



fusion

Building Materials

Building Nations

An ISO 9001 2015 Certified Company



For Sustainable Living

WHY FUSION BLOCKS

FUSION AAC (Aerated Autoclaved Concrete) Blocks are **ECO Friendly, Cost effective** alternative to conventional wall brick materials. These blocks are manufactured from common and abundant natural raw materials producing finished product twice in volume of the raw materials used, making them extremely resource-efficient and eco-friendly.

FEATURES and ADVANTAGES of FUSION AAC BLOCKS

Fusion blocks are ideal for all kind of structures such as schools, hospitals, hotels, offices, independent housing, apartments etc., due to the following advantages.

Lightweight:

Density of fusion blocks ranges between 550-650 kg/m³ making them lighter than water.

High Compressive Strength:

Compressive strength greater than 3.5 N/mm² which is superior to normal bricks.

Cost Saving:

Weights 1/3rd compared to clay brick resulting in great reduction of deadweight of building, thereby reducing the use of cement and steel which helps in great cost savings.

Faster Construction:

These blocks come in larger sizes and hence fewer joints required, resulting in faster construction.

Perfect Size and Shape:

Constant and consistent dimensions. Internal walls can be finished by direct P.O.P., thus eliminating the need of plastering.

High Thermal Insulation:

Helps maintain inner temperature of building to be warm during the winter and cool during the summer which ultimately leads to savings in air conditioning loads.

Resistance:

AAC blocks offer high fire, sound, moisture, and earthquake resistance properties.

Environment Friendly:

Manufacturing Process involved is non-toxic and does not pollute air, land or water.

GRIHA Council:

Product listed by GRIHA Council.

ISI:

Certified by Bureau of Indian standards.

IGBC:

Member Indian Green Building Council.

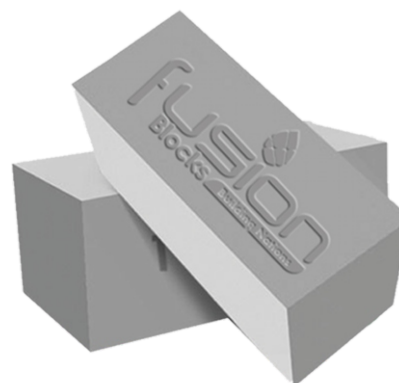
COMPARISON BETWEEN FUSION BLOCK AND CLAY BRICK

PARAMETER	FUSION BLOCK	CLAY BRICK
Size (mm)	600 x 200 x 100-300	230 x 115 x 75
Variation in Dimensions	+/-1.5 mm	5-15mm
Compressive Strength (N/mm ²)	3.5 - 5 N/mm ²	2.5 to 3.5 N/mm ²
Dry Density (Kg/m ³)	550 - 650	1950
Fire Resistance	2 to 6 hour (Depending on thickness)	2 Hours
Sound Reduction Index (db)	45db for 200mm thick wall	50db for 230mm thick wall
Thermal Conductivity W/m-k	0.16	0.81
Maintenance	Less	Comparatively higher
Energy saving	~25% reduction in air conditioner load	No savings
Construction speed	Very high due to bigger size, light weight	Comparatively lower
Quality	Uniform and Consistent	Normally varies
Quantity of Cement Required Per cubic meter of wall	0.5 bag of Cement	1.4 bags of Cement

Technical Details*

Dimensions (L x W)	600mm x 200mm
Thickness	75mm – 300mm
Compressive strength (N/mm ²)	≥3.5
Dry Density (Kg/m ³)	550 – 600
Thermal Conductivity (W/m-k)	0.12
Sound Reduction (db)	35-45
Fire Resistance	1600°C/6hrs for 200mm thickness
Precision In size (mm)	+/- 1.5
Shrinkage allowance	0.04%

* As per IS2185, Part-3, Grade-II



Sizes of Fusion Blocks & Respective Weights(approx)

