BRIMAX®
AAC PRODUCTS
TOGETHER WE BUILD GREATNESS

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Partner:
PCPATEL

From the house of:
श्रीनाथ® Bricks

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ADVANCED.
AFFORDABLE.
CLIMATE-SMART.

In today's world, building strong and sustainable structures that stand the test of time is no longer a choice, it's a necessity. And to come up with the right solutions for future challenges, we need to take the right actions today. At **BRIMAX** AAC, we are revolutionizing construction with our advanced AAC (Autoclaved Aerated Concrete) blocks, offering unparalleled strength, affordability, and a commitment to a greener future.

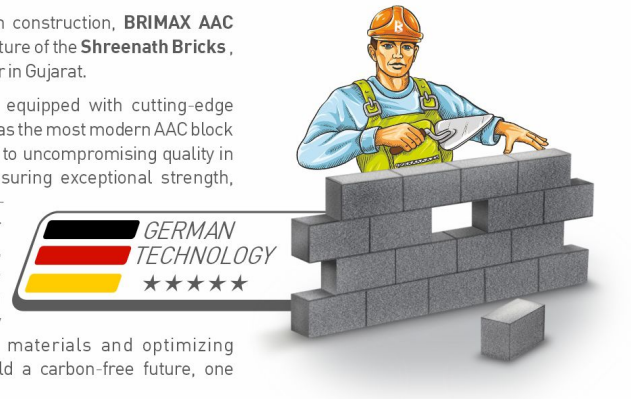
Mission

To empower builders and developers with innovative, high-performance **AAC** block solutions, manufactured with a commitment to sustainability and delivered with unmatched reliability.

Vision

To be the undisputed leader in India's **AAC** block industry, recognized for superior quality, environmental stewardship and exceptional customer service.

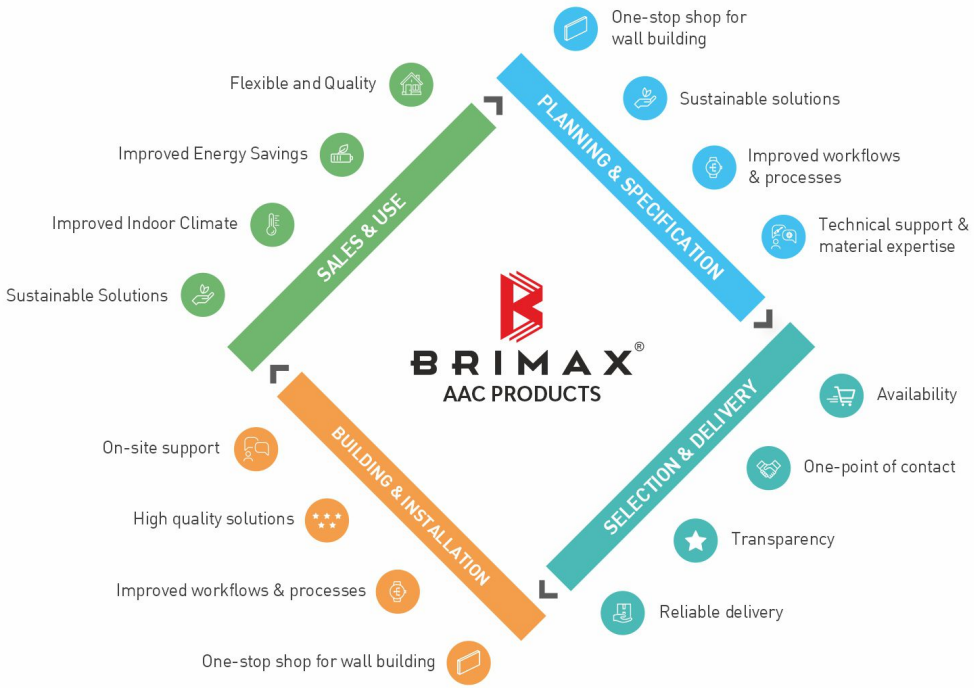
WHO WE ARE



Leveraging a rich heritage in construction, **BRIMAX AAC** Products LLP is the latest venture of the **Shreenath Bricks** , the largest brick manufacturer in Gujarat.

