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# CRETE

**FLYOCRETE GREEN CONCRETE LLP**

(Manufacturer & suppliers of Lightweight, Autoclaved Aerated Concrete Blocks, Slabs & Dry Mortar)

## Introduction

Flyocrete Green Concrete LLP was established on August 2010 and started commercial production from April 2012 after setting up the plant at Gat No.355 ,353 /1 ,At. Post. Talegaon, Talegaon-Indore Road, Tal.Dindori, Dist.Nasik -422202 having following other group of companies at various locations.

- **Shree Neelkamal Deco Home India Pvt Ltd. :**  
Established in the year 1986 , deals in Granites, Imported marbles, Natural stone processing and trading. Having units at Satpur , Nasik, Maharashtra (India).
- **Agrawal Marble India Pvt Ltd:**  
Established in 1985,deals in import of marbles from all over the world from various countries. Further process like cutting , polishing & distribution all over India. Having units at Jaipur (Rajasthan) & Silvassa (UT), India.
- **Poona Marboneel Pvt Ltd.**  
Established in the year 2006 deals in Granites, Imported marbles, Natural stone processing and trading. Having units at Pune.

- **Flyocrete Green Concrete LLP (FGCL):**

**Products:** Autoclaved Aerated Concrete Blocks (A.A.C Blocks): For internal, Partition, External , Insulating & Load bearing walls.

**Autoclaved Aerated Concrete broken (A.A.C Broken):** For insulation, lightweight filling, replacement to brick bat.

- **Highlights of FGCL:**

- Uniform quality and higher Compressive Strength than required as per **IS : 2185 Part -3 Under Grade -2.**
- Committed & quick delivery period.
- Easy and hassle free order booking system.
- Availability of wide choice in thickness, Height & length of the blocks and supply.
- Supply of A.A.C blocks in Calibrated finish also for good bonding with wall finishing material i.e Plaster, Putty.
- Minimum % of breakage due to more checks points from manufacturing of blocks to Loading stage.
- Customer care facility .
- Technical supports to the clients from experienced technical team of Engineers having experiences more than 15 years to 26 years in A.A.C field.
- Immediate decision about customer complaints if any.
- Facility to educate or update the knowledge of clients about A.A.C products.
- Guidance about use of Flyocrete A.A.C products in regular use as well as for special purpose.
- Guidance about feasibility of using A.A.C products in Projects as per different locations.
- In house testing facility for raw materials to final products.
- Customer can witness the test and if satisfied then supply can be made as per clients requirement and schedule.
- Intimation /alert facility about despatches.
- Arrangement of third party test certificate in case of project orders.
- Standard terms & conditions @breakages, corner edges damages to all.

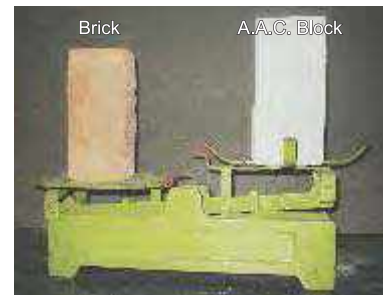
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## USEFUL PROPERTIES OF FLYOCRETE A.A.C. BLOCKS

### Lightweight:

Flyocrete AAC Blocks has density (Oven Dry) are between 551 to 650 Kg /cum i.e. 1/3 than brick and ¼ than concrete ,hence maximum material can be accommodate in one truck ,less requirement of trucks against conventional wall material, less movement of trucks hence less pollution ,less use of natural resources, help to nation by way of minimising the use of natural resources, diesel, road and other infrastructure's. Due to use of lightweight Flyocrete A.A.C block in masonry economy in structural design which will reduce the depth of foundations , sizes of the structural members, finally saving in the cost of Cement, Steel, Coarse aggregate, Fine aggregates required for concrete, suitable for the structures on low bearing soil, marshy lands, it will be useful for all types of residential /commercial /industrial, multi-storeyed projects which will save the use of land horizontally, suitable for using additional FSI/TDR on existing buildings/societies



Comparison of Weight of Red brick with Flyocrete A.A.C. Block



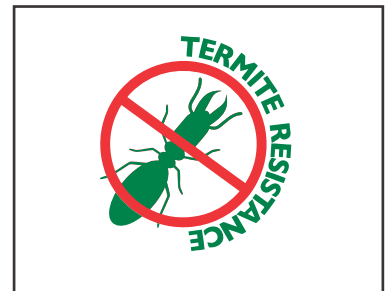
### Thermal Insulation:

Flyocrete A.A.C Products has very low thermal conductivity, hence its achieve very high thermal energy efficiency which result in saving on energy consumption for heating as well as cooling hence suitable as insulating material for steel work, boilers, furnaces, heat exchangers, oven in different industries, forges. Due to property of highly insulations it is more suitable and economical for Hotels /malls/multiplex/hospital all types of commercial projects where use of air conditioners are continuous which will save energy and money.



