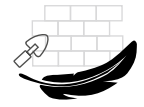
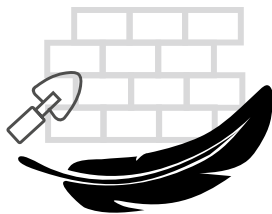


READY FOR A SUSTAINABLE WORLD



VAISHNO
AAC BLOCK

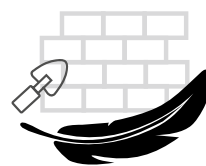
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VAISHNO
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PRODUCT INTRODUCTION



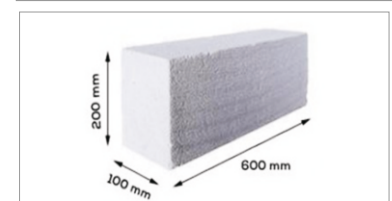
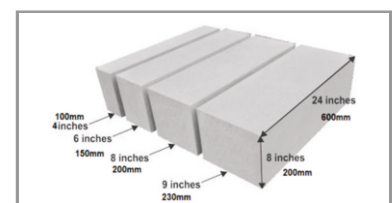
VAISHNO AAC BLOCK

V-Lite AAC blocks are a lightweight Autoclaved Aerated Concrete Block is used as a substitute for conventional building masonry. It is suitable for multistoried structures as it is lighter than standard size bricks and blocks as it is widely accepted globally because of its beneficial properties such as lightweight, thermal, sound insulation, fire resistant, low capillary water absorption, easy to cut, and other benefits which ease the process of construction.

These precast building elements are environment friendly and also boast the consumption of flyash which is a waste material. AAC elements are being used throughout industrial, commercial, and residential structures for different applications such as external and internal walls, roofs, other partitions and divisions.

Product Description:

V-Lite AAC block is manufactured by various materials mainly fly ash, cement on a proportionate blend of lime, gypsum, aluminum, and additives mixed with water in a high-speed mixer. AAC Blocks Consists of up to 80% air, this aerated material is processed through autoclaving which entails high pressurized curing of aerated. This is further strengthened by high pressure steam curing in autoclaves. The product thus formed is not only lightweight but also has higher compressive strength





BENEFITS

- Precise In Dimension
- High Compressive Strength
- Less Density-self Weight
- Flexibility In Size
- Thin Mortar Joint
- Less Number Of Joints



WEATHER & EARTHQUAKE RESISTANT

The impact of earthquake forces on a structure is proportional to the weight of the structure. Hence, V-Lite provides excellent resistance to earthquake forces.



TIME SAVING

Time Saving : Time consumed in building walls decreases due to light weightness of the product and its size over conventional clay bricks. Decreasing lead time as well as installation time.



COST SAVING

AAC Blocks are approximately nine times bigger than red clay bricks reducing the need for mortar joints by over 66%. High insulation properties result in saving of energy costs.



ECOLOGICAL

Composed with 60% of Fly Ash, aerated concrete blocks have been certified to be one of the most ecological building materials



ENERGY EFFICIENT

Thermal insulation is one of the greatest benefits of using AAC blocks, as the AAC blocks wall helps maintain distinct internal and external temperature saving energy costs.



SOUND INSULATION

Having a Commendable STC (Sound Transmission Class), AAC elements are appropriate material for wall construction



FIRE RESISTANT

AAC material is non-combustible and completely inorganic. AAC Blocks are suitable for use in areas where fire safety is recommended as these blocks are fire resistant for about 2-6 hours depending on the thickness of the wall.



MINIMUM WASTAGE

Breakage of AAC Blocks is negligible, that is less than 5% which increases the utilization of the blocks



WATER SAVER

For the curing process of AAC blocks walls, there is no need to water the blocks, only the mortar joints need to be cured with water in case of conventional mortar mix, saving water consumption



EASY APPLICATION

Being light in weight and larger in size, AAC Blocks are easy to apply and facilitates the comfort to the mason to working high-rise construction.



COMPARISON OF AAC BLOCKS & CONVENTIONAL LATERITE BLOCKS

Particulars`	AAC Blocks	Red Clay Blocks
Size(Lx Bx H) mm	600 X 200 X 100/150/200/230	300 X 230 X 150
Precision in size mm	±1(thickness & height)	±5(length)
Dry Density	600-700Kg/m ³ (Oven dry)	1800 Kg/m ³
Sound Reduction Index (DB)	45 for 200mm thick wall	50 for 230mm thick wall
Thermal Conductivity (W/MK)	0.16	0.81
Mortar Consumption m ³ with 1:6	0.5 Bag of Cement	1.35 bag of Cement
Construction Time per mason	30 m ²	20 m ²
Chemical Composition	Fly-ash used around 65% which reacts with binders for form AAC	Soil is used which contains Inorganic impurities in Efflorescence.
Finishing	Can be directly cut or shaped/sculptured as required	Not possible
Cost benefit factor	Up to 24% in structural cost (subject to project design)	No Cost benefit.
Energy Saving	Up to 30 % of Air-Conditioning load	No Energy Saving
Capillary Water Absorption	Less (due to low density)	More (due to High Density)

