



FERROUS[®]
CRETE

The name you can
trust upon.

www.ferrouscrete.com

ADHESIVES | AAC BLOCKS | GROUTS & ANCHORS | SEALERS |
WATERPROOFING | WALL PUTTY | PLASTER | ADMIXTURES |
SURFACE TREATMENTS | CONCRETE REPAIRS | INDUSTRIAL
FLOORING | SEALANTS | PROTECTIVE COATINGS |
CLEANING & HYGIENE SOLUTIONS

AAC BLOCKS



About Us

FERROUS CRETE is one of the leading manufacturers for Polymer Modified Tile/Stone Adhesives in India under the technical support by **LOTTE** Fine Chemicals Co. Ltd. Korea. It has state of the art technology production units at **Faridabad (Haryana) - Unit 1 & Unit 2, Bikaner (Rajasthan) - Unit 1 & Unit 2, Nellore (A.P), & Varanasi, (Uttar Pradesh)** and also an AAC Block production unit at **Palwal (Haryana)** with annual plant capacity of 2.5 lacs cubic meter under the extensive care & surveillance of a dedicated team of professionals.

FERROUS CRETE is first amongst Indian manufactures of tile and stone installation material to obtain the prestigious ISI Mark and also an ISO 9001 : 2015 accredited company. Utilizing the advanced polymer technology in producing Exterior & Interior finish products such as AAC Blocks, Adhesives, Grouts, Sealers, Plasters, Water Proofing, Wall Putty and other building products for commercial and residential applications. It provides outstanding quality life for the tiles & stone installation products.

Ferrous Crete has diversified and ventured in the cleaning industry under the brand name FerroKlean, to provide cleaning and hygienic solutions for Building Care, Floor Care, Kitchen Care, Personal Care, Infection Prevention, Food & Beverages Production and Fabric Care. Through cleaning technology and our expertise that saves life, providing a tailored customer centric approach that empowers sustainable cleaning solutions.

FERROUS CRETE brand is well supported by a fully equipped modern research, development & testing facilities. Besides this, innovation in marketing & merchandising added with the experience of sales team, who are expertise in all products & in quality approvals from the Government Institutions & Prestigious Projects. It is their best endeavors to understand the market needs & demands that helps us to provide the solution with an array of products.

In modern construction World, FERROUS CRETE has become a reputed Brand among its list of clients which includes Professionals, Builders, Contractors, Engineers, Architects, Municipalities, Star category Hotels and Hospitality sectors through its Pan-India Operations & Dealers network.

Focused on the Construction Chemicals / Adhesives business, now the Company has a vision of diversification into other products that fall under building material category & continue to invest in production equipments and facilities to provide our customers with top quality products at competitive prices.

Ferrous Crete AAC Block

It is a lightweight Autoclaved Concrete Block. It is suitable for multistoried structures as it is lighter than standard size bricks and blocks. Ferrous Crete AAC Block is manufactured through a reaction of aluminum on a proportionate blend of lime, cement and fly ash. During this process, the hydrogen gas that escapes creates millions of tiny air cells, rendering Ferrous Crete AAC Block with a strong cellular structure. 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.