### Highly Fire resistance:

Flyocrete AAC products has an extremely high fire rating of least 4 hours (200MM)and more. AAC products are completely inorganic and incombustible offers the double fire protection than concrete. Due to highly fire resistance properties it is useful for construction of fire wall of lift room / walls of hazardous chemical/paint storage rooms etc/walls in textile industries/cotton mills where the possibilities of fire are more.

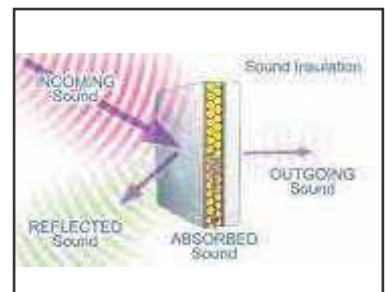


### Termite Resistance:

Flyocrete AAC Products cannot be damage by termite or insects.

### Sound absorption:

Due to property of sound absorbency, it is suitable for theaters, auditoriums, workshops, factories where noise levels are more than other places /locations.



**High strength to weight ratio:**

Flyocrete AAC products has strength to weight ratio between 18 to 22 against 16 for the concrete of grade M 150.

**Earthquake resistant :**

Flyocrete AAC blocks are extremely earthquake resistance compared to brick and it is ideal infill material for earthquake resistant concrete or steel structures.

**Enviro friendly:**

Flyocrete AAC blocks are manufactured from fly ash (waste from thermal power, called "Pollutant fly ash") ,which save lot of soil (of fertilise land )require to manufacture the bricks, stop pollution of releasing Carbondioxides in open air, stop use of coal for Klin for bricks. Hence Flyocrete AAC products are Ecofriendly, enviro friendly.

**Green Building material :**

From the process of manufacturing to till the final use of Flyocrete AAC products, it save lot of natural resources, less pollution due to locally available material, less material require to manufacture AAC material compare to other products. During the manufacturing process, waste material can be reuse /recycle, steam can be reuse ,maximum material saving ,ultimately less use of natural resources , hence "Green building material internationally".

**High dimension accuracy & Uniform surface:**

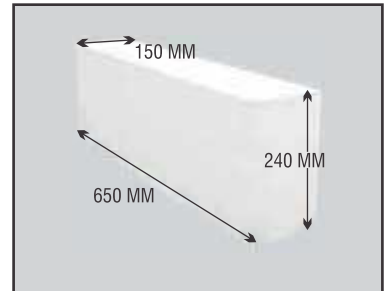
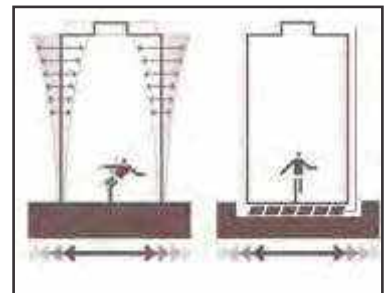
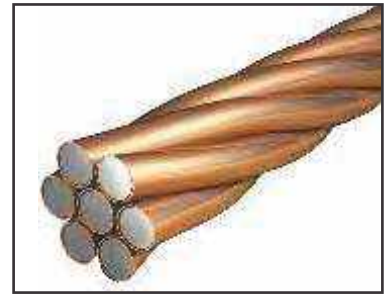
Due to high dimension accuracy, it is extremely easy to install, allow less cement mortars for joining and due to uniform surface require minimum thickness of finishing material, Saves natural sand and cement require for joining, plastering /finishing material.

**Water Penetration :**

Flyocrete block structures are of closed cells hence there is less capillary action and high surface activity allows to fast evaporation of moisture.

**High workability:**

Flyocrete AAC product are versatile material, as a result of excellent size /weight ratio, it allows rapid construction. In spite of solid it can be easily cut, sawn, drilled, nailed, milled like wood, making it extremely & comfortably workable product than bricks, concrete blocks and fly ash bricks.



