
SAHARA
AAC BLOCK
WE MAKE YOUR
HOUSES EXCEPTIONAL!
saharaindustries.com.np

SAHARA
AAC BLOCK

SAHARA AAC BLOCKS:
WHAT ARE THEY?

Sweden invented a method called aerated autoclaved concrete in the mid-1920s. The aerated materials in Sahara AAC Blocks are produced using autoclaving, which comprises high pressurized curing of aerated materials generated in cellular shapes, which are referred to as AAC elements.

Blocks, wall/floor/roof panel, and lintels are the several types of these structures. Sahara blocks are used as an alternative for traditional building masonry and have gained widespread acceptance due to its advantages such as light weight, thermal and sound insulation, mold resistance, and other advantages that make the construc-tion process easier.

ATTRIBUTES OF THE

ENVIRONMENT

- Product that's been recognized as a "Green Building" product.
- Assists in IGBC - LEED, TERI - GRIHA Design.
- Inorganic and breathable mold resistance.
- There is no toxic discharges or off-gassing.
- Improves the quality of indoor air.
- Efficient use of resources.

Sahara Blocks
DIMENSIONS

600 mm x 200 mm x 100 mm
SINGLE BLOCK CBM: 0.012 m^3
PER CBM, NO. OF QTY: 83.3 Pcs
Average weight of Block: 9.6 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 77.46
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 833.33
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 0.93

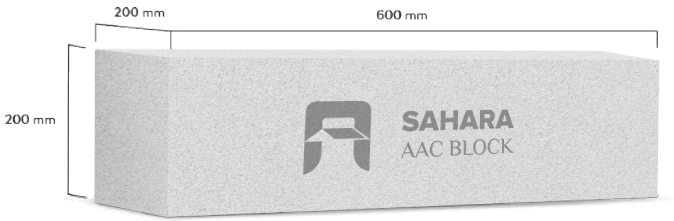
600 mm x 200 mm x 125 mm
SINGLE BLOCK CBM: 0.015 m^3
PER CBM, NO. OF QTY: 66.7 Pcs
Average weight of Block: 12.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 77.46
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 833.33
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 1.16

600 mm x 200 mm x 150 mm
SINGLE BLOCK CBM: 0.018 m^3
PER CBM, NO. OF QTY: 55.6 Pcs
Average weight of Block: 14.4 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 77.46
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 833.33
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 1.39

Sahara Blocks
DIMENSIONS



600 mm x 200 mm x 200 mm
SINGLE BLOCK CBM: 0.024 m^3
PER CBM, NO. OF QTY: 41.7 Pcs
Average weight of Block: 19.2 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 77.46
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 833.33
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 1.86

600 mm x 200 mm x 250 mm
SINGLE BLOCK CBM: 0.030 m^3
PER CBM, NO. OF QTY: 33.3 Pcs
Average weight of Block: 24.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 77.46
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 833.33
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 2.32

600 mm x 250 mm x 100 mm
SINGLE BLOCK CBM: 0.015 m3
PER CBM, NO. OF QTY: 66.7 Pcs
Average weight of Block: 12.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 61.97
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 666.67
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 0.93

Sahara Blocks
DIMENSIONS

600 mm x 250 mm x 125 mm
SINGLE BLOCK CBM: 0.019 m3
PER CBM, NO. OF QTY: 53.3 Pcs
Average weight of Block: 15.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 61.97
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 666.67
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 1.16

600 mm x 250 mm x 150 mm
SINGLE BLOCK CBM: 0.023 m^3
PER CBM, NO. OF QTY: 44.4 Pcs
Average weight of Block: 18.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 61.97
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 666.67
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 1.39

600 mm x 250 mm x 200 mm
SINGLE BLOCK CBM: 0.030 m3
PER CBM, NO. OF QTY: 33.3 Pcs
Average weight of Block: 24.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 61.97
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 666.67
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 1.86

Sahara Blocks
DIMENSIONS

600 mm x 250 mm x 250 mm
SINGLE BLOCK CBM: 0.038 m3
PER CBM, NO. OF QTY: 26.7 Pcs
Average weight of Block: 30.0 Kg

