KOSTA

Sustainability and Eco-friendliness, the pillars of trust

ABOUT KOSTA

Kosta Industries was established to service India's Construction Industry by providing them with innovative, cost effective building products and services with no compromise on quality. Kosta aspires to build a reputation of being a dynamic business committed to meeting the ever- changing needs of contractors and project specifiers alike in the Indian Construction space.

Together with its manufacturing partners Kosta provides AAC Blocks along with an unrivaled level of support, technical expertise, and design & erection assistance and aims to provide a premium service to everyone of our valued customers.

PURPOSE

To be a leader in the Indian Building materials industry by providing enhanced services, relationship and profitability.

VISION

To provide quality services that exceeds the expectations of our esteemed customers.

MISSION

To build long term relationships with our customers and clients and provide exceptional customer services by pursuing business through innovation and advanced technology.

CORE VALUES

- We believe in treating our customers with respect and faith
- We grow through creativity, invention and innovation.
- We integrate honesty, integrity and business ethics into all aspects of our business functioning

AAC (AERATED AUTOCLAVED CONCRETE)

The Autoclaved Aerated Concrete (AAC) material was developed in 1924 in Sweden. It has become one of the most used building materials in India which is used as a substitute of the conventional red clay bricks in residential, commercial and industrial construction activities.

Autoclaved Aerated Concrete (AAC) is a light weight cellular material which is formed by a chemical reaction between fine grained calcareous and siliceous materials. Calcareous materials include lime and/or cement whereas siliceous materials generally used are natural or ground sand and/or industrial by products such as slag and Pulverised Fuel Ash (PFA). The cellular structure which gives the product good thermal properties and a high strength density ratio, is produced by reaction between alkaline lime/OPC component and added Aluminium powder (foaming agent) to give bubbles of hydrogen. The curing of this type of concrete is done at high temperature and pressure in saturated steam (Autoclaving).

Speed of construction, saving in jointing mortar, attractive appearance, design versatility, good and strong binding are some of the merits of AAC block masonry.

ADVANTAGES OF AAC

LARGE VARIETY OF SIZES: AAC can be produced in a large variety of sizes, from standard blocks to large reinforced panels

EXCELLENT THERMAL INSULATION: AAC has a very low thermal conductivity and therefore a very high thermal energy efficiency is achieved. This results in cost savings for heating and cooling

EXTREMELY LIGHTWEIGHT: AAC weighs approximately 50% less than other comparable building products

HIGH COMPRESSIVE STRENGTH: AAC is a solid product, therefore making it highly load bearing. The entire surface area is used in structural calculations

HIGH DIMENSIONAL ACCURACY: as a result of its dimensional accuracy, AAC is extremely easy to install, as no thick set mortar is required

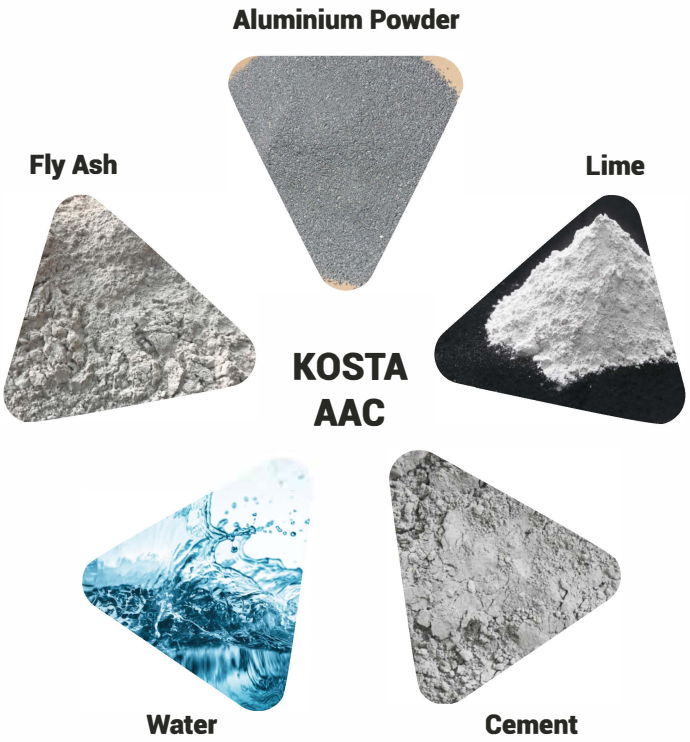
GREAT ACOUSTIC INSULATION: the porous structure of AAC provides a high acoustic insulation

HIGH FIRE RESISTANCE: AAC has an extremely high fire resistance rating of at least 4 hours

TERMITE RESISTANT: AAC can not be damaged by termites or insects

HIGH WORKABILITY: as a result of the excellent size/weight ratio, AAC allows rapid construction work. Even though AAC is a solid building material, it can be cut, sawn, drilled, nailed and milled like wood, making it an easily workable product

KOSTA AAC BLOCKS



KOSTA Autoclaved Aerated Concrete Blocks are manufactured from inorganic material, which are free of allergenic substances and have no radioactivity. KOSTA guarantees its high quality products and reliable technical characteristics.

