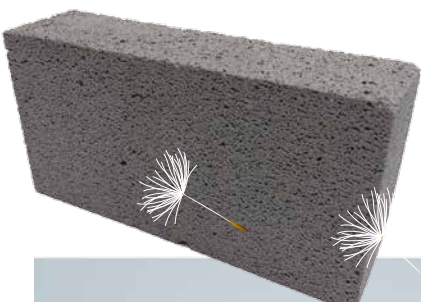


HPB TECHNOLOGY CO., LTD.



*LBB*

**Lightweight Bubble Brick**



[www.hpb.com.tw](http://www.hpb.com.tw)





01



# Lightweight Bubble Brick



Lightweight Bubble Brick is a good lightweight, environmental protective brick that made out of the process of matching and mixing siliceous materials (cinder, coal ash), calcium materials (cement, calcium oxide), appropriate amount of modifier (gypsum) and regular amount of air entraining material (aluminum powder) together, pouring point, air-entraining, taking shape. After the cutting, the bricks will use high pressure and high temperatures steam to cement them up.

The Lightweight Bubble Brick is one third lighter than that of red brick. The small hexagonal cells in the brick reduce the weight of main structure. So it's good for using in the high rise building and achieve good quakeproof effect.

The Lightweight Bubble Brick also has good performance of thermal resistance because its unique cell structure gives the brick low density and low heat transfer coefficient. The temperature of exterior wall and garret floor are always high in summer so the thermal resistance of Lightweight Bubble Brick can effectively block the heat, reduce the air-conditioner power consumption and achieve the energy saving and Carbon reduction.

The product is made entirely of non-combustible material so it is fireproof over 3-hours.

## Construction

- 1 Like red bricks, use the traditional wet construction to pile up. However, the light weighted speed up the construction.
- 2 With the effects of fireproof, soundproof, thermal resistance, you can have a safe and comfortable living environment.

# Features



## 1 *Lightweight and Seismic Resistance*

Lightweight Bubble Brick, a block under the cell structure, is low density, solid and lightweight. The weight of this product is one third less than red brick. Under the condition of lightweight, it effectively reduces the loading of main structure to improve the strength of seismic resistance.

## 2 *Fireproof*

This product is recently the best fireproof brick and the partition construction. The reason is that it is the mixture of siliceous materials and calcium materials, takes shape by the process of special construction, use high press steam curing, pass the Fire Resistance Test of CNS 12514 of over 3-hour fireproofed. The fireproof performance is stronger than traditional brick wall.

## 3 *Thermal Insulation*

The cells structure and siliceous materials in the Lightweight Bubble Brick is made out of the non-combustible material so it has low thermal conductivity and can be used as thermal insulation material for exterior walls and garret in building. In summer, Lightweight Bubble Bricks can effectively block out the outdoor temperature and reduce the air-conditioner consumption. In winter, they can keep the room temperature and reduce the usage of heater, which meets the need of energy saving and carbon reduction in the recent time.

## 4 *Soundproof*

As for soundproof, the Lightweight Bubble Brick has an outstanding performance. It is good for the building in all kinds of soundproof and partition walls because the bricks can effectively isolate the indoor and outdoor sound.





## 5 *Low Water Permeability Moisture Resistance*

The structure of Lightweight Bubble Brick consist of a number of small cells. All the cells are in independent and seal type and the cell diameter is about 1-2 mm. Therefore, it can effectively stop the water spreading. The Lightweight Bubble Brick made by unique manufacturing process is solid but in low density, enables to adjust room humidity. Due to the quick drainage, the living environment will be always comfortable and won't have efflorescence happened on the wall.

## 6 *Exact Size*

Applying the patent cutting equipment to cut an even and smooth product with exact size. For that reason, the finished wall is very complete. The workers can putty and paint directly on the wall and improve the speed of construction.

## 7 *Economy Construction*

The weight of brick is light so while made the brick, we enlarge its size to 20\*20\*60 cm, the same size as those of 24 red bricks. For that reason, we save a lot of material. In terms of trim size, because the measurement of Lightweight Bubble Bricks is more accurate, it can save the use of cement mortar as well.

## 8 *Environmental Friendly*

Lightweight Bubble Brick is made out of the recycle and reused materials. Its manufacturing process is low energy consumption with no chemical materials in it, which is a good green building material not only with no harm for human body, save energy but reduce waste.

# The Feature Comparison between Lightweight Bubble Brick and Red Brick

Products	Lightweight Bubble Brick (60x20x20cm)	Red Brick (1 / 2B) (23x11x6cm)
Fireproof	3 hours	2 hours
Soundproof	44 (STC)	40 (STC)
Thermal conductivity	0.3099 (W / m.k)	1.383 kcal / m <sup>2</sup> h°C
Compressive strength	64kgf / cm <sup>2</sup>	120kgf / cm <sup>2</sup>
Melting Point	1600°C	800°C
Dry Density	500~600kg / m <sup>3</sup>	2100kg / m <sup>3</sup>
Construction method	Wet, dry and semi-wet	Wet
Speed of Construction	About 20m <sup>2</sup> / day / person	About 10m <sup>2</sup> / day / person
Construction Management	Fast-speed construction, easy to manage, clean construction site	Dirty construction site, hard to manage
Waste collection	Less waste, low waste collection	High consumption, many waste, high waste collection
Pipe Work	Easy to cut	Takes time and labor
Environmental	Non-polluted manufacturing process	Environment pollution and about to eliminate
Cost Effectiveness	Lightweight, low structure cost, seismic resistance	High structure loading and impracticable for high rise building
Size	Basic size 60x20x10cm Basic size 60x20x20cm Other size enables customization	One size only

