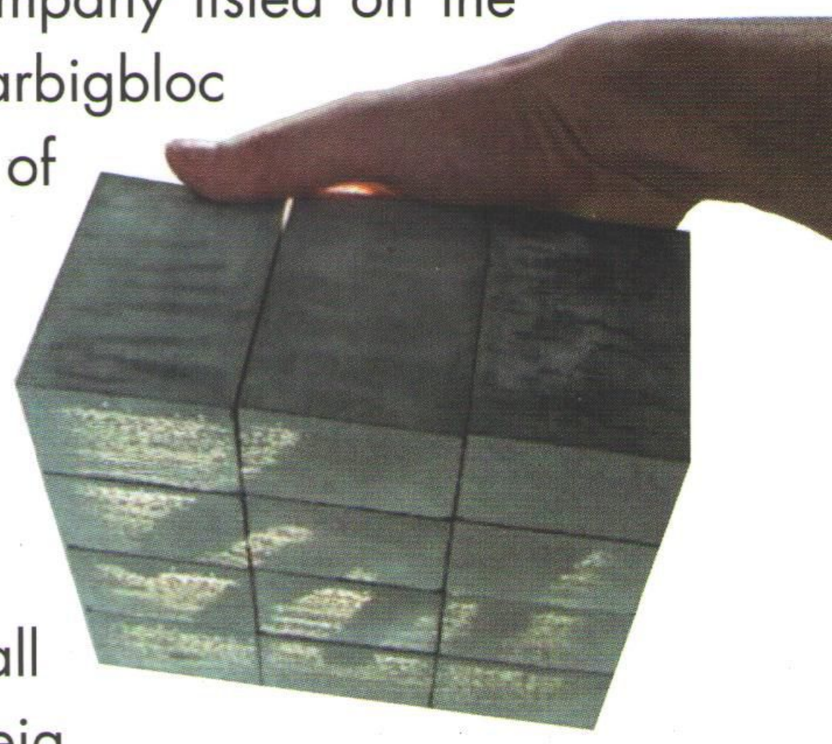
BIG BLOC
CONSTRUCTION

Let's make a better world...

Bigbloc Construction Limited is one of the oldest suppliers of AAC Blocks in India, which sells its product in the brand name"NXTBLOC".

Bigbloc Construction Limited is a professionally managed company listed on the National Stock Exchange of India Ltd. & BSE Ltd. and Starbigbloc Building Material Private Limited is wholly owned subsidiary of Bigbloc Construction Limited.



Bigbloc Construction Limited is the largest manufacturer of AAC blocks in Gujarat with a capacity of 550,000 cubic meter per annum.

Bigbloc Construction Limited is supplying its "NXTBLOC" to all major builders of Mumbai, which includes Lodha, Kanakia, Raheja Universal,Bachraj Developers, Bhagwati Group, Mahindra Life space, Paradise Group, Regency Group, L&T, Marathon Realty etc.