Technical Specification

Particulars	Units	Values
Size	mm	600x200/100, 150, 200, 230
Thickness	mm	50,75,100,125,150,200,230
Size Tolerance	mm	+2
Compressive Strength(IS:2185 Part III)	N/mm ²	3 - 4.5
Oven Dry Density (IS:2185 Part III)	Kg/m ³	550 - 650
Fire Resistance	Hrs.	4 (For 200mm thick Wall)
Thermal Conductivity Index	KW/m/c	0.16
Sound Reduction Index	dB	45 (For 200mm thick Wall)
Dry Shrinkage (IS:2185 Part III)	%	0.04

Size (MM)			Volume (Cu.M)	Pieces (Cu.M)
Length	Height	Thickness		
600	200	100	0.012	83.33
600	200	150	0.018	55.56
600	200	200	0.024	41.67
600	200	230	0.0276	36.23

V-Lite - Ready Mix Plaster is a polymer modified premixed cement based plaster. It is strong, convenient, simple to use and binds better to its substrate. It provides an even surface on which tiling can be done faster & efficiently. It has strong adhesive characteristics on all substrates. It can be applied for interior and exterior work on horizontal and vertical surfaces.

Advantages:

- High Bond Strength
- Reduced cost as compared to traditional sand plastering.
- Consistent quality made using mix of well graded sand and additives
- Crack Free, uniform and smooth finish walls

- Faster completion of work and negligible wastages
- Excellent Coverage and convenient to apply
- Needs less curing and binds better to substrate
- Reduced water absorption therefore enhanced durability

Suitable Substrates:

- AAC Block/Concrete Block
- Cement Mortar Blocks/Bricks
- Cellular Concrete Blocks
- Fly Ash Bricks
- Red Clay Bricks
- Concrete Hollow Blocks
- Stone Walls

Product Data	
Technical characteristic	
Parameters	Specification
Appearance	Gray Powder
Bulk Density	1.2 - 1.6 Kg/litre unit
Compressive Strength (Mpa)	More than 9 in 28 days
Flexural Strength	Min 1.8 Mpa in 28 days
Water Retentivity	Min 95% (EN 1015-8)
Coverage	0.16-0.23 Kg/ sqft/mm
Water Curing	2-3 times for 2-3 days
Thickness of Layer	6-15 mm per coat
Pot Life	1 - 2 hours



Note : The technical data provided in this technical data sheet is as per our internal lab testing and may vary as per the actual method of application at sites.

Coverage

Coverage is based on smoothness and evenness of the substrate, type of masonry work and the thickness of mortar used. Coverage of 17-20 Sq. Ft. per bag of 40 Kg is received when applied with a thickness of 10-12 mm. Prepare plaster by adding V-Lite Plast Ready Mix Plaster to 18- 20% of water and not vice versa.

Installation Surface Preparation:

The application surface/substrate must be free from loose particles or any other foreign material prior to commencement of work/application of any V-Lite Blocks products. Pre-wet or dampen surface with good quality fresh water, if necessary.

Mixing part

Pour a bag of V-Lite Plast Ready Mix Plaster in 7-9 liters of water in clean bucket and not vice-versa. Mix continuously by hand or using an electrical stirrer for 4-5 minutes to obtain a homogenous lump-free paste. Leave the mix to stand for 2-3 minutes and remix the plaster before use. Use the mixture within 60-90 minutes of preparation.

Additives

Waterproof compound, Anti shrinkage, Bonding Chemical and Fibres.

Curing

V-Lite Plast is self curing, No Additional curing is required. But 2 to 3 water curing cycles is recommended to get better results.

Cleaning

Clean tools and containers with water while mortar is fresh.

Packaging

40 kg HDPE laminated bags Shelf Life
V-Lite Plast has a shelf life of 12 months from the date of manufacture. Store at cool and dry place.

Applications:

V-Lite Plast is non-toxic. Use of gloves and goggles recommended. Any splashes to the skin or eyes should be washed off with clean water. In case of prolonged irritation, medical advice should be sought. V-Lite Plast is non flammable.

V-Lite Jointing Adhesive is a high strength adhesive for quick and firm laying of AAC blocks with thin joints. It is a factory mixed mortar made up of cement, graded sand and blended with polymers to impart high strength and water retention properties even when in thickness of 3 mm layer. It can be applied for interior and exterior use on horizontal and vertical surfaces. While applying the thickness of the joints should not exceed 10 millimeters (Easily obtained by using specific Trowels). For interior and exterior used for preparing thin bed adhesive for AAC, Light Weight and Cellular Concrete Blocks.

