EKOCON

FROM THE HOUSE OF AERCON BLOCKS

AERCON BLOCKS

Brand Philosophy

Ekocon is from the RS Group and manufactures AAC (Autoclaved Aerated Concrete) blocks, and other durable and sustainable construction material. AAC blocks constitute over 75% of air, making it light-weight yet firm. It enables rapid construction while promoting thermal conductivity and sound insulation.

Ekocon is a multifaceted and durable construction powerhouse that reuses fly ash and textured construction-grade mixtures and autoclaves the mix for over 16 hours to produce the time and cost-efficient brick that is a mason's dream and a homeowner's favorite. It has several variants across different sizes, used in both residential and commercial construction.

RS Group

The RS Group is the largest Concrete Block manufacturer in Chennai, running automated plants in 6 locations. We manufacture AAC Blocks, Dry mix mortar, Dry mix plaster, Fly ash bricks and High density bricks, and Tile adhesive & Tile Grout. Our technology-enabled processes empower us to manufacture green construction products with precision and efficiency. With proven market intelligence and adherence to ISO, BIS, and other International certifications.

Philosophy & Vision

Our logo represents our philosophy and commitment to producing sustainable construction materials. We've taken inspiration from the Neo-Plasticism movement that focuses on conveying universal truths through geometric austerity that lives through line, form, and color.

This geometric design does not take away from the human quotient, which is still indispensable, and we believe that every little measure we take and block we produce works towards lessening the load on the world and improving the quality of life.

Our products explore this duality in perspective—light and strength, chemical and organic, and asymmetric and geometric. It highlights the dichotomy between traditional methods of brick-lay construction and a new, more mindful construction method that reduces the impact on the environment while building edifices that stand the actual test—that of time.

Ekocon

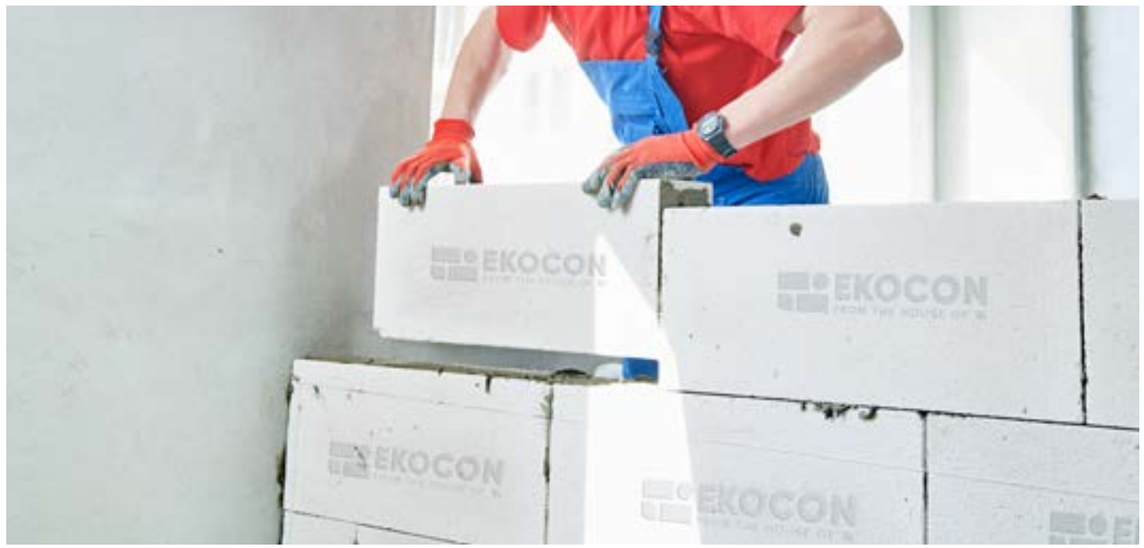
Team Ekocon

The Ekocon Factory

In order to guarantee the greatest quality and consistency in our products, Ekocon uses cutting-edge manufacturing techniques and the most recent technologies. We are dedicated to giving our customers the best products and services available.

The Ekocon Factory is located in Keerapakkam, Chennai, and comes fitted with state of the art German machinery. The manufacturing process includes super smooth cutting that ensures that our product is at the highest quality and at optimal costs. With superior European engineering, our horizontal cutting line considers minimum damage by cutting and smoothing the production line. The mixture does stick to the mould and does not corrode during autoclaving. It is a high-efficient flexible product panel.

All our products are manufactured in-house, and the factory is extremely close to the city. The factory is temperature and climate-controlled, and follows stringent quality control procedures. Owing to this, our state of the art factory can produce a load that is equivalent to a load that can be carried by 42 trucks. Considering the factory's proximity to Chennai, we can supply our clients on the same day we receive the order.