ECO - FRIENDLY


Indian Green Building Council
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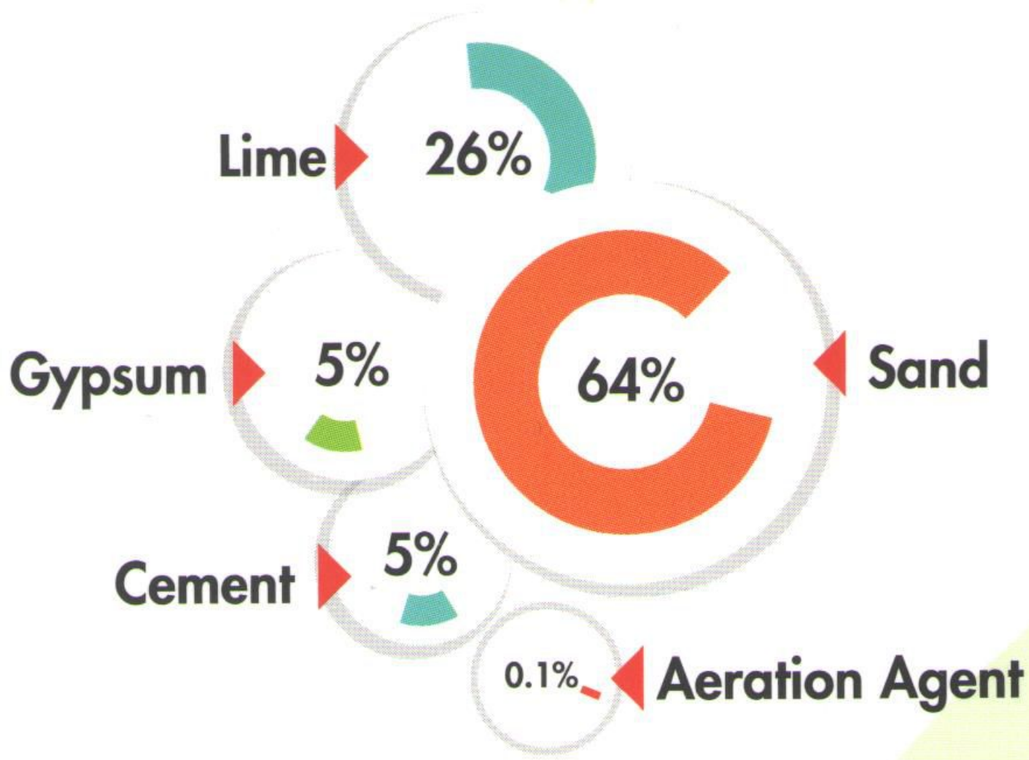
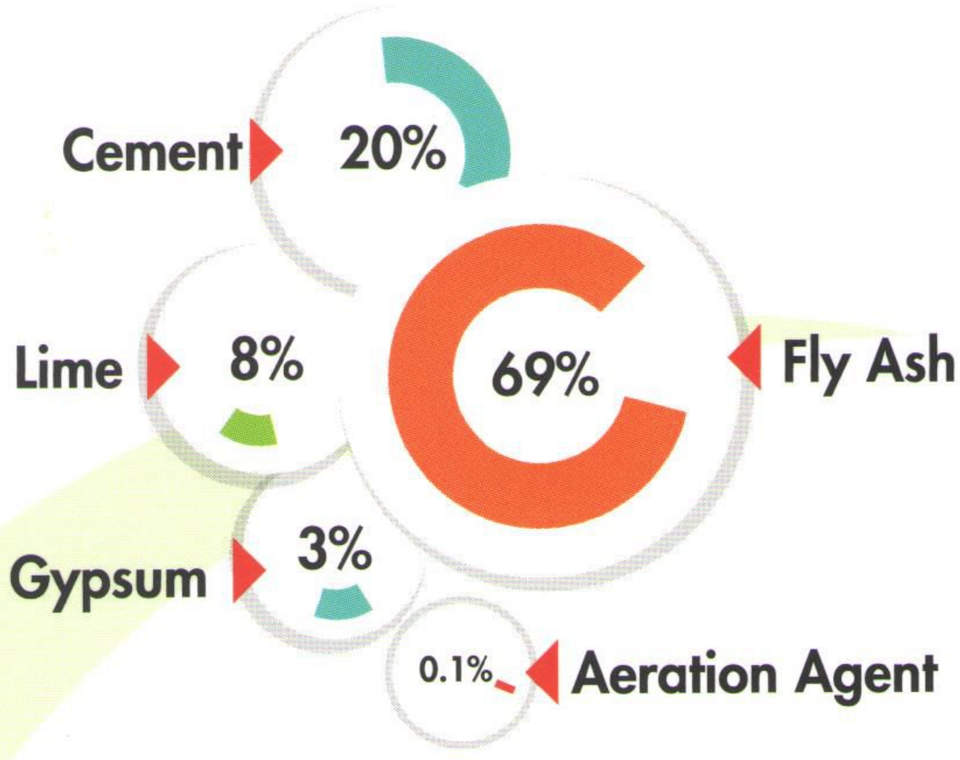
NXTBLOC®

