

# AAC blocks from UltraTech: Light in weight and heavy in returns

The Indian construction industry is witnessing a growing trend in the building materials category with the introduction of lightweight blocks and thin jointing mortar for masonry walls.

Lightweight blocks, which are familiar as AAC blocks (Autoclaved Aerated Concrete blocks) are widely used nowadays in almost all the high raised framed structures due to its numerous advantages. The AAC blocks are installed with a thin jointing mortar by adding just water to factory made dry mix jointing mortar.

UltraTech Xtralite AAC blocks are ultra-light weight concrete blocks with a unique cellular structure that provide superior energy efficiency, fire resistance, acoustical properties and similar advantages. Unique properties include light weight, acoustically beneficial, offering design versatility, energy efficiency,

environment friendly, fire resistant, termite and pest resistant, cost effective, and non-combustible.

UltraTech Xtralite blocks are manufactured in a fully automated factory and are sold as a finished green product with no VOC, as compared to environmental impacting manufacturing practices of clay bricks/concrete blocks.

UltraTech Xtralite has one of the highest hourly fire resistance ratings per inch, up to 4 hours compared to any building material. They can store and relive thermal energy to control the temperature of indoor environments due to its cellular structure. This result significantly reduces heating and cooling cost.

UltraTech Xtralite has high surface mass coupled with the mechanical vibration energy dampening within its porous structure, resulting in a construction material with remarkable sound insulations and absorption values.

Since its porous internal structure is comprised of 60-70% air, they absorb much more sound than conventional concrete, and other materials, effectively reducing sound wave transmission.

UltraTech Xtralite can easily be cut

and shaped with tools; mechanical, electrical and plumbing systems can be accommodated. It also accommodates MEP shaft installations by routing the units after installation. UltraTech Xtralite blocks are excellent for all buildings, including schools, hotels, dormitories, commercial structures, industrial facilities and homes.

The light weight of UltraTech Xtralite also help in the engineering designs as an excellent choice for partition walls, infill walls, shear walls and more. Vertical reinforcing and horizontal bars can be installed in bond beam units when required by the engineer/structural designer. IS 6041, ASTM C1693 are the references available for the AAC masonry work.

UltraTech Xtralite has a moisture content of 25-35 per cent by mass of the dry material. The lower the density, greater will be the initial moisture content. The material gradually dries out to reach equilibrium at 4-6 per cent moisture content. Autoclaving yields the blocks with very low linear shrinkage of 0.02 per cent.

The coating or top finishing materials like plasters and putty needs to be breathable in nature to facilitate moisture dissipation. UltraTech Readiplast/UltraTech Super Stucco are the recommended top finishing materials offered by UltraTech Building Products Division.

## Installation

UltraTech Xtralite can be installed like any traditional masonry units or with UltraTech Fixoblock, a thin bed jointing mortar using notch trowels.

UltraTech Fixoblock is a ready mixed versatile thin jointing material for joining AAC blocks, fly ash bricks, and concrete blocks. This mortar is specially designed to provide stronger, more durable bonding between the blocks with superior adhesive strength. It replaces conventional cement and sand mix mortar. UltraTech Fixoblock is available in 40 kg bags. By adding just water, it is ready for use with notch trowels.



UltraTech Fixoblock conforms to ASTM C1660 and is used at 3 mm thickness for the AAC block jointing. Usage of UltraTech Fixoblock as jointing mortar for AAC blocks is widely recommended as it can withstand the tensile stresses in masonry

units due to gravity loads. UltraTech Fixoblock is well designed to achieve a desired stiffness of mortar at the AAC block- jointing mortar interface which withstands the lateral loading problems and allows the entire masonry block wall to behave well as a whole unit.

