AUTOCLAVED AERATED CONCRETE (AAC)

THE PERFECT BUILDING MATERIAL

Autoclaved Aerated Concrete (AAC) is a lightweight, yet strong and durable building material. The first aerated concrete production started in 1929 in Europe and it has become one of the most used building products around the world since then. Produced all over the world, AAC is extensively used in residential, commercial and industrial constructions today.

AAC is an eco-friendly building material, made from natural raw materials such as sand (or fly-ash), cement, lime, gypsum, aluminium powder and water. This mix creates an aerated concrete providing excellent insulation, structure and fire protection in one lightweight product.

ENERGY AND RESOURCES EFFICIENCY

Thanks to the air pores in the material, AAC is a great acoustic and thermal insulator. The thermal conductivity (\(\lambda\)) values are between 0,08 - 0,16 W/mK depending on density used. This low thermal conductivity value allows for around 30% savings on heating and cooling costs.

AAC product densities vary between 300 - 800kg/m\(^3\) and compressive strengths are between 2,5 - 7 N/mm\(^2\). The finished product volume is 3x the volume of the raw materials used, making it an extremely resource-efficient and environmental friendly building material.

THE UNIQUE ADVANTAGES OF AAC OUTPERFORM CONVENTIONAL BUILDING MATERIALS

- Lightweight
- Fire resistant
- Fast construction
- Energy efficient
- Strong
- Soundproof
- Versatile
- Accurate
- Durable

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LARGE VARIETY OF AAC PRODUCTS

- Wall panels
- Floor and roof panels
- Partition and cladding panels
- Lintels
- Blocks
- O-blocks
- U-blocks

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**FIRE PROOF AND SAFE BUILDINGS**

All AAC products are well-suited to withstand fires, earthquakes, and other natural disasters. AAC achieves the highest possible level of fire safety and can withstand up to 4 hours of direct fire exposure. It is non-combustible and classified as Euroclass A1.

**AIRCRETE PLANT**

- **SUPER-SMOOTH SURFACES**
- **8 METER LONG PANELS**
- **ULTRA THIN PRODUCTS**
- **ZERO PROCESS WASTE**
- **LOW-CARBON FOOTPRINT**
- **MINIMUM FOUNDATION REQUIREMENTS**

**PROCESS STEPS**

1. Ball Mill (sand grinding)
2. Slurry Tanks
3. Mixing and Casting
4. Reinforcement Preparation
5. Rising (pre-curing)
6. Flat-Cake Cutting Line
7. Stacking and Autoclave Loading
8. Autoclaving
9. Unloading and Packing
10. Sawing and Milling

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