AUTOCLAVED AERATED CONCRETE BLOCKS

## SAND AAC BLOCK




## FLY-ASH AAC BLOCK



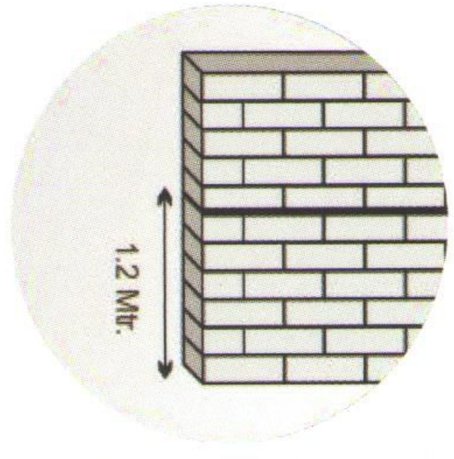

(* Quantities are subject to change with change in weather / quality of material)

## Usage of Sand Base AAC Block & Fly Ash Base AAC Block

Nails can be put with normal hammer.

Small grooves and chases for services can be cut with a manual chasing tool.

Block can be drilled to provide electrical socket.




Take copping above 1.2 mtr height.

## Sand base and Fly Ash block

**(1) Sand based AAC Blocks :**
Principal binding agent is lime. Lime has minimum impact of weather which results in better finish of wall.

**(2) Fly Ash AAC Blocks :**
Green building material which is superior to clay bricks in all aspect.

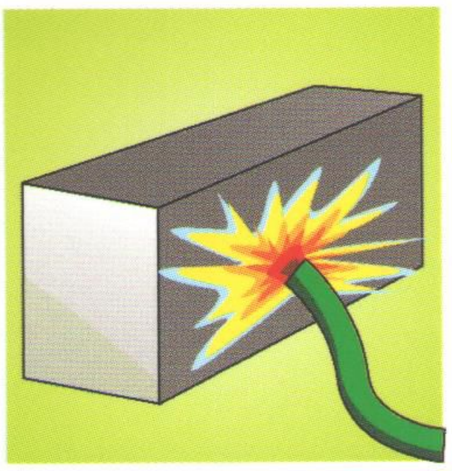
## Impact on project cost

| DESCRIPTION | SAVING | OVERALL IMPACT |
|---|---|---|
| Saving in cost of structure (Steel, Cement, Excavation) | 18-20% | 6% |
| Saving in mortar | 65% | 5% |
| Saving in plaster | 40% | 0.5% |
| Reduction in breakages | 70% | 0.5% |
| Savings due to lighter power infrastructure (transformer, Dg, Cable Sizes, Electricity Charges) | - | 5 |
| Overall savings | | 12% |

# Benefits of Sand Base AAC Block & Fly Ash Based AAC Block

## Sound Proof

AAC wall has an excellent Sound Transmission Class (STC) rating of 44
Result: Virtually Soundproof Interiors !

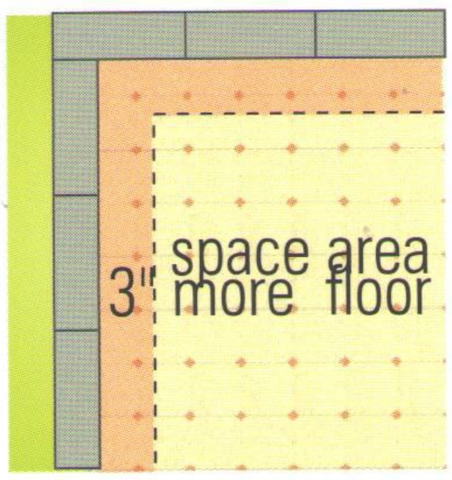


## Thermal Insulation

Highest thermal rating in the industry.. R30!
Thus provides well insulated interiors, keeping out warm air in summers and cold air in winters. AAC reduces Air conditioning costs by 30 %

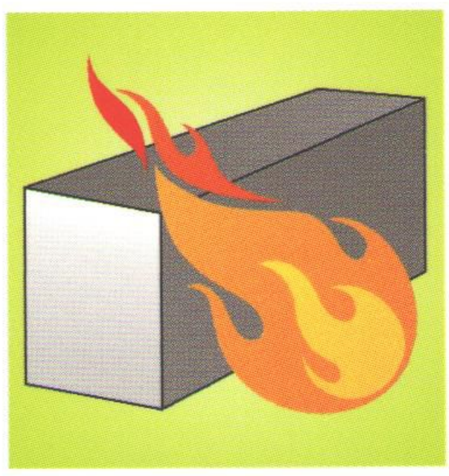
## Earthquake Resistant

Earthquake forces on structure are proportional to the weight of the building, hence AAC shows excellent resistant to the earthquake forces. Regions of high seismic activity like japan exclusively use AAC. It has been proven to withstand wind loads of category 5 tropical storms.