Our state-of-the-art facility, equipped with cutting-edge **German Technology**, stands as the most modern AAC block plant in India. This translates to uncompromising quality in every block we produce, ensuring exceptional strength, energy efficiency, and long-lasting performance for our clients. But beyond strength, **BRIMAX** prioritizes the environment. We champion eco-friendly practices by incorporating sustainable materials and optimizing production processes to build a carbon-free future, one block at a time.

We recently joined forces with the global AAC technology giant, **Hess AAC Systems** and are all set to pioneer the Indian lighthouse project. With the focus on providing the best, this shall be India's most technologically advanced plant.

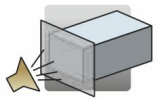


ABOUT AAC

Autoclaved Aerated Concrete (AAC) is a revolutionary building material that was first produced in Europe in 1929 and has gained widespread popularity due to its exceptional properties. Unlike traditional concrete, AAC is available in multiple formats from blocks to panels for wall, floor and roofs. It is lightweight making it easy to handle and customize with traditional tools. Its unique manufacturing process involves the addition of a foaming agent to the concrete mix, resulting in a porous structure that offers superior insulation, fire resistance, and load-bearing capacity. With 2-5 times faster construction time AAC is now widely used in residential, commercial, and industrial construction projects worldwide, thanks to its versatility, efficiency, and sustainability benefits.

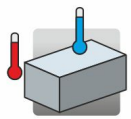
WHY CHOOSE AAC PRODUCTS?


Lightweight and Easy to Transport


Better Sound Insulation


High Load-Bearing Capacity

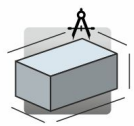

Impressive Fire Resistance

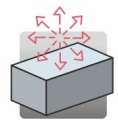

Superior Thermal Insulation


Long Life Span


Moisture, Mold and Termite Resistant


Reduced Environmental Impact


Dimensional Accuracy


Highly Versatile

HOW IS AAC MADE?

AAC is made from cement, lime, fine sand, other siliceous materials, gypsum, water and a small amount of aluminium powder (manufactured from a by-product of aluminium). When AAC is mixed and cast in forms, several chemical reactions take place that give AAC its light weight and thermal properties:

In the alkaline raw materials mixture,

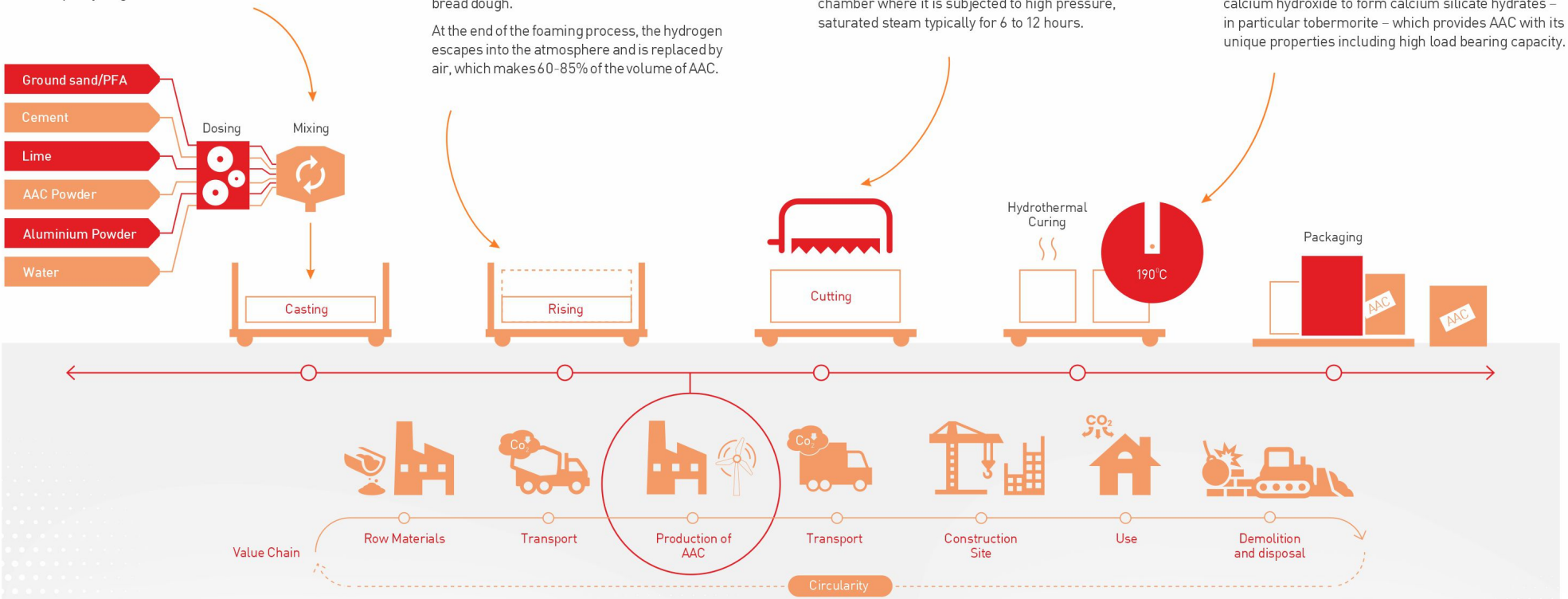
aluminium particles react to form millions of microscopic hydrogen bubbles.

The hydrogen gas foams and increases the volume of the raw mix creating bubbles up to 3 millimeters in diameter, causing it to rise like bread dough.

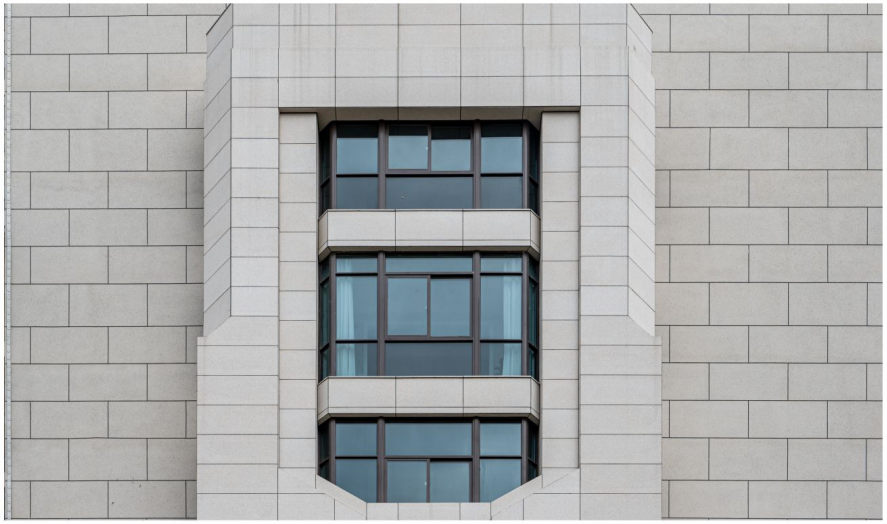
At the end of the foaming process, the hydrogen escapes into the atmosphere and is replaced by air, which makes 60-85% of the volume of AAC.

When the AAC cake is removed from the mould, it is solid but still soft. It is then cut into either blocks or elements and placed in an autoclave chamber where it is subjected to high pressure, saturated steam typically for 6 to 12 hours.

During this steam pressure hardening process, when the temperature reaches 190 °C and the pressure reaches 800 to 1,200 kPa, quartz sand reacts with calcium hydroxide to form calcium silicate hydrates – in particular tobermorite – which provides AAC with its unique properties including high load bearing capacity.