Products

AAC Blocks

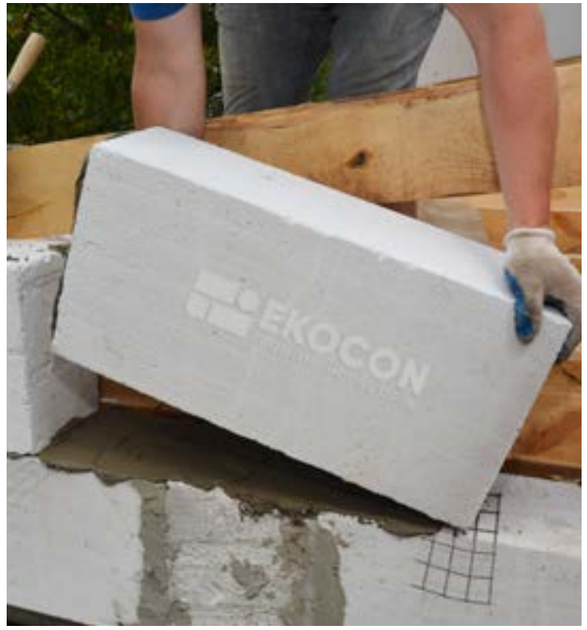
Dry Mix Mortar

Dry Mix Plaster

Fly Ash Bricks

AAC Blocks

AAC blocks are made from a mixture of fly ash (ethically sourced sustainable raw material), limestone, aluminum powder, and water. This mixture is then run through advanced German cutting technology where the mixture is set to rise in moulds and run through the fabrication machine which cuts them into blocks and prepares them for autoclaving.



At Ekocon, our team of professionals is committed to offering outstanding client service and support, from initial consultation and design to on-time delivery and installation. We have years and a wealth of experience in the construction industry.

Ekocon's AAC blocks are lightweight, porous, durable, and eco-friendly building materials that are rapidly gaining popularity in the construction industry due to their many benefits, including their superior insulation properties, fire resistance, and ease of installation.

Our AAC blocks offer a cost-effective, practical, and sustainable solution that will suit your unique demands and exceed your expectations, whether you are building a new home or commercial project or looking to remodel an existing facility.

Technical Specifications:

Length	**600 mm**
Height	**200 mm, 250 mm, 300 mm**
Thickness	**50 mm to 300 mm**
Dimensional variation	**±3 mm in Width & Height ±5 mm in Length**

Ekocon AAC Blocks

The Manufacturing process of Ekocon's AAC blocks conforms to the specifications as listed under BIS 2185 (Part 3): 1984 (Concrete Masonry Units-Autoclaved Cellular (Aerated) Concrete Blocks).

The Methods of testing of Ekocon's AAC blocks conform to the specifications as listed under BIS 6441: 1972 (Methods of test for Autoclaved Cellular Concrete Product).

The laying of Ekocon's AAC blocks are to be practiced in accordance with the specfications & standards laid by BIS 6041: 1985 (Code of practice for construcation of Autoclaved cellular Concrete Block Masonry) and BIS 1905: 1987 (Code of practice for structure use of reinforced Masonry)

Dry Density (Oven Dry)	**551 - 650 kg/m^2**
Average Compressive Strength	**3.5 N/mm^2 - 4 N/mm^2**
Thermal Conductivity	**0.142 - 0.24 W/Mdig.k**
Drying Shrinkage	**0.01% - 0.05%**
Sound Transmission Class	**37 - 44 Db**

Test Set:

AAC blocks are tested for a variety of parameters to ensure their quality and performance. The ASTM, BS, EN, and IS standards all play a role in the methodology of these examinations.

The following are some types of AAC block tests:

Density Test:

It is necessary to check the density of AAC blocks to make sure they are up to par with industry standards. The blocks' strength and longevity are evaluated in this test.

Compressive Strength Test:

AAC blocks' compressive strength is evaluated by placing a weight on them until they give way. This is a critical inspection since it reveals the blocks' load-bearing capabilities.

Water Absorption Test:

The amount of water absorbed by the AAC blocks is determined by this test. Indicative of the blocks' strength and longevity, moisture level is a key factor.

Thermal Conductivity Test:

One way to evaluate how well AAC blocks conduct heat is to subject them to a thermal conductivity test. Because of its effect on the blocks' insulation, this is important information to have.

Sound Insulation Test:

The test for sound insulation determines how well the AAC blocks dampen ambient noise. Given that it controls the blocks' acoustic qualities, this information is essential.