## Floor Space Area

Use of thinner blocks (6" instead of 9" exterior walls) because of its excellent water barrier & insulation properties leads to an increase in floor space area between 3-5 %



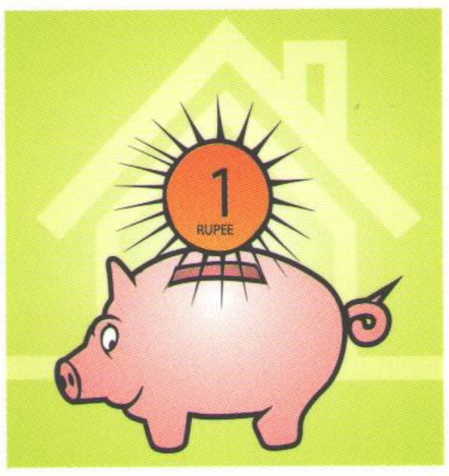
## Fire Resistant

Best in class fire rating of 4 hours. The melting point of AAC is over 1600° C, more than twice the typical temperature in a building fire of 650° C.

## Pest Resistant

Termites hate ACC !
being made of a inorganic minerals, it dose not promote growth of molds.

## Cost Saving

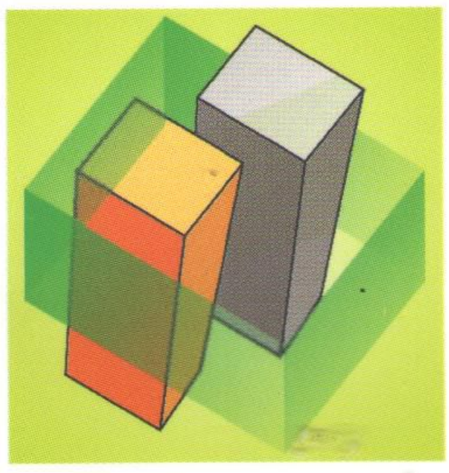



~ Being light weight AAC drastically reduces the dead weight of the building, resulting in to reduction in steel (up to 27 %)and cement (up to 20 %) structural cost savings.
~ Being 8 times the size of clay brick, AAC wall construction involves 1/3rd the joints, thus an overall mortar saving up to 66%
~ Its automatic manufacturing process gives AAC an exceptional dimensional accuracy & smooth surfaces, eliminating need of three-coat plaster walls and allows for a final 6 mm skim coat (putty/POP).

## Energy Efficient

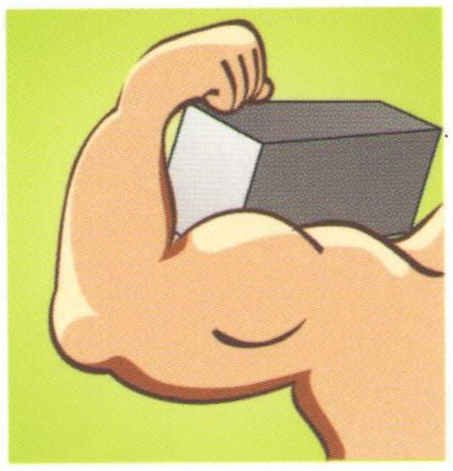
~ AAC is 100 % Green building material & is a walling material of a choice in LEED® certified buildings (ITC Centre, the highest rated green building has been built using AAC)
~ AAC is most energy & resource efficient in the sense that it uses least amount of energy & material per m3 of product
~ Unlike brick manufacturing process which uses precious too layer agricultural soil, AAC uses Fly ash/sand (65 % of its weight) thus provides the most constructive solution to the nation's fly-ash utilization problem.

## Water Barrier



Its structure does not allow for capillary action making it impervious to water. Its water barrier properties are further enhanced by adding silicon based additives.