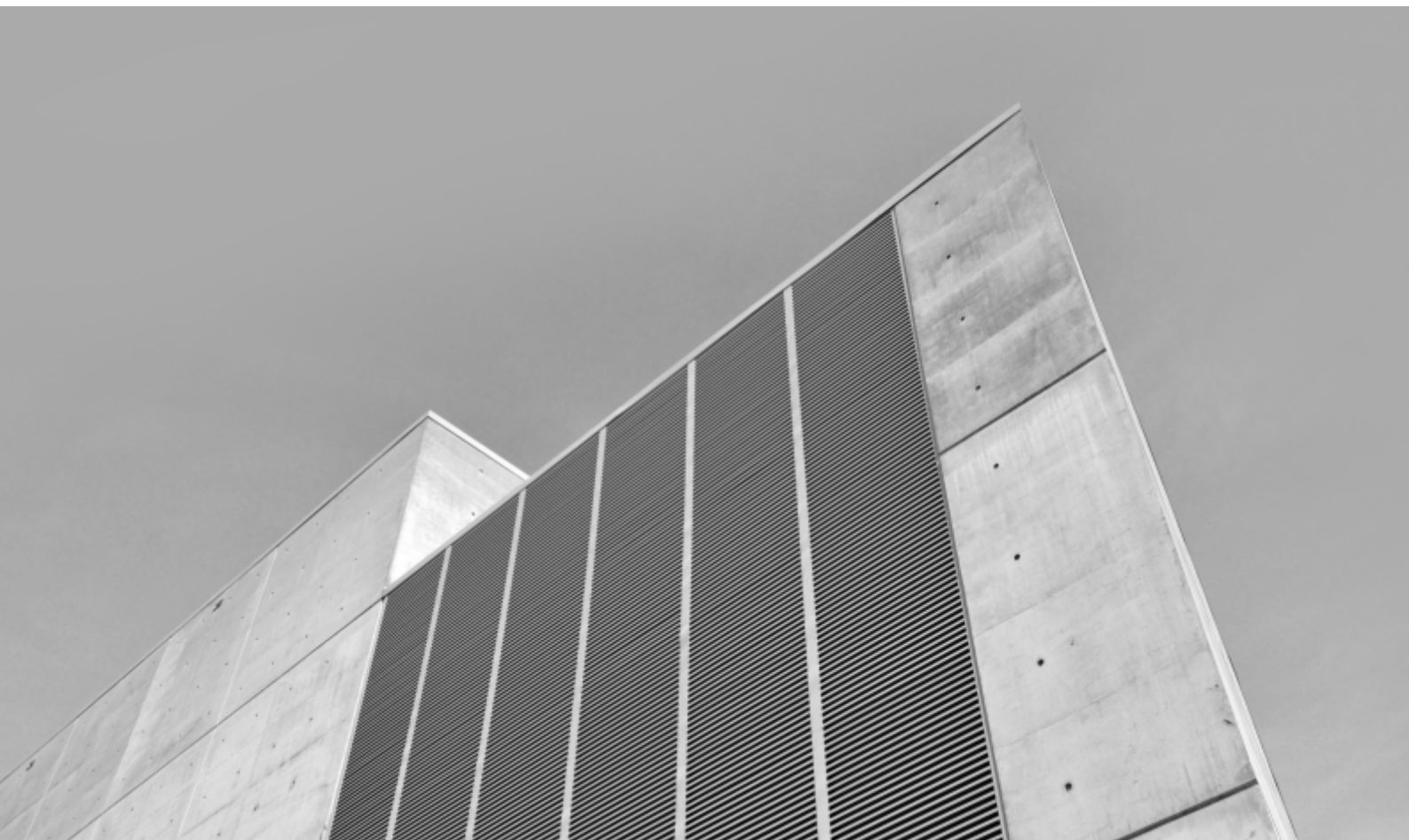


ADVANTAGES

- **Weather & Earthquake Resistant** - The impact of earthquake forces on a structure is proportional to the weight of the structure. Hence, Ferrous Crete AAC Block provides excellent resistance to earthquake forces.
- **Long Lasting** - Ferrous Crete AAC Blocks are not vulnerable to water damage as compared to other Construction materials. They can even withstand harsh climatic conditions, thus reducing the rate of deterioration, this in turn gives you increased value for your investment.
- **Acoustically Absorbent** - Ferrous Crete AAC Block provide excellent sound absorption with a STC (Sound Transmission Class) rating of 44. It is a cellular structure which provides superior sound insulation. Therefore, these blocks are suitable for construction of residences, hotels, IT offices, recording studios, theatres, hospitals etc.
- **Economical** - Ferrous Crete AAC Block are lighter than standard bricks and blocks, therefore they reduce the dead weight of the building. This will bring about significant savings in steel and concrete used.
- **Fire Resistant** - The melting point of Ferrous Crete AAC Block is over 1600 degree Celsius. Therefore, it is more fire resistant, with a fire rating of 4 hours.
- **Energy Efficient** - Ferrous Crete AAC Block give superior thermal insulation because of low thermal conductivity and low air infiltration. Moreover, lesser joints and better compacted (thin) jointing mortar add to the sound and thermal insulation. This also leads to cooler interiors and savings in air conditioning load and consequently enhanced energy efficiency. Since they are made of fly ash, the embodied energy is very less.