Fire Resistance Test:

This test evaluates the AAC blocks' capacity to withstand fire. It is crucial since it determines the blocks' fire resistance rating.

Dry Mix Mortar:

Construction projects, especially activities such as bricklaying, plastering, and flooring benefit greatly from the usage of dry mix mortar, which is a pre-mixed composition of cement, sand, and additives. Ekocon's Dry Mix Mortar is brought to the construction site in pre-mixed bags or containers, eliminating the need for on-site mixing of the mortar.

Dry mix mortar is popular due to its many benefits, one of which is its simplicity and portability. Dispensing with time-consuming and labor-intensive on-site mixing is a major benefit. This makes it a great option for massive building projects where time and effort are of the essence.

There is a large variety of dry mix mortar formulations and additives available to satisfy a variety of construction requirements. Depending on the specifics of the job at hand, additives may be incorporated into the mortar mix to enhance its qualities in a variety of ways, including bond strength, workability, and water retention.

Ekocon's Dry Mix Mortar is not only versatile and easy to use, but also provides high-quality results that last for a long time. Since it ensures a homogenous mixture, it can help lessen the likelihood of cracking, shrinking, and other flaws in the final product.

Technical Specifications:

Supply Form	**Cementitious Grey Powder**
Application Thickness	3 to 5 mm of AAC blocks
Binders	**Portland cement & Polymers**
Filler	Selected graded aggregates with maximum 0.6 to 1 mm grain size
Water Requirement	**30% of the weight of the mortar. According to the climatic conditions, to increase or decrease some percentage of water**
Density: ASTM C185	Dry= 1.3 kg/Litre, Wet: 1.5 kg/Litre
Compressive Strength	**ASTM C109 < 4N / mm²**
Splitting Tensile Strength ASTM C1006	0.40 Mpa average @ 28 days of AAC blocks of average compressive strength 0f 4n/mm²
Flexural Strength	**0.57 N/mm²**
Initial Shear Strength	> 0.15 N/mm²
Bond Strength	**0.8 N/mm²**
Fire Resistance	Class A1
Freeze & Thaw Resistance	**Passes the requirements**
Water Resistance BS 4551	>95%
Drying Shrinkage Coverage	**ASTM C531 <0.1% yields - 24 litre / 40 kg bag depends on block size**
Pot Life	45 Minutes

Method of Application:

Dry mix mortar's application technique is determined by both the dry mix mortar's kind and the nature of its intended use. The following are, nevertheless, some guidelines that can be observed when using Ekocon's Dry Mix Mortar:

For best results when using dry mix mortar, make sure the area to be coated is clean, dry, and free of any pollutants such as dust, dirt, oil, or grease. Prime the surface before applying mortar if it's required.

Process:

To use, combine the dry mix mortar with water as directed by Ekocon. The cement-to-sand mixing ratio typically ranges from one-third to one-sixth.

The mortar is applied with a trowel or spray apparatus after it has been mixed. What determines how thick a coating of mortar should be is the application and the dry mix mortar being used.

Let the mortar cure as directed by Ekocon. It's also important to keep the area out of the natural elements, such as wind and rain, while it cures. Temperature and weather are critical factors in determining the duration of the curing. Do not reuse or remix the set mortar.

Finishing Touches:

Use a trowel or float to smooth and level the mortar after it has been applied. This will guarantee a smooth, level surface with no lumps or bumps.

Dry Mix Plaster:

Ekocon's Dry Mix Plaster is a powdery substance that is used to fill and smooth the joints between pieces of drywall (also known as gypsum board or plasterboard).

Dry mix plaster is available in a variety of forms, including pre-mixed and ready-to-use compounds as well as water-required granules. In general, powdered dry mix plaster is less expensive and can be stored for extended periods of time without deteriorating.

Technical Specifications:

Test	Test Method	Specification
Setting Time: Initial	IS:4081 Part-5 1988	≥= 30 Min
Setting Time: Final	IS:4031 Part-5 1988	≤= 500 Min
Pull off adhesion	ASTM 4541 & EN 1015-12	MIN 0.3 MPA
Water Retentivity	EN 1015-8	MIN 95%
Compressive Strength	EN 1015-1999	As per EN998-1 for categories (N/mm^2) CSI - 0.4 to 2.5 CSII - 1.5 to 5 CSIII - 3.5 to 7.5 CSIV - ≥6
Flexural Strength	EN 1015-1999	MIN 1.8 MPA
Capillary Water Absorption	EN 1015-18	As per EN 998-1 W0.no.requirements W1C ≦ 0.40kg/m^2 min 0.5 W2C ≦ 0.20kg/m^2 min 0.5

Process:

To use Ekocon's Dry Mix Plaster, combine the powder with water to form a substance that can be applied to the drywall joints with a taping knife or a similar instrument.

