



PANLBILT STEEL & FOAM CEMENT PANELS COMPETITIVE ADVANTAGES

- Rapid Assembly
- Withstands heavy rain
- Mold, water and mildew proof
- Life Span: 50-70 years
- Fireproof: A1 Level
- Main factors affecting actual energy performance of a building: Thermal Conduction, Convection, Radiation & Mass
 - ▶ Thermal Conductivity: 0.1035 W/m.K
 - (90mm thick wall has the same thermal conductivity as 350mm brick wall)
 - ▶ Thermal Resistance: 0.869 m²·K/W
 - ▶ Outperforms framed buildings due to the combination of reduced conduction & convection plus high thermal mass
- Snow Resistance: Snow pressure 8.219 KN/m²
- Earthquake Resistance: Up to Richter 9
- Sound Insulation: 40 dB
- Wind Load: Wind speeds up to 140 MPH
- Wall Shock Resistance: 500 KG concentrated force
- Built-in Electrical Wire & Water Conduits



PERFORMANCE AND ADVANTAGES OF PANLBILT FOAM CEMENT BUILDING KITS

PanLbilt's foam cement external wall insulation refractory load-bearing board material is primarily comprised of sheet cement fiber board, hot-dip galvanized steel skeleton, cement foam core layer, cement exterior wall insulation fireproof material. Featuring 21st Century Green advanced technology bearing plate, with wind resistance, impact resistance, large bearing capacity, high compressive strength, low thermal conductivity, good thermal and acoustic insulation effect, smooth and easy to decorate, reasonable insertion, easy installation, easy to use cement and hot dip galvanizing Steel products have Class A fire protection, corrosion resistance, waterproof/mildew/mold protection, no construction waste, and long service life. It is the first choice for future steel structure engineering, villas and residential buildings.

1. Lightweight and energy-saving: the core foam cement board has a capacity of 230kg / m³, and the cement fiber board has a bulk density of 300~350kg / m³. The cement hollow brick has a bulk density of 1500 kg/ m³. Cement foam boards are lighter than cement hollow bricks. / 3, the cement wall has a bulk density of 2400kg / m³, and the cement foam board saves 80%.

The steel frame meets ASTM A36 standards. It has a minimum yield strength of 36 ksi (250 MPa) and tensile strength ranging from 58 to 80 ksi (400 to 550 MPa).

The galvanized steel track and support beams are about 70um.

2. Insulation and heat insulation: High-strength cement fiberboard is used on both sides of the product. The middle core layer uses the most advanced cement foaming technology to form 1-2mm completely independent bubbles. Foam cement contains a large number of closed cells in the pores. The non-flowing air is a good insulating medium that cuts off heat exchange. The lower the density, the more holes, the better the insulation. The internal bulk density of the product is about 230kg, the thermal conductivity of the core material is about 0.06, and the thermal conductivity of the brick wall is about 0.42, which means the thermal conductivity of the product. It is seven times lower than a brick wall. Materials with a thermal conductivity of less than 0.23 are often referred to as insulating materials and are therefore excellent insulating materials.



3. Green and environmental protection: The raw materials used in this product are cement and corrosion-resistant steel, no harmful substances to the human body, in line with international green environmental standards. At the same time, it can be assembled, disassembled and reused many times. It can be customized according to customer design and architectural requirements to fully comply with local building codes and does not produce construction waste.

4. Fire-retardant fire prevention: It is well known that due to the failure of various building fire protection requirements in recent years, fires have occurred many times, causing great harm to the country and people's lives and property. The main body of the fibre panels is made of cement and is equipped with galvanized steel. The product complies with the international AI fire performance, and the fire resistance limit exceeds 3 hours.

5. Sound absorption, sound insulation: Generally, a material with an average sound absorption coefficient greater than 0.2 is called a sound absorbing material. There are two types of traditional products: fiber (rock and mineral wool board, etc.) and porous (foam and foam glass, etc.). Foam cement board is a new type of porous sound absorbing material. Its average sound absorption coefficient is 0.8~1.4, which is a strong sound absorbing material that can reach the first or second level standard (what standard).

6. Anti-electromagnetic wave: Foam concrete is an excellent electromagnetic shielding material that can absorb and eliminate electromagnetic waves.

7. Impact resistance: The existing lightweight wallboard products in various markets are generally divided into two categories. One is on-site assembly from factory manufactured SIP panels. The two sides of the middle frame are bound by gypsum board or glass magnesium board, and there is filler in the middle, but the filler and the board are not combined to realize the hollow drum phenomenon, and the impact resistance is completely absent. Secondly, the original lamp body wall panel has only the panel and the core layer, and there is no skeleton. Although it has a certain impact resistance, it cannot be used as a load bearing because there is no skeleton, and the plate itself has a large weight, no skeleton, and the gap during installation is easy to crack. *The impact resistance of the PanLbilt product is tested according to national standards and there is no crack on the surface of the board.*



8. **Seismic performance:** The cement room adopts an integrated installation method, so that the steel on the plate is tightly connected to make it integrated. Even in the event of a major earthquake, the house will not collapse and cause personal injury.

9. **Quality Control for Assembly:** the product has been pre-assembled in the factory and conforms to 3 discrete Quality Control stations to insure proper fit and finish prior to shipment. Each component is identified with a unique number in order to streamline assembly on site. This process insures rapid assembly and bringing the structure to close quickly in preparation of internal build out of the building in preparation for occupancy.

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