Building A Sustainable **FUTURE**

GREEN CUBE™

ENVITECH PRIVATE LIMITED

Smarter Choice for Construction Needs

ISO 14001 : 2015 | ISO 45001 : 2018 | ISO 9001 : 2015

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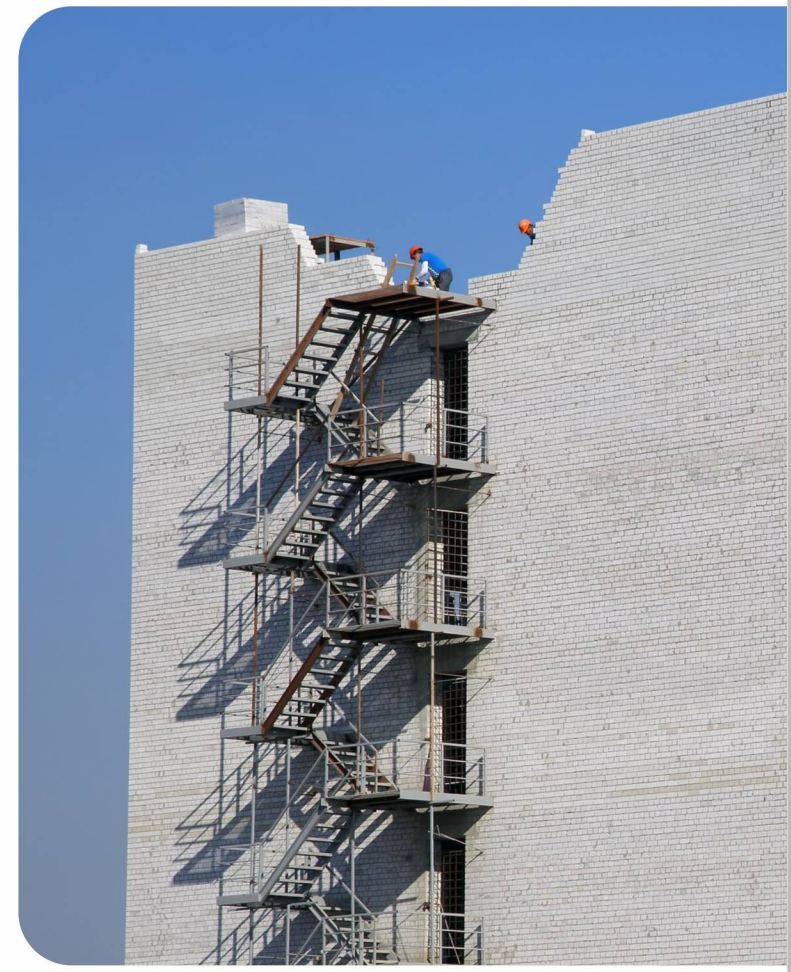
What is AAC Blocks?

The Autoclaved Aerated Concrete (AAC) was pioneered in Sweden back in 1924. Since then, it has emerged as a cornerstone in construction practices.

AAC blocks boast numerous merits such as being lightweight, fire-resistant, immune to termites, efficient in water usage, and economical. Consequently, its adoption within the industry is experiencing a rapid surge.

AAC presents remarkable prospects for enhancing construction standards while simultaneously reducing expenses on the job site.

Comprised of a blend of pulverized fly ash (PFA), lime, cement, gypsum, water, and aluminum, AAC undergoes solidification through steam curing. Owing to its outstanding attributes, AAC finds extensive application across various domains.