APPLICATIONS



AAC blocks are a game changer, a versatile material suitable for a wide range of applications. From traditional projects to contemporary landmarks, from residential projects to commercial spaces, AAC blocks are reshaping the way we build. Let's explore the diverse applications where our innovative blocks are carving a difference due to their energy efficiency and cost effectiveness.

Solid/Cavity External Walls

Our blocks offer superior thermal insulation, keeping homes cooler in hot climates and warmer in cold weather, contributing to energy efficiency throughout the year.

Internal Walls Within the House

AAC's dimensional accuracy and ease of cutting simplify construction of internal partition walls, as well as external walls allowing for efficient layouts and flexible room configurations.

Infill For Beam and Block Flooring Systems

The light weight and fire resistance of AAC make it a perfect infill material for cost-effective and fire-safe beam and block flooring systems, an emerging trend in many construction projects.

Separation Walls Between Apartments and Houses

The excellent sound insulation properties of AAC blocks create quieter living spaces in multi-unit dwellings, a key factor for comfortable living in any environment.

AAC BLOCKS v/s CLAY BRICKS

S. No.	Basis of Difference	AAC Blocks	Red Bricks
01	Size Range	Wide standard size range and also customizable	Available in one or two standard sizes. Not Customizable.
02	Construction speed	Bigger sizes, dimensional accuracy and fewer joints ensure higher construction speed	Smaller sizes, less dimensional accuracy and more number of joints reduce construction speed
03	The thickness of Mortar joints	Thin mortar joints in the range of 3-5 mm	Thick mortar joints of minimum 10 mm.
04	Green Product	Made from non-toxic materials that are not harmful to the environment	Made from Natural Clay which destroys the most fertile top layer soil
05	Seismic Resistant	Reduces the dead load of the building thereby increasing the safety against earthquakes.	Increases the dead load of the structure hence is more risky.
06	Fire Resistant	Fire Resistance of a 200 mm thick wall is up to 4 hours (As per PCA – Portland Cement Association)	Fire Resistance of a 200 mm thick red brick wall is up to 2 hours.
07	Moisture Resistant	Less water absorption due to unconnected micropores	More water absorption
08	Thermal Conductivity	Thermal Conductivity is low leading to less heat transfer	Thermal Conductivity is high causing more heat transfer
09	Sound Absorption	Good sound insulation properties	No Sound Insulation properties
10	Dry Density	It varies between 451–1000 kg/m3	It varies between 1600 – 1920 kg/m3
11	Compressive Strength	High, between 3-4 N/mm2	Lower compressive strength around 2.5 N/mm2
12	Weight	Lighter in weight	Heavier
13	Termite Resistant	Possesses pest control qualities, Does not allow the spreading of termites	No pest control features
14	Curing Period	Less water required for curing	More water required for curing hence high electricity bills and labour costs
15	Wastage	Less wastage, almost 100% utilization is possible	More wastage due to average 10 to 15 % breakage during construction
16	Savings	More savings	Less savings due to higher costs

BRIMAX®
AAC PRODUCTS

The unique manufacturing process of BRIMAX AAC produces a micro cellular structure that sets the material apart from other types of masonry and offers the following characteristics:

1 STRONG

Block strength from 2.9N/mm2 to 8.7N/mm2

2 ROBUST AND DURABLE

- Low wear and tear
- Resists sulfate attack in foundations
- Water-resistant
- Frost-resistant
- Does not rot or decay
- Excellent ballistic impact performance
- Is not susceptible to insect attack

3 VERSATILE

- Accepts a wide range of finishes
- Multi-purpose – use for entire buildings
- Adaptable for use in innovative designs
- Easy to alter or extend during or after the build process

4 EXCELLENT SOUND INSULATION

- Achieves 40dB sound insulation for internal partition walls (100mm blocks)
- Comfortably satisfies Part E of the Building Regulations by Pre-Completion
- Testing or Robust Detail methods of compliance Useable in flats and apartments as well as houses