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Flyocrete A.A.C. blocks can be cut easily by hacksaw



Can be chased for concealed Plumbing



Can be chased for concealed Electrification

## Details of “Flyocrete ” Products

### Sizes of Blocks:

Flyocrete Blocks are available in following sizes /Thickness/Lengths & Heights:

Standard Sizes of Blocks:

**Thickness:75/100/125/150/200/230/300 MM      Length: 650MM      Height: 240MM**

For 100Sft (9.29Sqm)masonry work /wall area =56.30 i.e 57 Nos of Blocks required of standard sizes considering cement mortar joint thickness of 10MM

Sizes and quantities of Flyocrete Blocks Per truck (Maximum 10 Ton capacity truck)							
Sr	Thickness (MM)	Height (MM)	Length (MM)	Volume (Cum)	Qty/Truck (No)	Volume (Cum)	No of blocks for 100sft masonry work (9.29Sqm)wall area
1	75	240	650	0.0117	1175	13.7475	57
2	100	240	650	0.0156	850	13.26	57
3	125	240	650	0.0195	700	13.65	57
4	150	240	650	0.0234	550	12.87	57
5	200	240	650	0.0312	400	12.48	57

Flyocret A.A.C. Broken/Second : 1 Metric Ton will cover approximate volume of 50-55 Cubic ft.

### Special Sizes (As per order):

Thickness(MM): 50 /70/90/120/140/190/225/250/275/300.

Length: (MM):300/400/450/500/600/625/675.      Height:(MM): 200/300/400

**Types of finish to block surface :** Calibrated Finish & Plain Finish

### Technical details of Flyocrete :

- 1) Flyocrete A.A.C blocks manufactured as per BIS 2185-Part-3 : Specifications for Autoclaved Cellular Concrete Blocks.
- 2) Flyocrete A.A.C blocks Tested as per BIS-6441: Method of test for Autoclaved Cellular Concrete products.
  - a) BIS-6441-Part-1- Determination of Unit weight or Bulk Density and moisture content.
  - b) BIS-6441-Part-5- Determination of Compressive strength.
- 3) For Flyocrete A.A.C block masonry: BIS:6041-1985: Code of Practice Construction of Autoclaved Cellular Concrete Block masonry shall be followed.

### Technical details of “Flyocrete” A.A.C Blocks

Physical properties of Flyocrete Autoclaved Aerated Concrete Blocks (Manufactured as per BIS-2185-Part-3-Grade-2)						
Sr. No	Description	Units				
1	Sizes of the Flyocrete Blocks	MM	Thickness		Height	Length
			75/100/125/150/200/230/300		240	650
			75/100/125/150/200/230/300		200	600
			75/100/125/150/200/230/300		240	625
2	Density (Oven Dry)	Kg/Cum	551-650			
3	Compressive Strength	Kg/Sqm	More than 30 Kg/Sq cm			
4	Thermal Conductivity	W/m.k	Not Greater Than 0.24			
5	Sound Absorption					
	Sound absorbency of air borne sound					
a	For 75 & 100mm thick wall	db	38 to 40			
b	For 200mm thick wall	db	45			
6	Drying Shrinkage	%	Less than 0.1			
7	Moisture content while Testing compressive strength	%	Between 8 to 12%			

## Applications of “Flyocrete” Autoclaved Aerated Concrete (A.A.C) Products.

### Flyocrete A.A.C Blocks :

- For the construction of Partition, Internal walls as well as External walls of residential, commercial, Industrial buildings, Malls, Multiplexes, Institutional Buildings, Hotel, Hospital, various types SEZ, Airport, Port, Factories, Apartments, Warehouses and Godowns.
- For Load Bearing walls of bungalows and various types of structures.
- For construction of various types of walls of Extension work of old buildings/use of TDR/ balance FSI.
- For construction of lightweight step arrangements for fixing the chairs in Theaters, Auditorium, Multiplexes.
- For construction of cabins in the factory, offices, societies.
- For Construction of fire resistance walls in factory to separate the area / for lift.
- For raising the floor heights to match the existing floor levels.
- To hide computer cables /electrical conduits /drainage line /plumbing and chambers in office area / IT Parks.
- For the insulation of roofs and existing walls .
- Arrangement of steps to existing structures.
- For the Sculpture /decorative /mural work in all types of buildings.
- Replacing the all types of walls of other material.
- For construction of the domes of Temple, Masjid, Churches and constructing various shapes.