600mm(L) X 200mm(W)	Kg
50 mm (2")	4
75 mm (3")	6
100 mm (4")	8
150 mm (6")	12
200 mm (8")	16
230 mm (9")	20
250 mm (10")	22
300 mm (12")	24

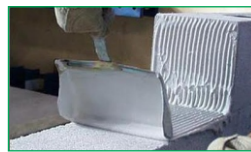


How to use Fusion Blocks

Prepare Jointing Mortar:



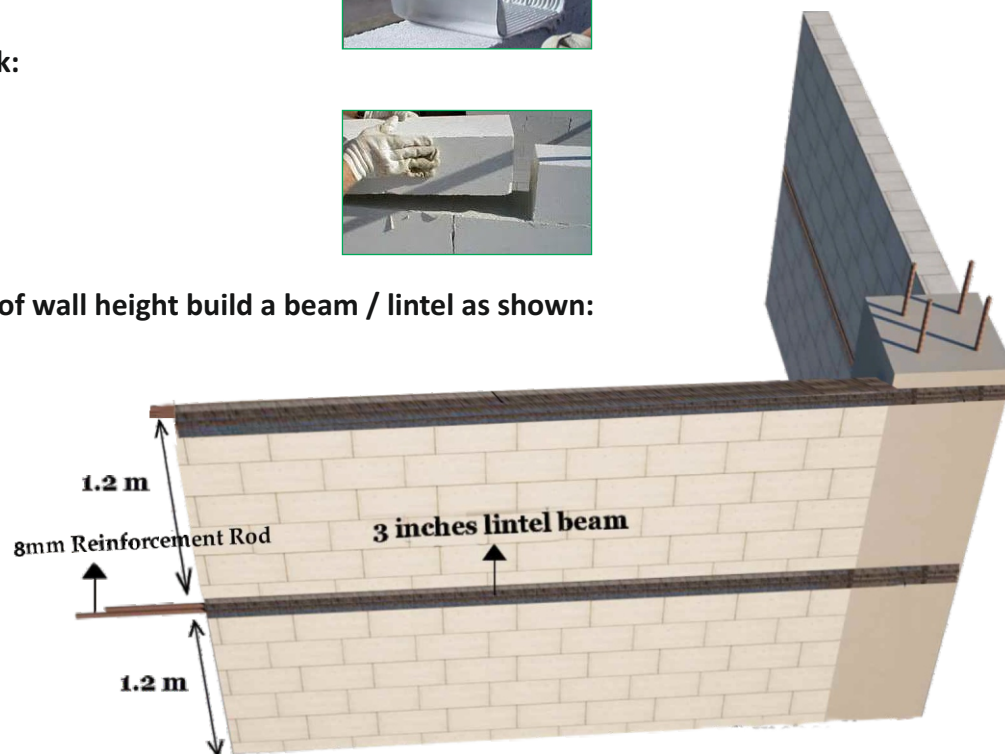
Apply Jointing Mortar as shown:



Install the block:



For every 1.2m of wall height build a beam / lintel as shown:



FUSION – Technical Support

1. We provide technical support for light weight walling-based structural design.
2. Advise on the handling, storage and efficient use of these products so as to minimize wastage and thereby costs.
3. Advice on the construction of walls:
 - Recommended / correct practices.
 - Training of supervisors and masons.
 - Site audit & feedback process on waling work.

Jointing Mortar

Fusion Jointing mortar is a Jointing adhesive which gives good bonding. This product is also suitable for the bonding of different construction materials in interior and exterior.

Properties:

◆ Base	:	Cement with modified polymer powder
◆ Density	:	2.0 gm\cc
◆ Water Demand	:	20 – 21%
◆ Tensile adhesion Strength	:	1.0 N\Sq. mm
◆ Self Curing	:	Yes

Area of Application:

- It can be used jointing AAC bricks, hallow bricks, and cement bricks.
- Parapet walls and jointing of cement windows and doors.
- Jointing of panels and pre-stressed concrete slabs.
- Boundaries and garden walls.