These qualities make Ferrous Crete AAC Block perfect for modern constructions and high rise buildings.

- The use of Ferrous Crete AAC Block in constructions significantly reduces the dead load and also ensures less usage of steel and concrete.
- Ferrous Crete AAC Block requires lesser number of joints, which result in saving jointing material, time and labour.
- Ferrous Crete AAC Block ensures a smooth and accurate masonry profile and is also useful for renovation and alteration purposes.
- The automatic manufacturing process gives Ferrous Crete AAC Block an exceptional dimensional accuracy and smooth surface, allowing less thickness of plaster.
- Ferrous Crete AAC Block also imparts thermal and sound insulation characteristics to construction. It also imparts fire and earthquake resistant properties.



MANUFACTURING PROCESS

- Consists of 70% of air.
- Combines Silica (sand or recycled fly ash) cement, lime, water and aluminum powder (expansion agent), paved into mould.
- Aluminum powder reacts with silica when added to concrete, resulting in the formulation of millions of microscopic hydrogen bubbles.
- Hydrogen bubbles causes the concrete to expand to expand to roughly five times its original volume.
- Hydrogen evaporates leaving a highly closed cell aerated concrete.
- Thereafter, they are cut and finally steam & pressure cured an autoclave.



PLANT CAPACITY
2.5 LAC m³ / Year

PRODUCT APPLICATION

- Do marking for the Doors, windows and for any other object need to be created.
- Apply the thin layer 3-6mm of fine paste of I188 Adhesive on the neat & clean identified surface with the help of Trowel (Flat side to be used to spread the paste like butter).
- Then additional paste can be scrapped by using the trowel from its notched edges.
- Place the blocks on that layer spread with adhesive to ensure joints and level are uniform as directed by the site engineer.
- Apply the mixture on the sides of the blocks to fill the joints properly.
- Use the plumb regularly for checking the alignment and level of the wall.
- Excess material need to be removed immediately and continue the above process for whole block wall.
- No water curing is required.
- The setting time is 24 hrs in normal conditions but may delay in over casted rainy or in winter season.
- Full strength will take 14 days approx.
- For larger size of Blocks the layering thickness should be slightly increased for better results.
- For larger size of Blocks the larger size of Trowel (10*10) tool is recommended for adhesive layering.
- The adhesive paste should be applied uniformly on the blocks surface to get proper results.
- Excess paste can be removed with damp cloth or sponge instantly before drying up.

NOTE: When the temperature is low during installation, for every 10°C below 21°C, curing takes twice as long to the aforesaid time.

When the temperature is high during installation, for every 10°C above 21°C curing takes half as long to the aforesaid time.





