

Engineering cases

Residence and hotel cases: In the residence and hotel cases, LESS PANEL can fully utilize its advantages of lightweight, high-strength, sound insulation, waterproof, and rapid construction, while ensuring construction quality, minimizing the construction period and accelerating project delivery.



Commercial cases: In commercial cases, LESS PANEL can fully utilize its advantages of lightweight and flexible, making it easy to achieve tall and big partitions, with a thinner wall thickness than traditional materials, increasing the rental area of shops, and improving commercial returns.



School cases: Schools usually have high sound insulation requirements. LESS PANEL are mixed and used in such projects to meet the sound insulation requirements of the projects, while also buying time for other processes and accelerating the construction pace of the project.



Engineering cases

Rail Transit cases: In underground rail transit projects, LESS PANEL are mainly used in underground machine rooms and warehouse partitions. Its unique waterproof and moisture-proof function can effectively reduce the impact of humid air in underground spaces on the use environment.



Hospital cases: The special function of LESS PANEL of anti-mildew and antibacterial can meet the health requirements of medical projects.



Public construction cases: Public construction have the characteristics of large space and high space, and the secondary structure of LESS PANEL is simpler than traditional materials, making it easier to achieve tall spatial walls. Its lightweight, high-strength, and waterproof advantages can also well meet the diverse functional requirements of public construction.



LESS PANEL

LIGHT ENERGY-SAVING STABLE



This is KITO Ceramics

Founded in 2004, KITO is a leading manufacturer of branded building materials with a global presence. Over the years, KITO's tile sales network has expanded worldwide.

In 2017, KITO developed a new type of ceramic panel with excellent performance - LESS PANEL. By 2023, KITO is already the largest manufacturer of foamed ceramics in China.



What is LESS PANEL?

Environmentally friendly product

LESS Panel is an environmentally friendly product made from residual materials such as river sludge, carbon and glass residues, and foam ceramic granules. The recycling enables the production of new substrates with the segmented roller furnace technology, and the recovery rate is over 90%. It also conserves and reuses natural resources and protects the environment.

Recycling saves energy and reduces the need for landfills, helping to reduce the annual waste generation of about 14.4 million tons. The interaction of industrial waste disposal and the production of energy-efficient and environmentally friendly building materials contributes to climate protection, for example by reducing emissions and saving energy.

The product is fired like a ceramic in a high-temperature burner at 1200 degrees and is therefore very stable. The internal pores are impermeable and provide a good barrier to water vapor and liquids. The product is lightweight, non-combustible, fireproof and pressure resistant.



LESS PANEL Product System

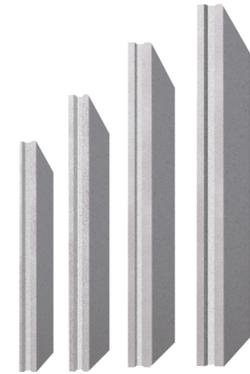


Wall Application

LESS PANEL K400
 Thickness: 80/100/120MM
 Width: 600/1200MM
 Length: 1220/1500/1800/2440MM*
 Density: 380-450KG/M³
 Fire resistance class: A1
 *Some are custom sizes

LESS PANEL K550
 Thickness: 80/100MM
 Width: 600/1200MM
 Length: 1220/1500/1800/2440MM*
 Density: 550-600KG/M³
 Fire resistance class: A1-1 hour**
 *Some are custom sizes
 ** (Lab test results in China)

LESS PANEL K600
 Thickness: 80/100MM
 Width: 600/1200MM
 Length: 1220/1500/1800/2440MM*
 Density: 580-630KG/M³
 Fire resistance class: A1-1.5 hour**
 *Some are custom sizes
 ** (Lab test results in China)



Engraving Application (KITO Window trim & Breeze block)

LESS PANEL K500
 Thickness: 100MM
 Width: 600/1200MM
 Length: 1800/2400MM
 Density: 500-550KG/M³



Special Application

LESS Insulation Panel I300-30/50
 Size: 300x300x30/50mm
 Density: 250-300KG/M³
 Thermal conductivity: 0.09-0.12W/(m·K)



Advantages

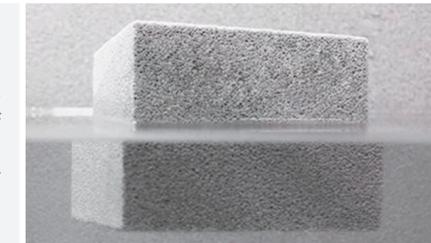


1. Sintered at high temperature

LESS PANEL is sintered at 1200 degrees and the firing time is up to 9-18 hours. It is a ceramic material with superior properties of ceramic materials, such as being far superior to cement-based materials in terms of stability and durability.

2. Lightweight

The density of LESS PANEL K400 is 380-450KG/M³, for example, the single piece of 600x1500x80mm is about 30KG. Workers can easily move, construction efficiency is greatly improved.



3. High Strength

The compressive strength of 80mm thickness LESS PANEL K400 is 5Mpa, and for 120mm thickness, the value is 6Mpa. The single point suspension force of 80/120mm thickness is 846N/916N. The breaking strength of 80/120mm thickness is 11229N/38242N.
 *The above data are certified by TÜV testing.

4. Waterproof

Although it appears that LESS PANEL is full of air pores throughout, these small pores are closed, which means that water vapor can barely pass through our material. In fact, we have a very low water absorption rate of about 3.5%. The water vapour permeability is also 0.46 ng/(Pa·s·m).
 *The above data are certified by TÜV testing.



Advantages

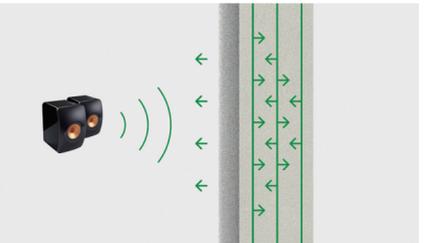


5. Fire resistance

The material itself is fired at high temperature and has a fire resistance class of A1. We have developed products in addition to LESS PANEL K550 and LESS PANEL K600 for scenarios that require fire resistance limits, which reach over 1 hour and 1.5 hours, respectively, and can meet the needs of the vast majority of buildings.
 *The above data are certified by CABR testing.
 *Will test in Germany in 2023

6. Sound insulation

The special closed-cell structure also brings excellent sound insulation performance. The Air borne sound insulation of 80/120mm thickness LESS PANEL K400 is 38/46 db. In addition, we are developing specialized acoustic barrier materials.
 *The above data are certified by TÜV testing.



7. Energy saving and environmental friendly

The thermal conductivity of 80mm thickness LESS PANEL K400 is 0.16 W/(m·K), and can be combined with LESS Insulation Panel I300 for better insulation performance. The raw material of this product is mainly industrial solid waste, which provides a new way to treat industrial solid waste. The rate of secondary solid waste generation in the production process is close to 0.
 *The above data are certified by TÜV testing.

8. High efficiency

We have introduced multiple sizes of panels to suit different construction scenarios, minimizing the number of cutting at the construction site later. At the same time, the light weight of the panels and their relatively small size effectively improve the efficiency of workers in construction.