Application: For interior and exterior use for preparing thin bed adhesive for AAC, Light Weight and Cellular Concrete Blocks.

Advantages:

- High Bond Strength
- No shrinkage cracks
- No curing required
- High Thermal Insulation
- Flexible, shock & impact resistant
- Improved adhesion between two blocks
- Improved compressive & tensile strength
- Increasing productivity onsite.
- Economical, fast and easy to use (mix & apply).
- Premixed

Suitable Substrates:

- Aerated Light weight blocks
- Concrete Blocks
- Cement Mortar Blocks/Bricks
- Concrete hollow blocks
- Cellular concrete blocks
- Fly Ash Bricks

Standard compliance

Approved standard - ASTM C1660 - 09



Technical characteristic	
Parameters	Specification
Appearance	Gray Powder
W/P Ratio	By weight 0.30
Pot life	1.5 to 2 Hours
Drying Time	24 Hour
Tensile adhesion strength	>0.34Mpa(As per ASTM-C1660)
Time to plaster	24 Hour
Open Time	30 Minutes
Mix Density	2000kg/m

Coverage: Coverage is based on smoothness and evenness of the substrate, size of blocks used and the thickness of mortar used.
 Size of AAC/CLC Block Coverage in Sq. Ft. for 40kg Bag
 600x200x150mm 110 to 200
 600x200x100mm 170 to 180

Installation

Surface Preparation:

Use a hard brush to remove any loose particles from AAC/CLC block. Clean off dust, oil, grease and all loose contaminating materials or coatings. Ensure surfaces are dry with no residue or permanent dampness. Pre-wet or dampen surface with good quality fresh water, if necessary

Mixing:

Use approx. 40 kg of V-lite Blockset Block Joining Adhesive thin bed mortar with Approx. 9 to 12 liters of potable water. It is utmost important to add Dry Mix Product to the water and not vice versa. Mix the material by hand or using a slow speed electrical stirrer in a way that a uniform mixture (free from lumps) is formed. Allow the mixture to rest for 2-3 minutes for polymers to act. Remix the mixture before use.

Application:

Thin bed mortar for laying blocks: Before placing mortar, ensure the block work to be dry and surfaces cleaned properly. Place the mixed mortar on the block work in thin layers of 3 mm (or as required by engineers at site) using trowel and place the next layer of blocks on the mortar. Keep joints between the blocks as required by the site engineers and fill the joints with the mixed mortar, using a thin bed trowel. Check the plumb of the wall while laying the blocks to keep the walls perfectly vertical to the plumb.

Curing:

V-lite Blockset is self curing, No Additional curing is required.
 Plaster: Plumb, square and true concrete block wall can be finished with the applications of Special polymer plaster i.e. V-lite Blockset – Ready

Plaster from **V-Lite** Plast. Plasters made with site mix may slump and powder due to water absorption of the block work.

Cleaning:

Clean tools and containers with water while mortar is fresh.

Packaging:

40 kg HDPE laminated bags

Shelf Life:

Factory packed bags of V-lite Blockset Block Joining Adhesive carries a shelf life of 6 months, if stored in cool & dry place. However, as temperature, humidity, water addition & other parameters vary from site to site; the information should be treated as a general guideline.

Limitations:

Adhesives/ mortars and grouts for blocks and bricks are not replacements for waterproof membranes. When a waterproof membrane is required, use a different product for the same.

Value Base

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Safety Directions

V-lite Blockset is non-toxic. Use of gloves and goggles recommended. Any splashes to the skin or eyes should be washed off with clean water. In case of prolonged irritation, medical advice should be sought.

V-Lite Blockset is non-flammable.

For further information refer to the material safety data sheet.



DO THE RIGHT

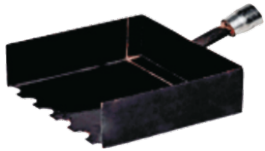
Stack the blocks on dry and even surface to avoid contact with moisture. It is recommended that the blocks be placed planks or other support. The blocks must be covered in rainy season



AVOID THE WRONG

Do not stack the blocks in haphazard manner or leave them exposed to rain or moisture

1 USING THIN BED MORTAR

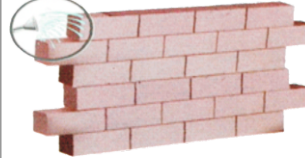


If using thin bed mortar, the thickness of the joint should not be more than 3 mm. only recommended tool is should be used. For laying the mortar, Use a notched trowel.

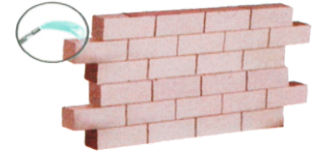


If using thin bedmortar, do not use a thapi for spreading the mortar.