TECHNICAL DATA

AAC Block is accepted worldwide due to its properties.
The technical data of AAC Blocks are as follows:

Parameter	Value
DENSITY	551 - 650 kg/m ³
COMPREHENSIVE STRENGTH	>4 N/mm ² (Mpa)
SHEAR STRENGTH	0.6
MODULUS OF ELASTICITY	2040 Mpa
COEFFICIENT OF THERMAL EXPANSION	8.1*10 ⁻⁶ K ⁻¹
WATER ABSORPTION	8%
THERMAL CONDUCTIVITY	0.16 w/k
THERMAL RESISTANCE® VALUE	0.46 m ² -K/w
DRYING SHRINKAGE	0.04%
FIRE RATING (Depending upon thickness)	2-6 Hrs (Depending upon thickness)
SOUND TRANSMISSION	48 db



IDEAL FOR GREEN BUILDING



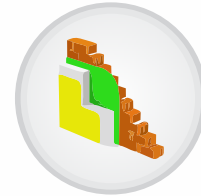
SOUND PROOF

With its closed air pockets lightweight blocks can provide very good sound insulation/sound absorption with a STC (Sound Transmission Class) rating of 44. It can also be used as sound barrier wall along busy roads. Result, virtually sound interiors.



EARTHQUAKE RESISTANT

Earthquake forces on structure are proportional to the weight of the building, hence light weight blocks show excellent resistant to earthquake forces.



THERMAL INSULATION

Highest thermal rating is an industry R30! Its cellular structure provides well insulated interiors, keeping out warm air in summers and cold air in winters. AAC reduces air conditioning cost up to 50%.



FIRE RESISTANT

Its unique cellular structure provides excellent fire rating. Due to this cellular structure AAC blocks do not disintegrate even in fire. It is best in class fire rating of 4 hrs. The melting point of AAC Blocks is over 1600 degrees centigrade, more than twice the typical temperature in building fire 650 degrees centigrade.



EASE OF WORKING

AAC can be drilled, sawed, nailed and chiselled. Basically, one may work. Autoclaved Aerated Concrete like wood, using wood working tools. Unlike standard concrete, AAC yields readily without chipping or cracking.



WATER RESISTANT

Microscopic structure of lightweight block does not allow for capillary action making it impervious to water. Its water resistant properties are further enhanced by adding silicon based additives.



HIGH STRENGTH

High pressure steam curing autoclaving process gives AAC blocks unmatched strength to weight ratio, higher than even M 150 concrete, and far exceeds the building the Indian Building Code Requirements.



PEST RESISTANT

With Solid wall construction and finishes, there are fewer if any, cavities for insects and rodents to dwell in. Termites and ants do not eat or nest in AAC blocks. Being made up of inorganic minerals, light weight blocks does not promote growth of molds.



ENERGY EFFICIENT

AAC is 100% green building material and is a walling material of choice in LEED certified buildings. AAC is most energy and resource efficient in the sense that it uses least amount of energy and material per m of product.

COMPARISON WITH TRADITIONAL BRICK



PARAMETER	AAC	BRICK
Size (LXHXT)	625 x 250 x 75 - 300	230 x 115 x 75
Precision in Size	05 mm (+/-)	05 - 15 mm (+/-)
Compressive Strength	4-5 n/mm ² & above (as per IS 2185)	05 to 7.5 N/mm ²
Dry Density	551-650 m ³ (Oven dry)	1950 Kg/Cu M
Fine Resistance	02 to 06 Hours (depending upon thickness)	02 Hours
Sound Insulation Index	45 db for 200 mm thick wall	50 db for 230 mm thick wall
Thermal Conductivity	0.16 w/m ⁰ k	0.81 w/m ⁰ k
Drying Shrinkage	0.04%	0.8%

AAC BLOCK SIZE

L X H X THICK	pcs/m ³	Wall Area/m ²
625 X 250 X 100	66.66 pcs	10.00 sq. m
625 X 250 X 125	53.33 pcs	8.00 sq. m
625 X 250 X 150	44.44 pcs	6.66 sq. m
625 X 250 X 200	33.33 pcs	5.00 sq. m
625 X 250 X 225	29.92 pcs	4.44 sq. m
625 X 250 X 250	25.60 pcs	4.00 sq. m
625 X 250 X 300	22.22 pcs	3.33 sq. m

COST COMPARISON

■ Cost Component
 ■ Saving in Component
 ■ Estimated Impact in Project Cost

MORTAR MATERIAL

60% 1%

Clay Blocks are 9 times the size of conventional bricks, resulting in 1/3rd the number of joints. Thus an overall mortar savings upto 66%.

