed as a result of reaction of aluminum on a proportionate blend of lime, Cement & Fly ash, the hydrogen gas that escapes creates **millions of tiny air cells** giving it a strong **Honey comb** like structure.



# Say no to the hassle & expense of Bond Beam/Coping

Switch to

**magicrete®**

**POWER MESH**



Magicrete Power Mesh serves as a bed joint reinforcement used in horizontal AAC masonry joints. Reinforcement within AAC masonry amplifies the lateral stability of walls, diminishes occurrences of thermal cracks, and boosts flexural strength by over double the original capacity.

According to IS:6041-1985 code of practice for the construction of AAC Blocks Masonry, providing horizontal joint reinforcement is essential to prevent cracks in masonry.

Comparison of flexural strength of Unreinforced Masonry, Steel Wire Reinforced Masonry & Magicrete Power Mesh Reinforced Masonry



a = Unreinforced Masonry b = Steel Wire Reinforced Masonry  
c = Magicrete Power Mesh Reinforced Masonry

Citation: Piekarczyk, A.; Flexural strength of AAC masonry with bed joint reinforcement. ce papers. 2018; 2:389-396 <https://doi.org/10.1002/cepa.887>



## Benefits



**Enhanced Strength**



**Better Bonding**



**Easy Workability**



**Crack Control**



**Cost-Effective**



**Impact Resistance**

\*For optimal results, it is recommended to use Magicrete Power Mesh along with Magicrete Block Joining Mortar.

## Block Joining Mortar



PACKAGING:  
30 Kg & 40 kg bag

### Technical Specification

PARAMETERS	SPECIFICATIONS
Appearance	Grey Powder
Water Required	35%
Pot Life	~1.5 - 2 hrs
Curing	Not required
Tensile Adhesive Strength	>0.41 N/mm <sup>2</sup> (as per ASTM - C1660)
Coverage	170 - 180 sq.ft (for 4" thick blocks)

#### Features:

- High bond strength
- No shrinkage cracks
- High thermal insulation
- Shock & impact resistant
- Superior adhesion
- Excellent compressive & tensile strength

### Technical Specification

PARAMETERS	SPECIFICATIONS
Appearance	Greyish Granular Powder
Maximum Aggregate Size	<3 mm
Bulk Density	1.5 - 1.6Kg/l
Compressive Strength (28 days)	>9 N/mm <sup>2</sup>
Flexural Strength (28 days)	Min 1.8 N/mm <sup>2</sup>
Water Retentivity	Min 95% (EN 1015 - 8)
Coverage	18-20 Sq.ft./40 kg Bag (for 10-12mm thickness)
Thickness of layer	Max 12mm per coat
Pot life	1.5-2 hours
Proportion of water	17-19% as per weight

#### Features:

- High strength
- Crack free wall
- Faster application
- Excellent coverage

## Readymix Plaster



PACKAGING:  
40 kg bag

### Technical Specification

PARAMETERS	SPECIFICATIONS
Appearance	White Powder
Initial/Final Setting Time	270/300 Min
Tensile Adhesion Strength	>1.0 N/mm <sup>2</sup>
Compressive Strength	8.5 N/mm <sup>2</sup>
Flexural Strength	2.1 N/mm <sup>2</sup>
Water Retentivity	99.60%
Pot Life	90-100 Min
pH	9.2-10.1
Coverage	12-15 Sq.ft/kg depending on wall finish

#### Features:

- No shrinkage cracks
- Protects expensive paint from flaking, dampening and peeling off
- Reduces paint consumption
- Superior paint finish
- Strong bonding

## Wall Putty



PACKAGING:  
20 Kg & 40 kg bag



## WallPRO



PACKAGING:  
4 Ltr & 20 Ltr Pail

### Technical Specification

PARAMETERS	SPECIFICATIONS
Appearance	Single Component Emulsion
UV Resistant - 1000 hrs	No Defects
Exposure Drying Time	30 min
Gravity	1.31-1.35
Algae and Fungus Resistant	No Growth
Crack Bridging Ability	Upto 2 mm wide
Tensile Strength	1.5 N/mm <sup>2</sup>
Adhesion Strength	1.0 N/mm <sup>2</sup>
Elongation	>100%
Water Permeability	6

#### Features:

- Excellent waterproofing
- Resistant to UV degradation
- Bridges cracks up to 2 mm width
- Improves tensile adhesion strength
- Anti-carbonation
- Highly flexible
- No shrinkage cracks

### Technical Specification

PARAMETERS	SPECIFICATIONS
Appearance	Liquid white tinted primer
Specific Gravity (@27°C)	1.28 ± 0.01
Solid Content	>50 %
Tensile strength (ASTM D412)	≥ 2.0 N/mm <sup>2</sup>
Efflorescence resistance	No efflorescence observed on paint film
Resistance to water	Passes
Accelerated Weathering (@ 500 hrs UV exposure)	Passes

#### Features:

- Efflorescence barrier mechanism
- Penetrating primer
- Excellent adhesion
- Anti-fungal
- Alkali resistance

## PrimeKote



PACKAGING:  
4 Ltr & 20 Ltr Pail

## CrackPRO



PACKAGING:  
1 kg Pail

### Technical Specification

PARAMETERS	SPECIFICATIONS
Specific Gravity (@ 27°C)	1.40 ± 0.02
Service temp range (@ 30°C)	-15 to +80
Non Volatile Content	>70%
Vertical slump.	Nil
Movement accommodation factor	+ 10%
Extension recovery	Min 75%
Water resistance	Excellent
Freeze / thaw stability, cycles	Passes 5
Volume shrinkage	20%
Tack free time	30 - 40 Mins

#### Features:

- Non-shrink
- Superior mechanical strength
- Water resistant
- Highly flexible
- Strong adhesion

# Approved By



# Esteemed Clientele



# Project Gallery



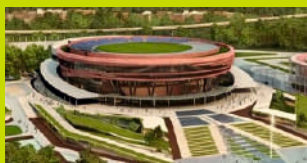
Diamond Bourse  
Surat, Gujarat



Supreme Court  
New Delhi, Delhi



IIT Ropar  
Rupnagar, Punjab



ITPO, Pragati Maidan  
New Delhi, Delhi



DLF Camellias  
Gurgaon, Haryana



Omkar 1973  
Mumbai, Maharashtra



Ajmera Aeon  
Mumbai, Maharashtra



Kalpataru Immensa  
Thane, Maharashtra



Raheja Viveria  
Mumbai, Maharashtra



IIM Rohtak  
Rohtak, Haryana



Lodha Amara  
Thane, Maharashtra



PNB Headquarters  
New Delhi, Delhi



Goa Airport  
Dabolim Airport, Goa



Exhibition and Convention Center,  
Yashobhoomi - Dwarka, Delhi



Lodha World Tower  
Mumbai Maharashtra



**Magicrete Building Solutions Pvt. Ltd.**

(ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified co.)

101-102, Ritz Square, Near Narmad Library, Ghod Dod Road, Surat-395001 Gujarat.

**[www.magicrete.in](http://www.magicrete.in)**

In case of customer care: 80 70 40 80 10 | [info@magicrete.in](mailto:info@magicrete.in)

Follow us on:   

DOWNLOAD  
THE MAGICRETE  
BUILD MART APP