FOR 100 SQ. FT. NO. OF FLY ASH BLOCKS REQUIRED : 61.97
FOR 100 SQ. MT. NO. OF FLY ASH BLOCKS REQUIRED : 666.67
Required CBM TO ERECT 100 SQ. FT. WALL OF FLY ASH BLOCK : 2.32

APPLICABLE B.I.S. CODES FOR
Sahara AAC Blocks

- BIS 2185(Part-III)
  Specification of material
- BIS 6041
  Construction of AAC masonry
- BIS 6441 (Part I-IX)
  Testing Procedure
- BIS 6072,6073
  Autoclaved Reinforced panels

COMPOSITION OF

Sahara AAC Blocks

Fly Ash / Sand

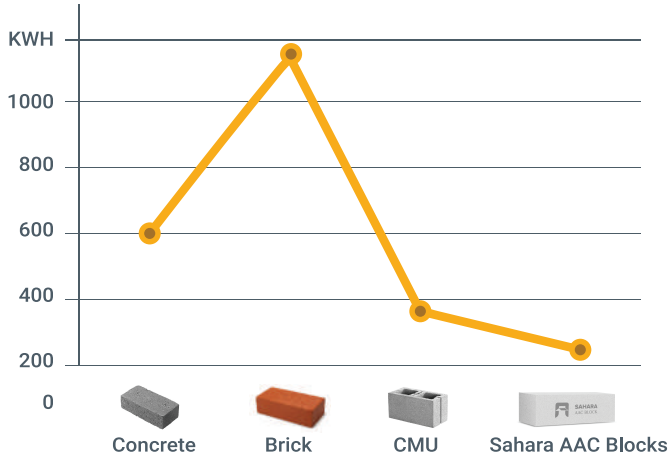
Cement OPC

Quick Lime

Gypsum

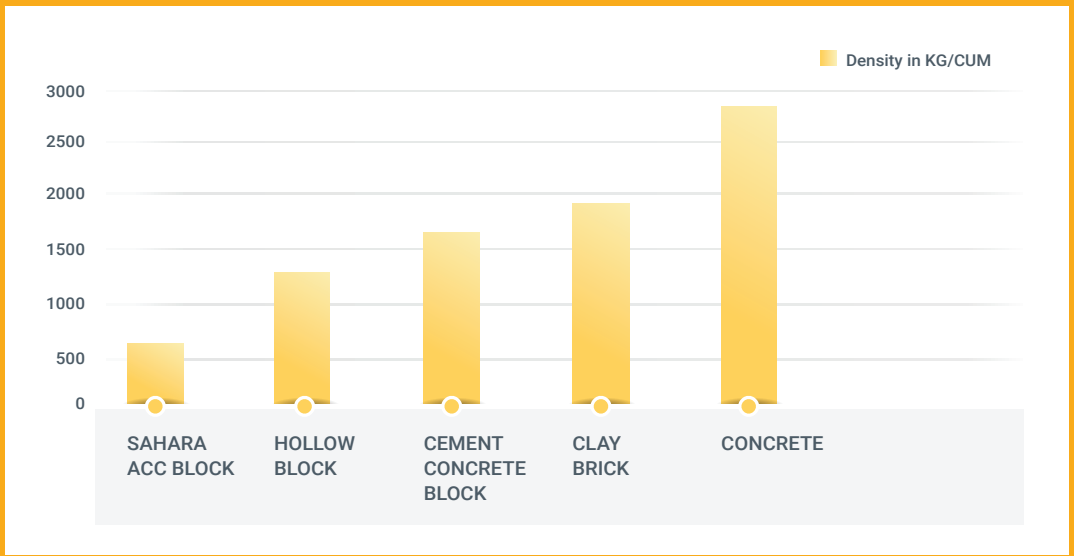
Aluminium Powder

Soluble Oil



ENERGY CONSUMPTION BY

Sahara AAC Blocks



Density of Sahara AAC Blocks

VERSUS OTHER MATERIAL

Features and Benefits

Cost Efficiency:

- Sahara AAC blocks are X9 the size of clay bricks, using 66 percent fewer mortar joints.
- The dead load on the building structure is reduced as a result of the lightweight qualities.
- The requirement for plaster on Sahara AAC blocks is reduced due to the blocks' surface precision.
- Energy expenditures are saved as a result of the high insulation qualities.