## High Strength



High pressure steam-curing autoclavingprocess gives AAC unmatchable strength to weight ratio, Higher then even M 150 concrete, and far exceeds than Indian building Code requirements.

BIG BLOC CONSTRUCTION

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# NXTFIX

## BLOCK JOINTING MORTAR


NXTFIX mortar is a semi premix high quality mortar for jointing and bonding of AAC blocks. NXTFIX mortar semi premix consists of cement, graded sand and specialised polymers which combine to give superior strength, water retention and stability. It replaces the conventional method and material of jointing mortar which requires a 12-18 mm thickness with a revolutionary 2-3 mm joint thickness. NXTFIX mortar only requires addition of water before application to prepare the product for use, reducing the hassle of measuring and maintaining various individual elements to create a conventional mortar.

**FEATURES :**

**1. HIGH BOND STRENGTH :** Special polymer imparts high adhesive Strength increasing overall masonry strength & load bearing capacity.

**2. ECONOMICAL :** Quantity of NXTFIX required is 3 times lesser than conventional mortar.

**3. SEMI PREMIX :** NXTFIX mortar bags are semi-premix solutions which only require the addition of water to prepare for application, reducing the hassle of mixing various raw materials and further saving a lot of time and manpower.

**4. NO CURING REQUIRED :** Due to water retention polymers, curing is not essential after application

**5. NEGLIGIBLE SEEPAGE :** Due to texture Chemical bond and properties of NXTFIX mortar, seepage water penetration through joints is negligible.

**6. EASY APPLICATION :** Easy to mix, blend and apply due to the smooth texture of the mortar, the semi premix ensures higher flow ability and water Retention properties.

ECO - FRIENDLY

LONG LASTING - LIGHT WEIGHT - ENERGY EFFICIENT - FIRE & PEST RESISTANT

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**PH NO: +91 - 90999 05383 / 79403 99757**

## PRODUCT CHARACTERISTICS & TECHNICAL SPECIFICATIONS

| PARAMETERS | VALUES |
|---|---|
| Physical Nature | Powder and Gray in Colour |
| Water Demand | 25-35% |
| Spread on surface | Excellent (in comparison to conventional mortar due to the consistency in texture and smoothness in application) |
| Hard Dry | Approx.24Hours (further depending in the temperature and humidity conditions) |
| Surface Area Covered by 40Kg bag | 170-200 sq.ft (for 4" thick blocks) |
| Splitting Tensile Strength | ≥0.34 N/mm2 ( as per ASTM- C1660) |
| Ingredients | Graded Sand, pozzolanic material, Binder, Performance additives. |
| Packaging | 40 kg Bags |
| Storage | Keep in dry place free from moisture and water. Do not leave the bags open. |

### Comparison with Traditional Method

| PARAMETERS | TRADITIONAL | NXTFIX |
|---|---|---|
| Joint Thickness | 10mm - 18 mm | 3mm+ |
| Drying Time | Slow | Rapid |
| Setting time | Slow | Rapid |
| Height of build | Restricted | No Restriction |
| Precision | Less | More |
| Air tightness | Less | More |
| Strength | Joints are weak points | Joints are stronger |
| Shrinkage | Yes | No |
| Stability | Less Stable | More Stable |
| Material storage | More | Less |
| Aesthetics | Uneven, with variations | Even and better laying |

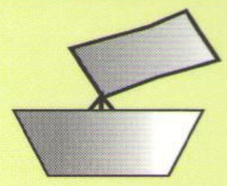
### Health safety Precaution:

This product is non-toxic and non-hazardous. Use of gloves, dust-mask and goggles is recommended.

In case of contact with skin/eyes, wash with plenty of clean water. In situation of prolonged irritation, professional medical aid should be sought.

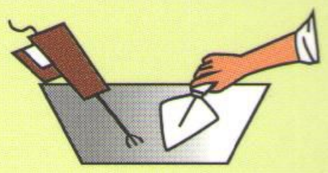
# PREPARATION & APPLICATION

**Mortar Mixing**



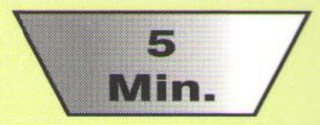
In a clean bucket, mix NXTFIX thin bed mortar in 25-30 % of water.