Plastering Mortar

Fusion Plastering Mortar is a plastering adhesive which gives good bonding. This product is suitable for plastering of different substrates such as AAC blocks, CLC blocks and cement bricks.

Properties:

◆ Base	:	Cement with polymer powder & water retaining special additive
◆ Pot Life	:	Approximately 90 minutes @ 30°C
◆ Water Demand	:	18-20%
◆ Compressive Strength (Mpa)	:	> 4 in 28 days
◆ Bulk density	:	1.2 to 1.4 kg/lit
◆ Coverage	:	0.16 – 0.22 kg/sft/mm
◆ Thickness of layer	:	6 – 12 mm.



Area of Application:

- It can be used on inner and outer walls.
- It can be also used efficiently on bricks, blocks, and concrete walls.
- Instead of traditional plastering ready plast can be used.
- It is easy to apply that is stronger, looks smooth surface and good bonding to its base.

Wall Putty

Fusion Wall Putty is a white cement based putty. It bonds strongly with the base surface, even if the surface is damp and forms protective coat.

Properties:

◆ Base	:	White cement, Quality polymers & specialty chemicals and fillers.
◆ Pot life	:	2hrs.
◆ Water Demand	:	40 – 45%.
◆ Coverage	:	25 ± 3 sft\mm\kg.
◆ Thickness of layer	:	≤ 2.0 mm (two coats).



Applications:

- Can be applied on interior, exterior walls & sealing.
- Can be used on concrete, plastered walls, pre- caste walls, AAC blocks walls.
- Can be applied on used surface (flaky) after proper preparation.

Waterproof Membrane Coating



Fusion Waterproof Membrane is a two-part coating. It is an excellent water resistant barrier. It will have resistance to both positive and negative pressures.

Properties:

Base	:	Mineral Compound(part-I) & polymer (Part-II).
Work ability	:	60 minutes at 30°C.
Bonding Capacity	:	2.0 N/mm ² .
Tensile Strength	:	1.8 N/mm ² .
Crack Extension	:	20%.
Water Pressure resistance	:	up to 70m water columns as per DIN 1048.



Applications:

Fusion Waterproof Membrane Coating can be applied for

- Water tanks.
- Bathrooms.
- Water proofing in swimming pools.
- Cellars, both exterior & interior of building (new and old building).



Tile Adhesive



Fusion Tile Adhesive material is an unique formulation, which gives adhesive property in fixing tiles. It is also suitable for fixing different construction materials in interiors and exteriors.

Properties:

Base	:	Mineral Compound.
Working Temperature	:	5° to 30°C.
Pot Life at 30°C	:	30 minutes.
Movement Absorption	:	Nil.

Applications:

- Easy application due to high work ability.
- Provides impermeable layer.
- Reduces shrinkage in the system.



Tile Joint Filler Bond

Fusion Tile Joint Filler Bond is a single component system, consisting of organic additives, special mineral compound and pigments. This is developed to create strong, long-lasting tile joints that are impermeable to water.

Properties:

- | | | |
|--------------------|---|--------------------------|
| ◆ Base | : | Mineral. |
| ◆ Work Temperature | : | 25 Minutes 30°C. |
| ◆ Bonding | : | 2.0 N/ MM ² . |



Applications:

- Tile Joints upto 5 mm in width.
- Also suitable for outdoor floor and wall cladding.
- It is non-shrinking and non-cracking.
- It's available in white and ivory colours to match most colour schemes.

Tile Joint Screed Bond

Fusion Tile Joint Screed Bond is a three component, solvent free, unique base, hardner and filler.

Properties:

- | | | |
|----------------|---|------------------------|
| ◆ Pot life | : | 30 Minutes @ 30° C |
| ◆ Initial cure | : | After 24 hours @ 30° C |
| ◆ Full Cure | : | 7 days @ 30° C |

Applications:

- Tile joint screed bond can be used for tile jointing.
- It can be used for marble jointing.