*The specific weight of Lightweight Bubble Brick is lower than traditional red brick but is intensity.*

*The material is solid and similar to that in red brick but won't shrink, crackle and has efflorescence like ordinary cement products.*

## Dimension

15 x 20 x 60 cm | 10 x 40 x 60 cm | 20 x 20 x 60 cm | 15 x 30 x 60 cm

(Other dimensions could be specified by client)

## Application

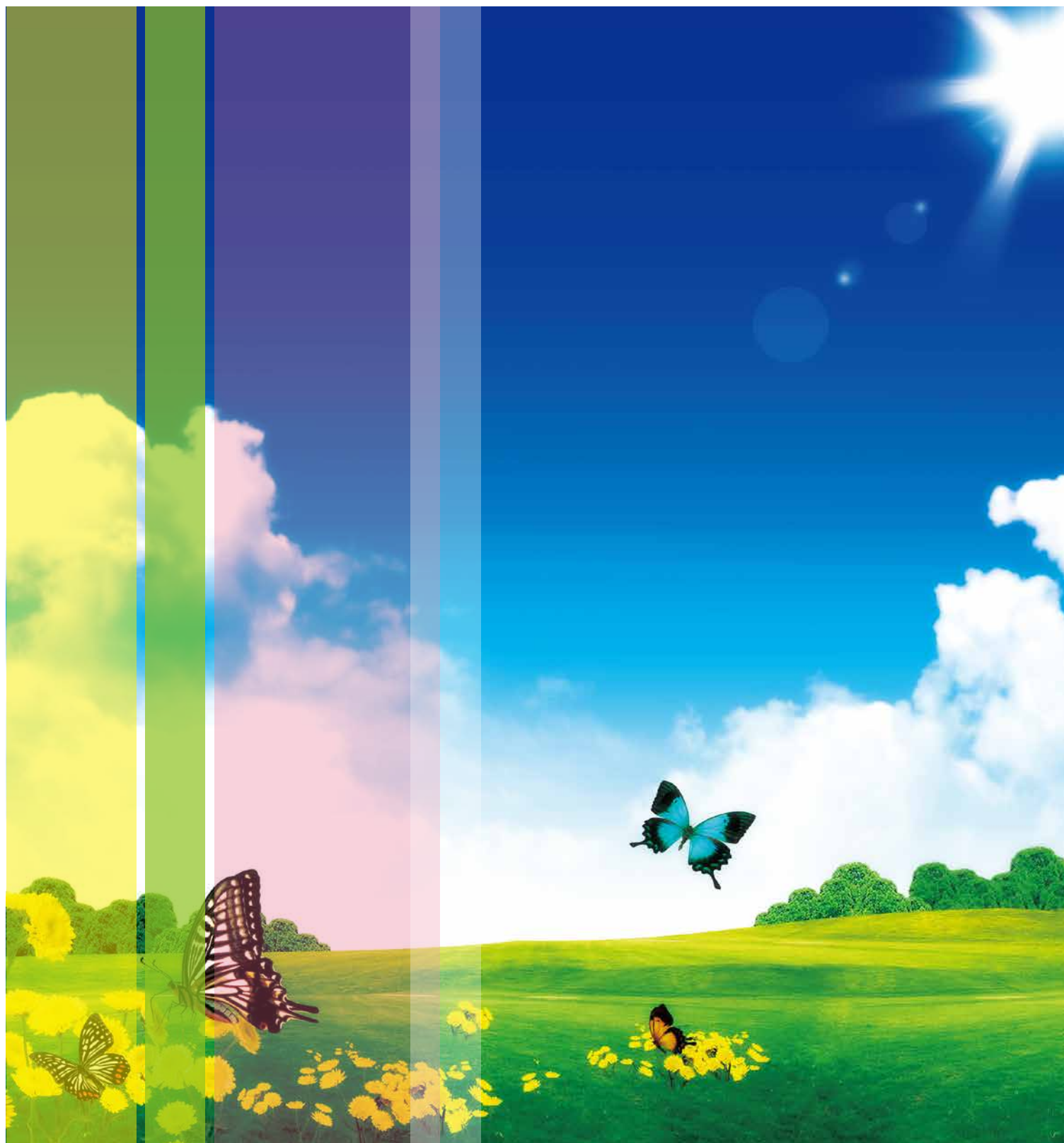
partition, high-ceiling partition, double-wall, long wall, exterior wall, fire wall.....

*Lightweight Bubble Brick*



06





宙峰有限公司  
**HPB TECHNOLOGY CO., LTD.**

3F, No. 199-3, Sec. 3, Chung Hsiao E. Rd., Taipei City 106, Taiwan  
Tel : **+886-2-2752-6181** Fax : **+886-2-2752-6096**  
Email : **hpb.tech@msa.hinet.net** Website : **www.hpb.com.tw**



欲知更多環保建材  
請掃描左邊QR Code