5 THERMAL MASS

- Helps to create a comfortable living environment
- Provides an even temperature range in winter or summer

6 USER-FRIENDLY

- Easy to fix to
- Can securely hold fixings for heavy loads
- Easy to work using simple hand tools
- Virtually maintenance-free
- Easy to achieve airtight construction
- Stretch wrapped for protection and tidiness
- Delivered where required on pallets for easy movement and storage

7 LIGHTWEIGHT

- Meets CDM regulations for manual handling (except Foundation Blocks)
- Easy to transport
- Less than half the weight of the equivalent aggregate block
- Reduces the building load in high rise construction
- Can enable wider spans in beam and block floors

8 AIRTIGHTNESS

Can be used to achieve excellent airtightness on site

9 SUSTAINABILITY & THE ENVIRONMENT

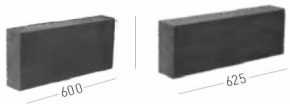
- Easy to cut, reducing on-site waste
- Made using pulverised fuel ash (an industrial by-product) Constructions obtain the highest rating within the Green Guide to Housing Specification
- Light weight allows greater volumes delivered at once, reducing journeys
- Most production waste material is recycled back into the manufacturing process

10 EXCELLENT THERMAL INSULATION

- Reduces the amount of additional insulation Offers enhanced thermal insulation when used in walls, foundations and beam and block floors reducing the amount of insulation required
- Significantly contributes to satisfying Part L of the Building Regulations

PRODUCT RANGE

AAC BLOCK SIZE (in mm) Volume (M^3)	No of Pcs (per m^3)
600 x 200 x 75	111.11
600 x 200 x 100	83.33
600 x 200 x 125	66.67
600 x 200 x 150	55.56
600 x 200 x 200	41.67
600 x 200 x 225	37.04
600 x 200 x 230	36.23

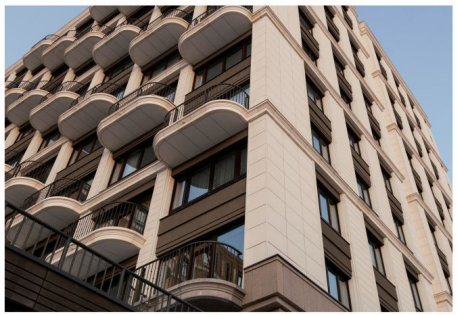


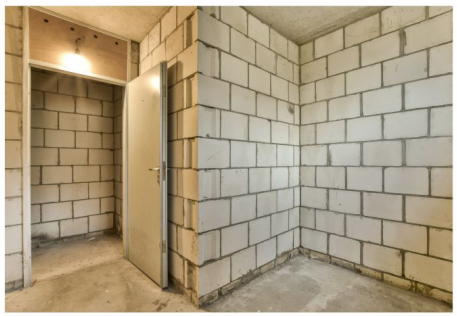
DIMENSION

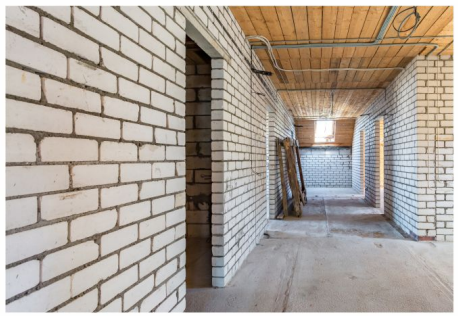
We offer the following specifications:

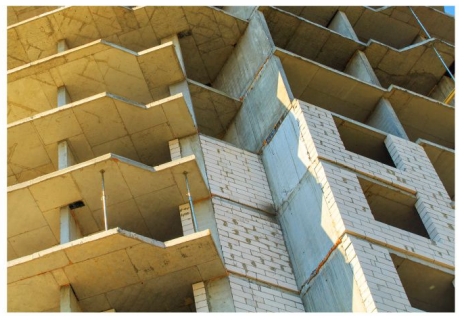
Block lengths : 600 mm & 625 mm
Block heights : 200 & 250 mm
Block thickness : 75, 100, 125, 150, 200, 225, 230, 250, 300 & 375 mm