KOSTA AAC BENEFITS

LIGHTWEIGHT

OFFER HIGH ACOUSTIC PERFORMANCE

HIGHLY DURABLE

ENSURE FAST CONSTRUCTION

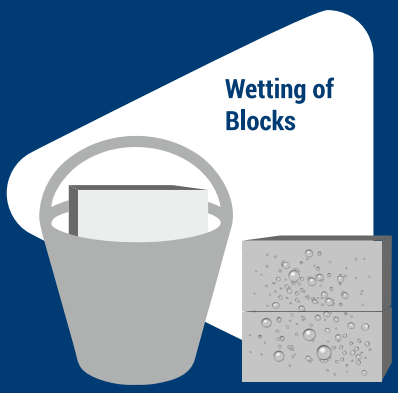
IMPORTANT GUIDELINES WHILE USING AAC BLOCKS

Mortar for Masonry

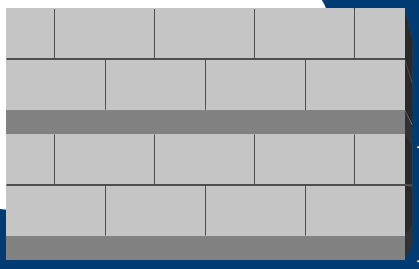
The blocks shall be embedded with a mortar, the strength of which is relatively lower than that of the mix used for making blocks in order to avoid the formation of cracks. A 1:6 cement - sand mortar may be used. (Refer IS 6041-1985 Para 3, 3.9.2)

Wetting of Blocks

These blocks need not be wetted before or during the laying in the walls; in case the climatic condition so required, the top and the sides of the blocks may be slightly moistened.
(Refer IS 6041-1985 Para 6, 6.1)



Coping Beam

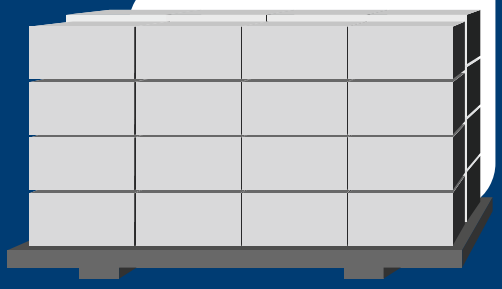


Horizontal coping at 0.9 to 1.2 mtr height & Vertical coping in center if wall length is more than 3 mtr, with 2nos 8mm reinforcement, M20 concrete. (Refer IS 6041-1985 Para 4, 4.6.5.1 & 2)

Horizontal coping & Vertical coping

Storage of Blocks

The blocks shall be stored in such a way as to avoid any contact with moisture on the site.
(Refer IS 6041-1985 Para 5, 5.1)

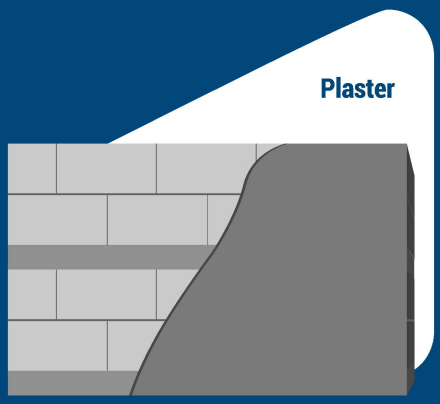


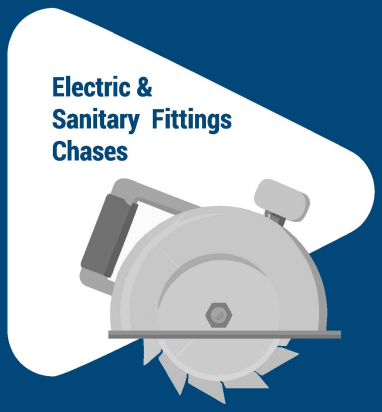
Thickness of Mortar

Keep it limited to 10 to 12 mm in cement sand mortar (Refer IS 6041-1985 Para 7, 7.1) & 3 to 4 mm in ready mix mortar.