PLASTERING MATERIAL

35% 1.5%

Exceptional dimensional accuracy & smooth surfaces eliminate the need for three coat plaster walls and allow for a final 6mm skin coat (putty/gypsum plaster).

WASTAGE

12% 1%

Breaking in clay bricks might escalate upto 15% which in case of FERROUS CRETE AAC is bare minimum.

STRUCTURAL MATERIAL (STEEL & CONCRETE)

15% 7%

FERROUS CRETE AAC drastically reduce the dead weight of the building. This translates to design of lighter structure leading to reduction in use of steel & concrete (upto 20%).

INCREASE IN FLOOR SPACE AREA

2% 4%

Exceptional thermal insulation & weather barrier properties make it possible to use thinner blocks, hence, increasing carpet area.

SAVING IN CAPEX FOR HVAC SYSTEM

30% 0.5%

FERROUS CRETE AAC has excellent properties resulting in saving in capex & opex of HVAC System.

COST SAVING



India, is now standing on the forefront of the construction growth. With the coming of leading business houses of the world, the citizen is armed by the day with opportunities of better living every moment, Be it business or residence, the impact on the construction industry is most visible. But rising costs in every peripheral of the industry is resulting in meager profits which impacts purchase decisions, and this is leading de-growth for many construction houses.

FERROUS CRETE is the revolutionary AAC block that will refresh your business with resounding profits.

FERRO - 1188

(Block Laying Adhesive)

Ferro – 1188 is a thin set adhesive for laying of AAC blocks, fly ash bricks and concrete blocks. It is specially designed to just mix water. It has a long open time. It is a polymer modified adhesive for masonry building applications, optimum for the adhesion of AAC blocks. It has high shear bond strength. Ferro – 1188 replaces traditional method of 20 – 25 mm thickness with 3 – 6 mm thickness of Ferro – 1188. It is ideal for use in green building.

Applications

Suitable for AAC blocks, cement blocks, concrete block, hollow blocks, cellular concrete blocks, grouting the cement windows door frames etc.

Pack Size: 40 Kg.

Colour: Grey & White



Coverage -

Approx. 90 – 110 Sq.ft. / 40 Kg. bag at 2-3 mm bed thickness for 600 x 200 x 175 block size. / 1.35 m³/ 40 kg. bag at 2-3 mm bed thickness.

Advantages

- Single component, just add water
- Long open time
- Ultimate adhesion for AAC blocks, Concrete blocks etc
- High Shear and compressive strength • High bond strength
- Rapid setting
- Fast installation
- No Curing required
- More economical, saves time
- Easy to use
- High strength, Polymer modified
- Reduces the structure load
- Non shrinkage adhesive
- Eliminating material waste



SOME OF OUR PRESTIGIOUS CLIENTS

HOTELS

Hotel Radisson
 Hotel Claridges
 Hotel The Grand
 Hotel Hyatt
 Hotel ITC
 Hotel Pullman
 Hotel Howard Park Plaza
 Hotel Country Inn & Suites
 Hotel the Hans
 Leela Grand
 Hotel Ista
 Hotel Gulab Niwaas
 Hotel Aashish
 Hotel Noor Mahal
 Hotel Gajraj
 Hotel Konica
 Hotel Shagun Palace
 Hotel Maharaja Palace
 Hotel Raj Malhotra
 Hotel K2 Hotel 7 Star
 Hotel Savoy Suites
 Hotel Blue Sapphire