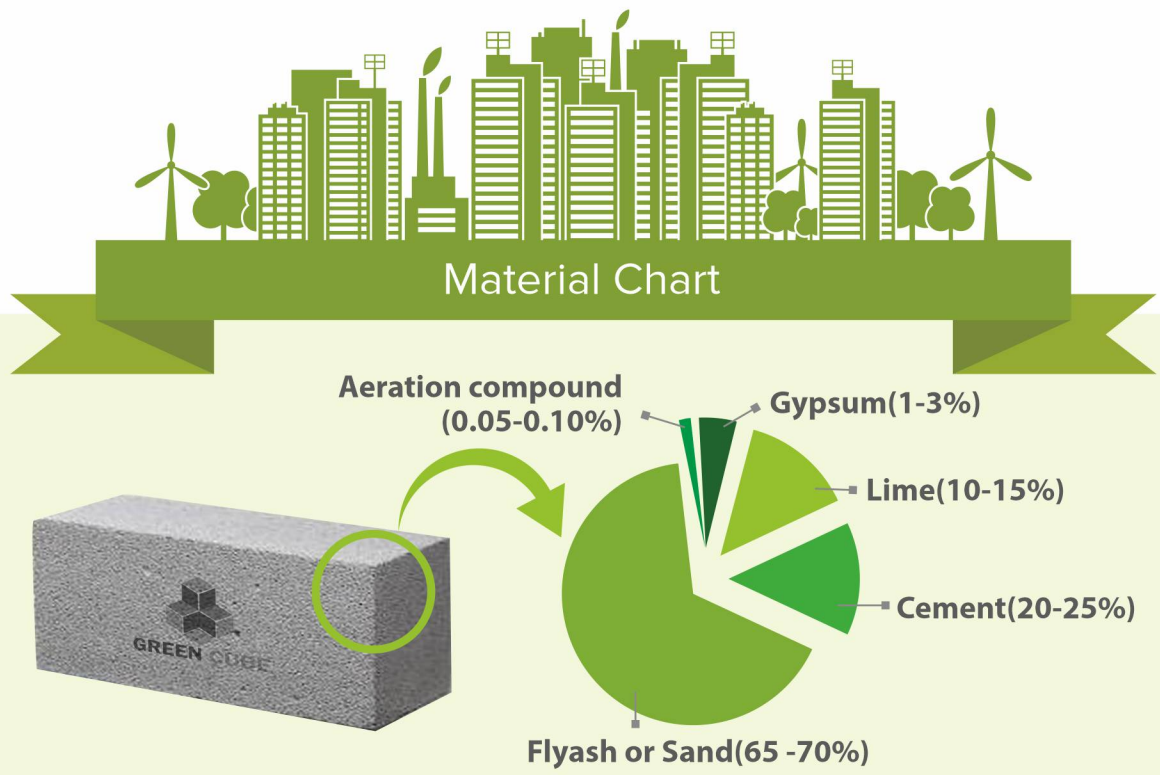


Why Green Cube?

- **Latest machinery for production**
- **Great quality**
- **In house lab for quality testing**
- **Promising delivery**
- **24/7 Support**

Advantages

- **Light weight**
- **Faster construction**
- **Environment friendly**
- **Perfect size & shape**
- **Superior fire resistance**
- **High resistance to water penetration**
- **Termite resistant**



AAC BLOCK SPECIFICATIONS		
S.N	**Properties**	**Specifications**
1	General Size	600 x 200 x 75-100, 625 x 200 x 75 -100
2	Thickness	50,75,100,125,150,200,225
3	Minimum Compressive Strength	3 to 4.5 N/mm2 (is 2185)
4	Minimum Dry Density	450 to 650 Kg/m3
5	Thermal Resistance	0.8-1.25 per inch of thickness
6	Allowable Shear Stress	8-22 psi
7	Sound Absorption	Up to 42 De
8	Fire Resistance	4* hours
9	Thermal Conductivity	0.16 to 0.18 W/Mk
10	Dry Shrinkage	0.04% of the size of AAC block

Comparison Between AAC Block & Red Brick		
Parameter	**AAC Block**	**Red Block**
Structural Cost	Steel Saving upto 15%	No Saving
Cement Mortar for Plaster & masonry	Required less due to Flat, even surface and less number of joints	Requires more due to Irregular surface and more number of joints
Brackage	Less Then 2%	Average 10 to 12%
Construction Speed	Speedy construction due to its big size, Light weight and easy to cut in any size or shape.	Comparatively slow
Quality	Uniform & Consistent	Normally Varies
Fitting Chasing	All kind of fitting and chasing possible	All kind of fitting and chasing possible
Carpet Area	More due to less Thickness of walling material	Comparatively Less
Energy Saving	Approx 30% reduction in air-conditioned Load	No Such Saving
Chemical Composition	Flyash used around: 65 - 68% which reacts with lime and cement to from AAC	Sell used contains many inorganic impurities like sulphate etc. resulting in efflorescence

Calculation Sheet

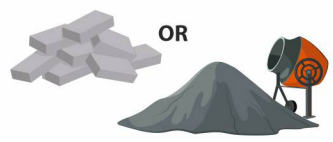
Length (mm)	Height (mm)	Width (mm)	No of Pcs (per m^3)	work in Sq.ft ** (per m^3)
600	200	100	83.33	116.33
600	200	125	66.67	93.07
600	200	150	55.56	77.56
600	200	200	41.67	58.17
600	200	230	36.23	50.58

**Assumption:12mm Mortar Thickness

Guideline

(Refer is 6041 - 1985 code of
Practice of Construction of Autoclaved cellular Concrete Block Masonry)

Mortar For Masonry



The bricks will be ensconced within a mortar, possessing a potency marginally inferior to that of the concoction employed for block fabrication to prevent crack formation. A mortar ratio of 1 part cement to 6 parts sand could be employed. (Refer IS 604 1-1985 Para 3, 3.92)

Wetting of Blocks

These blocks do not necessitate pre-wetting before or during their installation within the walls, should weather conditions necessitate otherwise. However, it is advisable to lightly dampen the top and sides of the blocks. (Refer IS 6041-1985 Para 6, 6.1)

Coping Beam

Horizontal coping shall be placed at a height ranging from 0.9 to 1.2 meters, while vertical coping shall be positioned at the center if the length of the wall exceeds 3 meters. Both copings shall incorporate two 8mm reinforcements within M20 concrete. (Refer IS 6041-1985 Para 4, 4.6.5.1 & 2)

Storage

The blocks must be stored in a dry environment, shielded from moisture at all times on the site. Adequate covering or shelter should be provided to ensure optimal preservation.
(Refer IS 6041-1985 Para 5, 5.1)

Mortar Thickness

Keep the joint width limited to 10 to 12 mm when using cement-sand mortar (Refer IS 6041-1985 Para 7, 7.1). Additionally, ensure that the joint width remains between 3 to 4 mm when utilizing ready mix mortar.

Plaster

Maintain an internal plaster thickness of 10 to 12mm, and for external surfaces, ensure a thickness of 15 to 17mm (Refer IS 6041-1985 Para 12).

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