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### Flyocrete A.A.C Broken/Seconds :

- For thermal insulation purpose.
- For lightweight filling in sunken portion of all type of buildings.
- For replacing the brick bat in waterproofing.
- To raise the floor height in various types of building for different purpose.
- To prepare lightweight concrete for special purpose.
- For creating various shape/height on existing floor to reduce load compare to bricks or other material.

FLYOCRETE GREEN CONCRETE LLP. NASIK														
(Details of FLYOCRETE A.A.C BLOCKS Sizes & cement mortar required for joining & Plastering)														
Sr.	Thickness	Height	Length	Area/No	Vol/No	Height of block including Cement mortar joint thick 10 mm	Length of block including Cement mortar joint thick 10 mm	Area of one block including Cement mortar joint thick 10 mm	No of blocks require for 100 Sft 9.29 Sqm wall area considering mortar joint thick of 10MM	Vol of one block including Cement mortar joint thickness	Total vol of blocks required for 100 Sft i.e 9.29 sqm	Vol of 9.29 sqm wall of diff thick	Vol of cement mortar (1:6) required for joining 100Sftwall	Vol of cement mortar (1:4) required for joining considering 12mm thick plastering bothside
	(MM)	(MM)	(MM)	(SqM)	(Cum)	(MM)	(MM)	(SqM)	(No)	(Cum)	(Cum)	(Cum)	(Cum)	(Cum)
Face area				(240x650)										
1	50	240	650	0.156	0.0078	250	660	0.165	56.30	0.00825	0.439164	0.4645	0.03	0.25
2	75	240	650	0.156	0.0117	250	660	0.165	56.30	0.012375	0.658745	0.6968	0.04	0.25
3	90	240	650	0.156	0.014	250	660	0.165	56.30	0.01485	0.790495	0.8361	0.05	0.25
4	100	240	650	0.156	0.0156	250	660	0.165	56.30	0.0165	0.878327	0.929	0.05	0.25
5	120	240	650	0.156	0.0187	250	660	0.165	56.30	0.0198	1.053993	1.1148	0.06	0.25
6	125	240	650	0.156	0.0195	250	660	0.165	56.30	0.020625	1.097909	1.1613	0.06	0.25
7	140	240	650	0.156	0.0218	250	660	0.165	56.30	0.0231	1.229658	1.3006	0.07	0.25
8	150	240	650	0.156	0.0234	250	660	0.165	56.30	0.02475	1.317491	1.3935	0.08	0.25
9	200	240	650	0.156	0.0312	250	660	0.165	56.30	0.033	1.756655	1.858	0.10	0.25
10	230	240	650	0.156	0.0359	250	660	0.165	56.30	0.03795	2.020153	2.1367	0.12	0.25
11	250	240	650	0.156	0.039	250	660	0.165	56.30	0.04125	2.1958818	2.3225	0.13	0.25
12	275	240	650	0.156	0.0429	250	660	0.165	56.30	0.045375	2.4154	2.5548	0.14	0.25
13	300	240	650	0.156	0.0468	250	660	0.165	56.30	0.0495	2.634982	2.787	0.15	0.25

Comparison of weight of Flyocrete with Red Bricks & Fly ash Bricks



Oven Dry density 572 kg/m3



Compressive Strength Test :  
Actual found 39.98 kg/Sqm



Red Bricks :  
Actual weight found 2.456 Kg



Flyocrete A.A.C. Block cut to  
brick size. Found 1 kg



Fly ash Bricks  
weight found 3.170 kg



Actual Photograph of Flyocrete Blocks  
Joints filled with Flyobond Dry Mortar



Const of dome by Flyocrete A.A.C. Blocks



Villager's Home constructed by using  
Flyocrete Blocks under Govt. Scheme



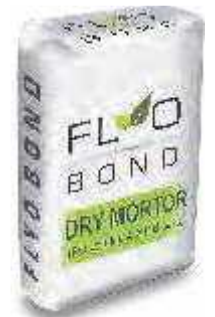
Multi storied Project constructed  
by using Flyocrete Blocks