2 WETTING THE BLOCKS



Moisten the blocks slightly using a brush applying mortar.



Do not flood the wall with water

3 CUTTING THE BLOCKS



Use a carbide tipped saw to cut the AAC blocks

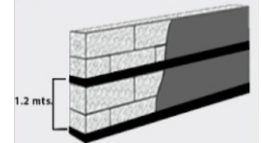


Do not use tools like hammer, chisel, etc. to cut the blocks

4 PLASTER THICKNESS

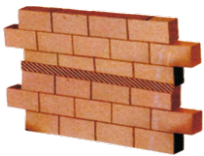


The thickness of the external plaster should be 15mm and internal plaster should be 10mm.

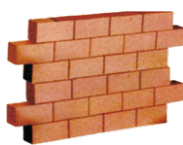


The thickness of the external plaster should not be more than 15 mm and thickness of internal plaster should not be more than 10mm

5 COPING BEAM

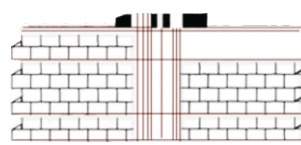


Coping beam must be 2nos, 8mm reinforcement after every 1.5-2 meters depending on site

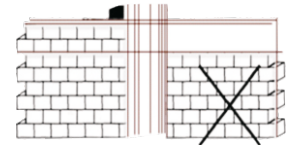


Do not construct a wall without a coping beam

6 PLACING THE LINTEL

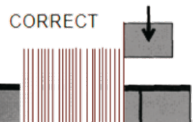


The lintel should be placed on a complete block



The lintel should not be placed on half block as this caused stress concentration resulting in cracks

7 LAYING THE BRICKS



While placing the blocks, care must be taken to slide the blocks vertically into position as this prevents the mortar from being displaced.



Do not slide the blocks horizontally into position after applying mortar on the surface. This causes the mortar to get displaced and accumulate at the corners

**ONE BAG OF 40 KG PER
ONE CBM OF WORK**



Using Jointing Mortar Bag

Use approx. 40 kg of **AR BLOCKSET/V-LITE BLOCKSET** Block Jointing Adhesive thin bed mortar with Approx. 9 to 12 litres of potable water. It is utmost important to add Dry Mix Product to the water and not vice versa. Mix the material by hand or using a slow speed electrical stirrer in a way that a uniform mixture (free from lumps) is formed. Allow the mixture to rest for 2-3 minutes for polymers to act. Remix the mixture before use. **AR BLOCKSET/V-LITE BLOCKSET** is self curing, No Additional curing is required.

APPLICATION GUIDELINES (Stepwise):

1.1 Stacking & handling of blocks at site.

- i. Stacking of blocks should be done on a dry and proper leveled surface.
- ii. Blocks should be kept free from direct rain. Height of stack should not be more than 1.5 meters.
- iii. Preferably use pallets to keep the blocks.
- iv. Keep the blocks in systematic array to avoid point loading, also making it easy to count.
- v. Minimize handling. Do not throw the blocks in handling.
- vi. There should not be any foreign material between two blocks, as due to point loading, a block may crack or damage while stacking.
- vii. Store material consignment wise enabling easy counting & quality verification post unloading.

1.2 Before AAC Wall construction, Inspection of column & beam and its shacking to be done:

- i. Column should be straight enough and have sufficient strength. Straightness between columns to column must be correct.
- ii. Structural Beam should be given proper time to settle and cure.
It should not have the possibility to deflect after the construction of the wall. Deflection of the beam may impose line load on wall and wall may crack.
- iii. Hacking of column provides a positive key for jointing mortar. Hacking should be done just after the construction of column otherwise on later stages, it becomes difficult to provide hacking as it gains complete strength. We can do hacking using heavy pointed hacking tools or use Chisel and Hammer. There are certain chemicals available in the market which after application on beam and column avoids manual

1.3 Wall thickness

The Minimum thickness of non-load bearing internal walls shall be 100 mm. The minimum thickness of external walls in framed construction shall not be less than 200 mm however depending upon the local condition and desired effect of thermal transmission and sound reduction, 150 mm thick block wall may be used. The minimum thickness of external and internal load-bearing walls shall be 200mm and 150mm respectively. For parapet walls unless adequately braced at intervals not exceeding 3m. the height of the wall shall be limited to five times its thickness.

1.4 Mortar

As per IS-6041 (Clause 3.9.2), a 1:2:9 Cement: Lime: Sand mortar may generally be used but where either the intensity of load is high or wall is exposed to severe condition 1:1:6 mortar shall be used. 1:6 cement: sand mortar may also be used.

1.5 Thickness of joints

Thickness of joints should be kept 10-12 mm in case of traditional mortar or 2-3 mm in case of thin bed jointing mortar.



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