Ekocon's Dry Mix Plaster is frequently used in construction and remodeling projects to create a uniform, smooth surface on walls and ceilings. It is an essential component of any drywall installation, as it serves to strengthen and seal the joints between the drywall sheets and prepares the surface for painting and other finishes.

Method of Application:

The application method for dry mix plaster will vary depending on the specific product and the nature of your project. Ensure you follow these procedures while applying Ekocon's Dry Mix Plaster.

Before applying dry mix plaster, ensure that the surface is spotless, dry, and devoid of any loose debris or dust. Utilize a damp cloth or sponge to clean the surface and eliminate any filth and grime.

If you are using dry mix plaster in powder form, combine it with water according to Ekocon's instructions. Utilize a mixing spatula or electric mixer to create a lump-free, smooth paste. If you are using a compound that has already been mixed, you can skip this stage.

Plaster the joint between the plasterboard panels using a taping knife or a similar instrument. Spread it uniformly and smoothly, filling any gaps or depressions. For larger joints, it may be necessary to apply multiple coats, allowing each to dry before administering the next.

After the plaster has cured, smooth the surface with a sanding block or sandpaper to remove any rough spots or bumps. Wear a respirator or dust mask to protect your airways from the fine dust.

Finishing Touches:

After the surface has been smoothed, it can be painted or otherwise finished as desired. Follow Ekocon's instructions when applying any paint or finish.

Plastering requires perseverance, attention to detail, and a steady hand in general. However, you can accomplish a smooth, professional-looking finish with the proper tools and methods.

Fly Ash Bricks:

Bricks known as “Fly Ash Bricks” are produced by combining fly ash, a byproduct of coal-fired power plants, with other materials like cement, sand, and water. The flue gasses produced by burning coal in power plants contain a fine powder known as fly ash. Fly ash bricks are a greener and cheaper alternative to regular clay bricks since fly ash is a plentiful and low-cost waste product.

There are many benefits to using Ekocon’s Fly Ash Bricks instead of regular clay ones. They have a higher compressive strength and lower weight, making them more practical for use in a variety of applications. Better thermal insulation characteristics than clay bricks mean less money spent on heating and cooling thanks to the use of fly ash bricks.

Ekocon’s Fly Ash Bricks have many uses outside of construction, including landscaping and erosion prevention. Retaining walls, garden walls, and other outdoor buildings can all benefit from the durability and weather resistance of fly ash bricks.

Fly ash bricks, in general, are a cost-effective and environmentally friendly option for construction and other uses, and they help lessen the damage caused by coal-fired power plants.

Technical Specifications:

Test Conducted	Test Results	Test Methods
Density	1600 - 1800 kg/m^3	Laboratory Method
Compression Strength	7-11 N/mm^2	IS3495 Part I
Water Absorption	10-14%	IS3495 Part II
Drying Shrinkage	<0.015	IS4139

Ekocon’s Mortar:

To make mortar, combine one part Ekocon’s Dry Mix Mortar and add enough water to make a thick paste. Make sure there are no lumps in the mortar by giving it a good stir.

Method of Application:

The following are the steps involved in laying Ekocon's Fly Ash Bricks:

The site must be cleared of any debris or loose soil before the fly ash bricks may be laid. To ensure the bricks have a solid foundation, the area must be compacted and leveled.

Planning the placement of the bricks ahead of time will help guarantee that they fit together neatly and uniformly. You can do this by using chalk or a string line to mark where the bricks will go.

Process:

Using a trowel, spread the mortar evenly over the area where the bricks will be laid. Mortar should be applied at a thickness of around 10 millimeters.

When laying bricks, each brick should be carefully lifted up and set onto the mortar bed. They need to be firmly pressed down to the surrounding bricks until they are flush and level. There should be a tiny bit of mortar seepage between each brick.

To ensure the bricks are horizontal and vertical, a spirit level should be used to align them. The unevenness can be fixed by shifting the bricks around.

To finish laying a row of bricks, the spaces between them must be filled with mortar. A trowel can be used to remove any extra mortar, and a pointing tool can be used to complete the joints.

Finishing Touches:

Bricks should be examined for level and straightness at regular intervals during the laying process to guarantee proper alignment. Wait at least 24 hours for the mortar to set before laying another course of bricks.

If you follow these guidelines, you'll be able to lay Ekocon's Fly Ash Bricks with ease and build something that will last.

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RS AERCON BLOCKS

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