

MERITS OF AAC BLOCKS

1. High Thermal Insulation-



These blocks have appx. 1/3 density that of Conventional Building Blocks. It has very low specific conductivity. This makes heating or cooling (Air Conditioning) very efficient. Generates regular saving on energy and global warming.

2. Light Weight-



With an approximate density of $(450-550)\text{Kg/M}^3$, which is only one third of the weight of equivalent hollow concrete blocks and half of the weight of light weight aggregate block, it reduces the loads on the concrete structure and foundation of the building substantially. This saves construction time and the total materials required for the construction of the entire buildings (saving 33% of dead load when using A.A.C Thermalite for the hourdi slabs and walls).

3. Superior Fire Resistance-



A 10 cm thick AAC Thermalite block provides a fire resistance value of 4 hours and 15 cm block 6 hours in accordance with BS-5628-3- approximately twice more protection than the normal concrete. Therefore, Thermalite is particularly suited for fire walls and fire protection of structural steel.

4. Compressive Strength-



The block has an average compressive strength of (28-35) kg/cm² which is superior to most types of light weight blocks, 25% more stronger than other products of the same density.

5. Workability-



It can be sawed, nailed and drilled easier than wood, by suitable tools available for this purpose. It results in less wastage and keep the site clean.

6. Economical, Easier & Quicker to install-



Construction time is substantially reduced while Thermalite blocks are used. Thermalite blocks are large and lighter than conventional blocks and hence can be installed at a quicker rate. Blocks are laid flush utilizing thin joint mortar hence reducing mortar and plastering cost and eliminating thermal bridging.

7. Sound Insulation and absorption-



The cellular structure of AAC Blocks provides superior sound absorption and insulation, both of which depend on density and porosity. The air porosity of the material will have significant effect on the performance of the wall. The aerated structure of Thermalite consists of millions of very small non-interconnected air cells giving very low air porosity. This gives a high resistance to the passage of air borne sound relative to density.

8. Environmentally Friendly-



Non-existence of toxic substances, less consumption of fuel, electricity and nominal wastage during production, saving of electricity in large in Thermalite building – all these advantages of Thermalite reduces the environment pollution. In fact, wherever Thermalite is used, energy is saved.

9. High Resistance to Air and Water Penetration-



The AAC Thermalite products, because of their cellular and discontinuous microstructure, are superior to the normal concrete in resistance of water penetrability & thus the external surface of AAC Thermalite walls provides superior resistance to air and moisture penetration than the traditional masonry products. Thermalite is manufactured from non-biodegradable materials, which does not rot nor attract mould, keeping interiors clean and durable.

10. Durability & Dimensional Stability-



The AAC products have been in use for nearly 70 years. Since then, the production has spread to most parts of the world and the material has proved its durability under extremely different climatic and chemical conditions. The linear expansion coefficient of Thermalite is approximately 0.02%