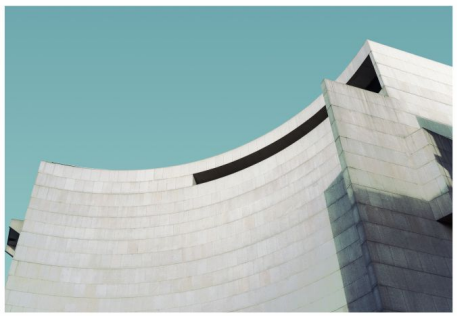
Note: Other sizes are generally possible but shall require further investigation upon request.











PRODUCT CHARACTERISTICS OF BLOCK

a) Dimensional accuracy

Accuracy of cutting

- length of the block : ± ≤1.5 mm (repetitive)
- height of the block : ± ≤1.0 mm (repetitive)
- thickness of the block : ± ≤1.5 mm (repetitive)

b) Density and compressive strength

Compressive strength class*	Density range
Min, 4 N/mm^2	550 kg/m^3 and 650 kg/m^3
Min, 5 N/mm^2	650 kg/m^3 to 750 kg/m^3

* measured at a rest humidity of 6% (+/-2%)

c) Shrinkage

The maximum average amount of shrinkage 0.03 mm/m

Note: We can perform raw material testing including test casting of final product in our laboratory.

BRIMAX BLOCK JOINING MORTAR

DESCRIPTION

Ready to use grey cement based non-shrink, self- curing mortar for fixing AAC blocks, Concrete blocks, fly ash bricks etc.

Characteristics / Advantages

- Ready to use, only water to be added.
- Thinner jointing material with very high tensile adhesion strength improving the overall masonry strength.
- Better bond than conventional cement based mortar
- Faster to apply due to good spreadable properties.
- Excellent high strength & water retention properties
- Economical as quantity of mortar is less than conven tional mortar
- Self-curing.

PRODUCT INFORMATION

Chemical Base	Cementitious mortar modified with polymers.
Packaging	40 kg bag
Appearance / Colour	Grey powder
Shelf Life	6 months from date of production
Storage Conditions	Stored properly in original unopened, sealed and undamaged packaging in dry and cool conditions.
Density	Bulk Density : ~1.33 kg/l (at +27°C)
Compressive Strength	>6 N/mm² at 28 days (According to EN 1015-11)
Tensile Adhesion Strength	≥0.8 N/mm² (Accordng to EN1348)
Consumption	~3 -4 kg powder required / Sqm for 3 mm average thickness.
Layer Thickness	3-4 mm
Ambient Air Temperature	+5°C min. / +45°C max.
Substrate Temperature	+5°C min. / +45°C max.
Pot Life	90 minutes

SUBSEQUENT QUALITY/PRE-TREATMENT

The substrate must be structurally sound, laitance free, clean and free from dirt, oil, grease, other contaminants and loose or friable particles. Pre-wetting of substrate is essential with maximum saturation of water but saturated surface dry condition.

MIXING

Brimax Block Joining Mortar mix thoroughly with clean water for a minimum of 3 minutes. Leave material to stand in container until the majority of bubbles have dispersed (minimum 5 minutes). Then re-mix the material for 15 seconds - the product is now ready for use.

APPLICATION

If the substrate is very porous, if the temperature is high and/or the relative humidity low, it is advisable to dampen the surface. Do not leave any standing water. Apply a thin uniform Layer of Brimax Block Joining Mortar 2 to 3 mm thick on the clean & levelled surface using proper trowel

Place the next course of masonry units on evenly joint- ing mortar bed in proper line & level. Each masonry unit shall be properly bedded and set in position by gently pressing with handle of trowel.

Clean the excess material, if any immediately. Contin ue the procedure for the entire masonry work.

Do not disturb the blocks setting for first 24 hours. etc.