Low Energy Consumption:

- One of the most significant advantages of employing Sahara AAC blocks is thermal insulation, since the Sahara AAC block wall helps preserve separate internal and external temperatures, lowering energy expenses.

Burn Resistant:

- Sahara AAC blocks are excellent for use in situations where fire safety is required, as they are fire resistant for 2 to 6 hours, depending on the wall thickness.

Pest Control:

- Sahara AAC Blocks' pest-resistant features (due to the fact that the blocks are constructed of inorganic materials) keep termites at bay, preventing damage and losses.

Waste Management:

- Sahara AAC blocks have a low breakage rate of less than 3%, allowing them to be used more efficiently.

Sound Protection:

- Sahara AAC blocks elements are suitable for wall building since they have a high STC (Sound Transmission Class).

Features and Benefits

Earthquake Resistant:

- The production procedure gives the blocks noteworthy strength while preserving their light weight attribute, allowing them to be more stable in buildings and making them earthquake resistant.

Water Saver:

- There is no need to water the blocks during the curing phase of Sahara AAC block walls; only the standard mortar joints must be treated with water, saving water.

Minimum Storage:

- Sahara AAC block customers do not need to have huge storage rooms for Fly Ash blocks because supplies are available all year.

Time Saving:

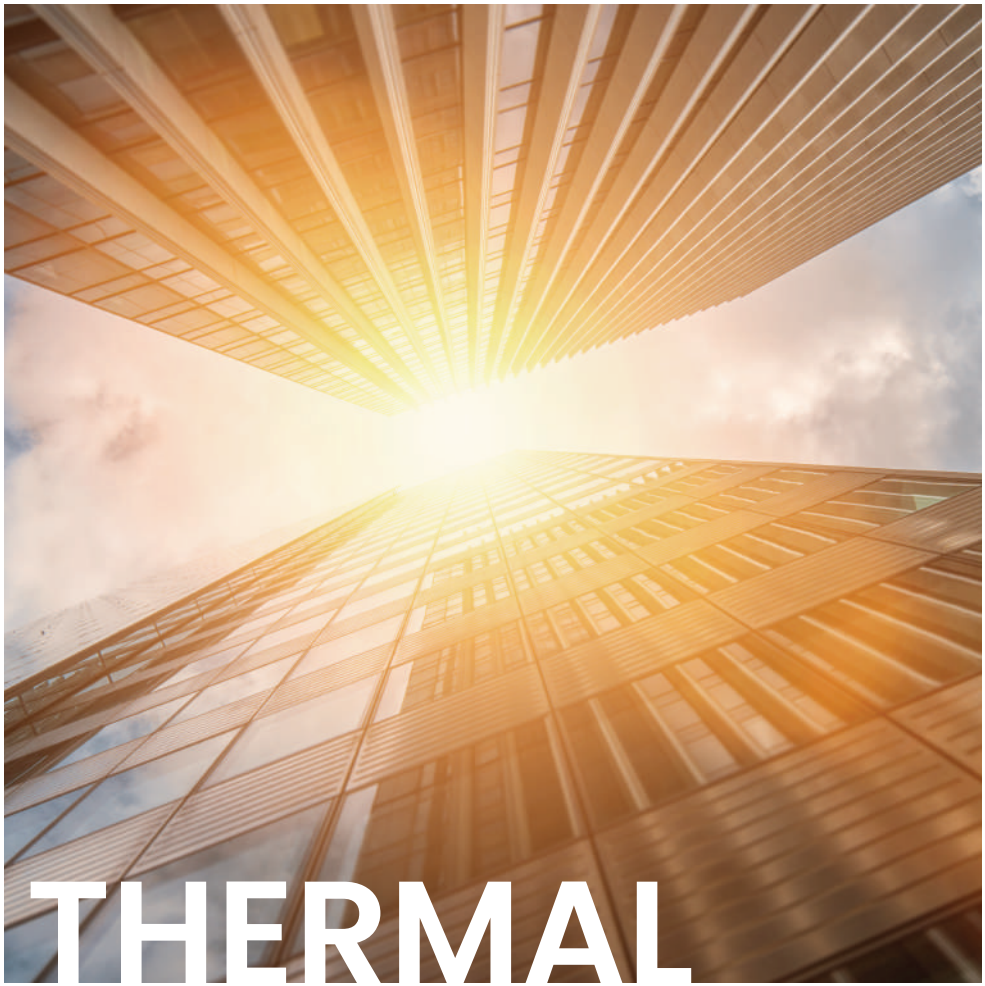
- Due to the product's lighter weight and smaller size than traditional clay bricks, it takes less time to create walls, reducing lead time and installation time.