**Mixing by Mixer or Tool**



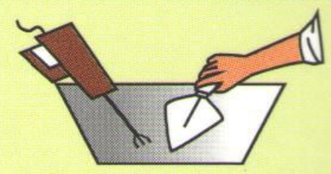
Mix first for 5-10 minutes by hand or electrical mixer to mix homogeneously.

**Reaction Time**



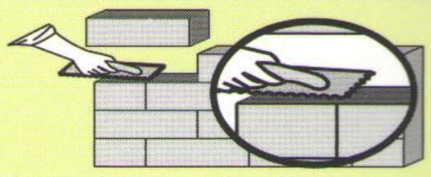

Allow mortar to stand for 5 minutes.

**Mortar Remixing**



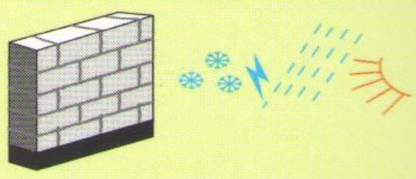
Mix again for 2-3 minutes. Now thin bed mortar is ready to use.

**Mortar Spread**



Mortar should be spread on all sides of block in such a way to maintain the bond thickness 2-3 mm.

**Setting Time**

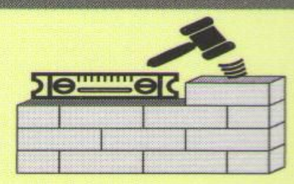


The setting time is affected by climatic conditions, allow stand-alone time accordingly.

**Clean Surface**

Before application clean the surface of blocks using suitable tools like brush so that any foreign material is not held on the blocks .

**Alignment**

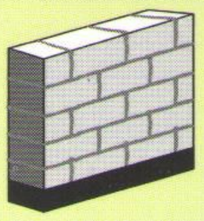


Use Spirit Level and fibre hammer to remove any air gaps in between blocks for proper jointing and alignment.

**Wet Surface**

Wet the surface of blocks before applying mortar.

**DND**



Do not disturb the wall after application of mortar for at least 24 hours.

# Technical Specification

| NO. | Parameter | AAC block | Clay brick |
|---|---|---|---|
| 1 | Size ( LxHxT) | 600 x 200x (75 to 300)mm | 230 x 75 x 115 mm |
| 2 | Size Tolerance | 3mm(+/-) | 05 to 15mm(+/-) |
| 3 | Compressive Strength | 4 $N/mm^2$ & above (as per IS:2185) | 2.5 to 3.5 $N/mm^2$ (as per IS:1077) |
| 4 | Dry Density | 550-650 Kg/Cum (oven dry) | 1950 Kg/Cum |
| 5 | Fire Resistance | 02 to 06 hours (depending upon thickness) | 02 hours |
| 6 | Sound Insulation Index | 45db for 200mm thick wall | 50db for 230mm thick wall |
| 7 | Thermal Conductivity | 0.16 - 0.18 (w / m-K) | 0.81 (w / m-K) |

# General Specification

| | | | |
|---|---|---|---|
| 1 | Structural Cost | steel saving up to 15% to 20% | no such saving |
| 2 | Cement Mortar For Plaster & Masonry | required less due to flat, even surfaces & minimum number of joints | required more due to irregular surface & more number of joints |
| 3 | Breakage & Utilization | negligible breakage therefore 100% utilization | average 10 to 15% breakage |
| 4 | Construction Speed | speedy construction due to it's big size, light weight & ease to cut in any size or shape | comparatively slower |
| 5 | Labour Out Put | approximately double of conventional brick | comparatively low |
| 6 | Quality | uniform & consistent | normally varies |
| 7 | Carpet Area | more due to less thickness of walling material | comparatively low |
| 8 | Storage | readily available at any season in a short notice so no storage required | particularly in monsoon, stock at site is compulsory |
| 9 | Water Required | required less in wetting & curing, hence saving in electricity bill & labour cost. | need more curing resulted to higher amount of electricity bill & labour cost. |
| 10 | Energy Saving | approximately 30% reduction in air-conditioned load | no such saving |

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