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**'FLYOBOND' DRY MORTAR FOR FIXING A.A.C BLOCKS/BRICKS.**

**Highlights:**

- ◆ Easy to mix and use dry mortar saves Water, Sand , Cement & time .
- ◆ Joint thickness minimum 2/3 MM against 10MM to 25MM in other material.
- ◆ No curing required to the joints after installation in A.A.C Block Masonry against other conventional Cement mortar curing method.
- ◆ No wastage during use against conventional Cement mortar.
- ◆ Uniform quality and strength due to quality control and produce under strict supervision in factory.
- ◆ Easy to handle, mix, transportation saves lot of energy which is required in conventional method/system.
- ◆ Available in convenient packing of 10 Kg /25 Kg/40 Kg which are easy for transportation, handling & use.
- ◆ No special /Skill persons required for joining of A.A.C Blocks masonry.
- ◆ Easy availability within 24 to 48 hours after placing orders.
- ◆ Reasonable price with good quality.
- ◆ Special rates for Project orders if booked in bulk along with A.A.C blocks orders.
- ◆ Special discounts for Hospitals/Schools / Colleges /Charitable trusts /Public buildings, Village Homes, Farmers, Grampanchayat and similar other types of buildings.
- ◆ Wall join with "Flyo Bond" can be plaster or paint earlier compare to wall join with conventional mortar.
- ◆ Wall in which "Flyo Bond" has been used gets more strength in lesser time as compare to other material.
- ◆ Skip the activities of supervision & monitoring the quality of mortar at site.
- ◆ Use of Flyocrete dry mortar save labour cost ,time for joining , water for curing, keeps site neat and clean .
- ◆ Due to early completion of masonry work & early completion of projects, resulting in saving interest cost of project and time.
- ◆ Accountability and traceability at site due to easy stacking of bags in countable manner.
- ◆ Best to use in areas where there is scarcity about availability of sand, water & skilled man power.



## FLY BOND DRY MORTAR

### Guidelines of storage, handling & using of “ Flyo Bond Dry Mix Mortar” in masonry

**A) Storage:**

Store in covered place for better result, best before use within three months from the date of manufacturing.

**B) Application of Flyo bond dry mortar:**

For Autoclave Aerated Concrete (A.A.C) Blocks /Concrete Block /Fly ash brick /Brick masonry

**C) How to use:**

- 1) Add clean water @ 1 to 1.25 Litre for 4 Kg Flyo bond mortar ,mix thoroughly with water in mixing tray till get Smooth , Uniform & workable mix ,allow proper time for additives to dissolve .
- 2) Clean & wet the surface of block/bricks before application, surface shall be free from dust & loose particles.
- 3) Before starting masonry, surface for laying the masonry shall be structurally sound to avoid Any cracks in masonry due to deflection of structural members if any.
- 4) Apply Flyo bond mortar in minimum thickness of 2 /3 MM in horizontal and vertical joints as per standard masonry method. No curing required due to non shrinkage properties of Flyo bond mortar.
- 5) For maximum utilisation and to achieve minimum thickness notch trowel sh all be used.

**D ) Ingredients:** Cement 53 Grade /Sand/Polymer/special additives.

**E) Safety precautions while mixing and handling:** Contains non toxic material, In case of contact with face, eye or body wash with plenty of water. While mixing hand glove shall be used.

**F) Packing: 25 Kg :** In case of requirement of more details, PI feel free to contact us.

Details of Flyocrete A A C Blocks required and Flybond dry mortar required For 100 Sft masonry work including 3MM thick "Flyobond dry mortar" joint .							
Sr	Sizes of Flyocrete A A C Blocks			Number of blocks required for 100 sft FlyocreteA.A.C masonry work including 3MM thick "Flyobond Dry Morter" joint (No)	Flyobond dry mortar required for 100sft masonry working including 3MM thick dry mortar joint (Kg)	Packing per bag of Flyobond Dry mortor (Kg)	No of bag required for 100 Sft masonry work(Bag)
	Thick (MM)	Height (MM)	Length (MM)				
1	75	240	650	58.55	20	25	0.8
2	100	240	650	58.55	27	25	1.08
3	125	240	650	58.55	34	25	1.36
4	150	240	650	58.55	40	25	1.6
5	200	240	650	58.55	54	25	2.16
Delivery Period: within 24 to 48 Hours after Placing order Quantity /truck of 10 Ton capacity      400 Bags Minimum Spliting tensile strength required as per ASTM C-1660-09 (Mpa)      0.4 Actual spliting tensile strength recived while tested from third party (Mpa)      0.42							