Convenient Application:

- Sahara AAC blocks are easy to apply and deal with because they are lighter in weight and greater in size, especially in high rise constructions.

FIRE PROTECTION

Sahara AAC Blocks is non-combustible. It offers one of the highest hourly fire resistance ratings of any building material per millimeter. As a result, it's an excellent solution for fire protection around steel columns and beams, as well as shaft walls, stairwells, hallways, and firewalls. A non-load bearing wall with a thickness of 100 mm and a thickness of 200 mm must have a fire resistance of 2 hours and 6 hours, respectively.



THERMAL INSULATION

Energy savings in building operations are especially important because the cost of energy for heating and air conditioning is typically the largest cost factor in a building's running costs. Because of the entrained air in the cellular structure of the Sahara AAC Block system, the product has outstanding thermal insulation and heat retention properties.

These qualities contribute greatly to the building's energy efficiency.

EARTHQUAKE RESISTANT

Sahara AAC Blocks have been utilized in seismically active areas for many years. In general, buildings made entirely or partially with Fly Ash Blocks have demonstrated good earthquake resilience in practice. Sahara AAC Blocks' small weight reduces the seismic stresses experienced by other materials. The non-combustible and fire-resistant characteristics of the Fly Ash substance is a benefit in the event of earthquake-related fires.

Sahara AAC Blocks's low weight in relation to its strength is an inherent benefit for earthquake design. The use of Sahara AAC Blocks allows the designer to lower the structure's mass, reducing the impact of accelerations induced during a seismic event.

MASONRY

TOOLS AND CUTTER




Particulars	Units	Values#	Requirement as per IS -2185 Part -3
Size (Length x Height)	mm	600 x 250 / 600 x 200*	NA
Size (Width)	mm	75, 100, 125, 150, 200, 225, 250, 300	NA
Size Tolerance (Maximum)	mm	± 1	L: ± 5 mm, H & W : ± 3 mm.
Compressive Strength	N/mm2	> 3.5	> 3 (density range 551-650 Gr-2)
Oven Dry Density	Kg/m3	550-650	551-650
Fire Resistance	Hrs	4 (for 200 mm thick wall)	Min 2 hrs is desirable.
Thermal Conductivity (K Value)	W/mk	0.16-0.21	0.24 Max
Sound Reduction	dB	37-42	NA
Modulus of Elasticity	Mpa	2040	NA
Thermal Resistance (R Value)	m2.K/W	0.95 (200 mm Width) @ K=0.21W/mK	Max Value is desirable.
Thermal Conductance (U Value)	W/m2K	1.05 (200 mm Width) @ K= 0.21W/mK	Minimum Value is desirable
Drying Shrinkage (Maximum)	%	0.02	0.1 for Gr-2 & 0.05 for Gr -1
Sound Transmission Class Rating	dB	44	NA
Capillary Water Absorption	gm/dm2	180	210 @24 Hrs (as per NFP 14306)

TYPICAL USES OF
Sahara AAC Blocks

Hilly areas exposed to snow fall

Desert areas exposed to Heat waves

High seismic zones

Sahara AAC Blocks as Thermotile

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SAHARA
INDUSTRIES PVT. LTD.