BUILDERS & DEVELOPERS

The Myst (TATA)
 KW Srishti
 Bestech Sanskriti
 DLF Crest
 DLF Camellias
 Paras Tiera
 Supertech Supernova
 Noida World One
 JP Greens
 Emmar Palm Hills
 Vatika Professional Point
 ASF Insignia
 JMD Gardens
 Raheja Atharva
 Stellar One
 Wave City Centre
 JCB
 Purvachal Royal Park
 AVJ Heights
 ATS Le Grandiose
 Mahagun Mirabella
 Exotica Dreamville
 BPTP Astaire Gardens
 Apex Kremlin
 Truvae Fragrance
 Arihant Arden
 IREO Mixed Use Development
 AIPL Joy Street
 Hare Krishna Orchid
 Cloud 9

Pioneer Park
 Central Park-2
 Adani Samsara Villas
 White Orchid
 Mahindra Embassy Park
 Land craft River Heights
 Kalpataru Vista
 World Residency
 Windsor Paradise- II
 Star Rameshwaram
 SKA Green Mansion
 Pyramid Homes
 Imperia Premia
 Lotus Isle
 Godrej Frontier
 Good Year
 Rajhans Residency
 Express Zenith
 Prateek Wisteria
 Universal Homes
 Delhi One
 Vipul Tatvam Villas
 Himalaya Pride
 Green Arch
 Apex Court
 Urbtech Xavier
 Eldeco Mystic Greens
 Bulland Elevates

GOVERNMENT

Mohali Airport
 Common Wealth Games
 Delhi Metro Rail Corporation
 Public Works Department
 Indian Oil Corporation Ltd.
 Indian Oil Refinery
 Married Accommodation Project
 National Thermal Power Corporation
 Oil and Natural Gas Corporation
 Central Road Research Institute
 Housing Board Project
 Police Housing Project
 Reserve Bank of India
 Indian Railway
 Military Engineer Services
 All India Institute of Medical Sciences
 Jawaharlal Nehru University
 National Hydroelectric Power Corporation
 Post Graduate Institute of Medical Education & Research
 Mahanagar Telephone Nigam Limited
 Bombay Suburban Electric Supply
 Bharat Sanchar Nigam Limited
 Central Soil Salinity Research Institute

Haryana Power Generation Corporation Limited
 Delhi Development Authority
 GAIL India Ltd.
 Bharat Heavy Electricals Limited
 Greater Mohali Area Development Authority
 Punjab Urban Planning and Development Authority
 Air Force
 Secretariat (HP)
 Haryana Urban Development Authority
 Special Protection Group
 Greater Noida Authority Residential
 Army Welfare Housing Organization
 India Trade Promotion Organization
 Supreme Court
 National Centre for Integrated Pest Management

SPORTS

Yamuna Sports Complex
 Dhayanchand National Stadium
 Indira Gandhi Stadium
 National Games Village
 Sports Complex Sec. 78, Mohali
 Sport & Complex Sec. 69, Mohali Sport

HOSPITALS

V.S. Hospital
 All India Institute of Medical Sciences
 Amrita Hospital
 Indira Gandhi Hospital
 Kailash Hospital
 JP Hospital
 Pushpawati Singhanian Research Institute

UNIVERSITY

Amity University
 Gagan Public School
 Manav Rachna University
 Gautam Buddha University
 Jindal University
 Sri Ramaswamy Memorial Institute of Science and Technology
 Modern Vidya Niketan school
 Dynesty International School
 Public Works Department School
 Genesis Global School
 LPS School
 Indian Institute of Management
 National Institute of Information Technology.
 Industrial Training Institute
 Indian Institute of Technology
 National Institute of Technology

PLANT LOCATIONS



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MANUFACTURING UNITS



Ferrous Crete (India) Pvt. Ltd.

Corporate Office : 10 B/2 Fruit Garden, NH-5, Near Neelam Chowk, N.I.T.,

Faridabad - 121 001 | E-mail : ferrousadhesive@rediffmail.com

Tel : +91 129 4005514 | Fax : +91 129 4005514

Website : www.ferrouscrete.com

Customer Care: **1800 121 0129** follow us on    