

Benefits of Building with Autoclaved Aerated Concrete

Autoclaved Aerated Concrete (AAC), building material has been recognized among the most environmentally sustainable building materials used in the construction industry today, whether it be residential, commercial, or industrial.

AAC requires very minimal energy consumption in its manufacturing and uses 80% less raw materials to produce the same volume as used in conventional cementitious materials.

AAC's thermal qualities will significantly reduce heating and cooling costs in all types of building structures.

Your average residential building built with AAC, for example, would save anywhere from 50% to 70% of these costs depending on location and design of the structure.

It has the highest “fire prevention rating” of any structural material in the industry being non-combustible and withstanding up to 2900 degrees fahrenheit without releasing any toxic fumes before melting to a glass like substance due to the silicon sand content.

The Twin Towers in New York went down at a temperature of around 2300 degrees.

The average residential fire ranges from 900 to 1200 degrees, obviously both scenarios far below AAC's fire tolerance.

AAC is approximately 80% less in weight, (depending on what class is manufactured), of conventional concrete materials which is a cost savings in the logistical construction process.

It also requires only 20% the amount of raw materials to produce the same volume of mass as other cementitious materials, regular solid concrete for example.

The aeration of the AAC allows it to “breathe”, causing the diffusion of moisture vapor which helps mitigate moisture levels significantly within a building by automatically absorbing and releasing outside or inside moisture content.

This is independently done without the need for additional devices normally used for moisture control.

There is no toxicity in the manufacturing process and the finished product is completely void of off-gassing any volatile organic contaminants, VOCs.

AAC structures are durable to the point of lasting hundreds of years even in severe environmental conditions.

Longevity is the most significant factor pertaining to the true affordability of all manners of construction, (“affordable housing”).

AAC can be designed to withstand over 200 mph wind loads and is incredibly sound structurally in high seismic zones due to its light weight modulus and ductility of design.

AAC in its manufacturing, has an established quality control model and stringent production tolerances, which allows builders to achieve a very high quality of construction and optimal structural performance.

AAC is incredibly versatile in architectural design and use in a wide range of construction applications.

From modular blocks for construction of load-bearing and non load-bearing walls, also, elongated reinforced panels for roof, floor and wall construction.

Its STC rating, (sound-proofing capabilities) are the highest in the industry per inch of thickness.

AAC's lightweight make-up and excellent on-site workability makes it extremely quick to install and saves in cost by eliminating up to five steps required in conventional construction.

The list of benefits and attributes for AAC could go on and on, but these should certainly demand attention from anyone intent on:
“Building Responsibly with Integrity and Knowledge”.