10 to 12 mm

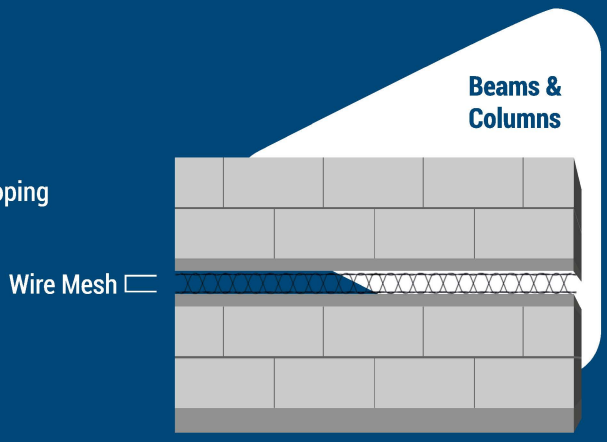
Plaster thickness required Internal:10 to 12mm,
External : 15 to 17mm (Refer IS 6041-1985 Para 12)





Chase to be grooved before plaster of wall and use electric wall chasing machine for zero vibration & good quality work, Do not chase on joints.

Use wire mesh/fiber mesh for RCC-Masonry joints & coping



KOSTA AAC BLOCKS SPECIFICATIONS

Product Specifications	Unit	Value
Length	mm	600 / 625 /640
Height	mm	200/240
Thickness	mm	100,125,150,200
Compressive Strength	N/mm2	> 4 (As per IS : 2185 Pat III)
Normal Dry Density	Kg/mm3	550-650
Thermal Conductivity	W/mk	0.24
Sound Reduction offered	Db	Upto 42
Fire Resistance	Hrs	*4
Dry Shrinkage	%	0.04

KOSTA AAC BLOCKS SIZES OFFERED

Sl. No	Dimensions of AAC Blocks	1 AAC Block volume	No. of pieces in one Cu.M.
1	600*200*100 MM	0.0120	83
2	600*200*125 MM	0.0150	67
3	600*200*150 MM	0.0180	56
4	600*200*200 MM	0.0240	42

• **Customised sizes** in **all thicknesses** also **available**

COMPARISON WITH OTHER WALLING ELEMENTS

Properties	Common Burnt Red Clay Bricks As per Is 1077	Fly Ash Bricks As per IS 12894-2002	Hollow & Solid concrete Blocks As per IS 2185 (Part -I)	AAC Block As per IS 2185 (Part -III)
Size as per IS in mm Normal	190x90x90 190x90x40 230x110x70	190x90x90 190x90x40 230x110x70 230x110x30	400,500,600 (Length) 200, 100 (Height) 50, 75 100, 150 200, 250 or 300 (Width)	400,500,600,625,650 (Length) 200,250,300 (Height) 100,125,150,200,250 (Width)
Density kg/m3	1700-1800	1700	Hollow A- Min 1500 B-1000 to 1500 Solid not less than1800	451-1000
Compressive Strength N/mm2	3.5 to 35	3.5 to 35	A-3.5, 4.5, 5.5, 7 B-2,3,5	2 to 7
Drying Shrinkage	n/a	Should not exceed 0.15%	Should not exceed 0.1%	Should not be more than 0.05% for Grade 1 and 0.10 for Grade 2 Blocks
Thermal Conductivity W/mk	0.82	20 to 30% less than concrete blocks	0.70-1.28	0.9-0.24
Sound Insulation	50 Db for 230 mm thick wall	Normal	Good	45 Db for 200 thick wall
Water Absorption	Shall not be more than 20% by weight upto 12.5 class	Shall not be more than 20% by mass upto 12.5 class	Shall not be more than 10% by mass	n/a

LIST OF APPLICABLE CODES & STANDARDS

Code	Relevance / Applicability
IS : 1661	Code of practice for application of Cement and Cement-Lime Plaster finishes
IS : 1905	Code of practice for structural use of un-reinforcement masonry
IS : 2185(Part -3)	Specification for concrete masonry units (Autoclaved Cellular Concrete Blocks)
IS : 2250	Code of practice for preparation and use of masonry mortars
IS : 6041	Code of practice for construction using Autoclaved Cellular Concrete Block masonry
BS : 5628 Part -1,2,3	Code of practice for use of masonry

KOSTA DRY MIX MORTAR

- Easy to mix and use dry mortar- saves Water, Sand, Cement & time.
- Joint thickness minimum 2/3 mm against 10 mm to 25 mm in other material.
- No curing required on the joints after installation in AAC Block Masonry
- No wastage during use.
- Easy to handle and offers uniform quality and strength
- Available in convenient packing of 25 Kg

KOSTA SERVICES

COST ANALYSIS

Helps customers to optimize construction costs according to building's function and structure.

SPECIAL TOOLS AND EQUIPMENT

Supplies tools and equipment to maximize the efficiency and ensure quality construction work.

ON SITE SUPPORT

Assigns experienced technical engineers to provide training service upon customer request.

LOGISTICS SUPPORT

Organize the most economical transportation so as to secure lead time.

KOSTA

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