Non-Shrink Grout - 540 / 720



Fusion Non-shrink Grout is formulated cementitious grout which is non-shrink and free flowing, making ideal for machine foundations. It withstands both static and dynamic loads transferred by the machine on it.

Properties:

	FUSION NON-SHRINK GROUTS - 720				FUSION NON-SHRINK GROUTS - 540			
Colour	Grey Powder				Grey Powder			
Young's Modulus	28.2KN/mm ²				24 KN/mm ²			
Density	2210 Kg/M ³				2180 Kg/M ³			
Unrestrained Expansion	2% - 4% @ 30°C				2% - 4% @ 30°C			
Expansion Time (After Mixing)	Stops after approximately 120 Minutes at 30°C				Stops after approximately 120 Minutes at 30°C			
Flow ability under 100 mm Head at 30°C	Gap width 20mm –1600mm Gap width 40mm –3000mm				Gap width 20mm –1000mm Gap width 30mm –3000mm			
Water Powder ratio	0.17				0.18			
Compression Strength(Kg/Cm ²)	1 day	3 day	7 day	28 day	1 day	3 day	7 day	28 day
	255	480	580	750	110	300	400	580

Applications:

- It is suitable for machine foundation, concrete anchors, columns in precast constructions, cavities, gaps and boiler foundations etc.
- It is free from harmful chlorides and other aggressive chemicals.
- It develops high initial and final strengths.



Rapid Cement

Fusion Rapid cement is modified cement consisting of an accelerator, which sets with in few seconds. It can be used in a number of situations where quick setting required.

Properties:

- Initial Setting time : 75 sec @ 30° C.
- Compressive strength : 40 kgs/cm² (1 hour) & 250 kgs/cm² (28 days).

Applications:

- Rapid Cement used where quick setting is required.
- Quick repairs of concrete, screed.
- Stopping leakages in tunnels, pits, and sewage systems.



Multi-Bonding

Fusion Multi-Bonding is based on SBR polymer to be used as a concrete bonding agent and primer for cementitious repairs.

Properties:

- pH : 7.0 to 8.0.
- SPECIFIC GRAVITY : 1.05 to 1.09.

STRENGTH (N / mm ²)	CONTORL	Multi Bonding
Compressive strength	36	40
Tensile Strength	4	4.5
Flexural Strength	8.0	11.0
Adhesion to Concrete	5.0	20.0

Applications:

- For production of repair mortars.
- Bonding between old concrete and new concrete.
- Used as bonding agent for concrete and cement mortar.



Non-shrink Admixture

Fusion Non-Shrink Admixture is a plasticized expanding grout admixture. It is a single component additive for cement mortar for grouting aid.

Properties:

- ◆ Expansion : Positive expansion 2 to 4 %.
- ◆ Setting Time : It will not alter the normal set of cement grouts.
- ◆ Standards : It complies with BS 8110 part 1985.



Applications:

- Non shrink precision grout can be used for grouting of all types of machinery, steel columns and bearing plates.

Advantages of Fusion Blocks





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www.fusionblock.com

(+91) 9966030748 / 49 / 50

Corporate Office:

Plot No – 606, Road No. 33,
Jubilee Hills, Hyderabad – 500033.
Email: info@fusionblock.com
Phone: +91-9966 030 748/49/50

Factory Address

Sy No: 856/1, Thikkavaram(V),
Chillakur (M), Nellore Dist,
Near Guduru, AP-524412.
Email: plant@fusionblock.com

Bangalore Office:

H.No-305, 11th A cross, 20th main,
J.P Nagar 2nd phase,
Bangalore - 560078
Phone: +91-7259030789
Email: sales@fusionblock.com

Chennai Address

New no.6, Old no.27,
Pasumarthy St., 2nd line,
Kodambakkam, chennai-600024
Office: 044-42860006
Phone: +91-7338 823 991

Cochin Office:

D.No.52/1655, Bee Bee Lane,
Kachapally Road, Vytilla,
Cochin - 560078
Phone: +91-9995658711
Email: sales.kerala@fusionblock.com

