

第三名
3rd place

作者：
Creator

春池玻璃實業有限公司
/ Spring pool glass

安新輕質節能磚 Anxin Lightweight

春池玻璃秉持「為地球減壓，為環境造氧」的使命，每年處理的廢玻璃占全臺 70%，是全臺最大的廢玻璃回收廠。春池積極投入綠色製程，降低能源消耗，透過創新研發，以廢玻璃為原料開發出輕質隔熱、隔音建材，擴大推廣節能綠色建材，對循環經濟及節能帶來極大貢獻。

安新輕質節能磚透過特殊的蜂巢結構，達到良好的隔音與防火特性，並全由無機質製成，在遭受火焰噴燒時，不會產生任何有毒氣體與濃霧，增加居家與建築物的安全保障。搭配具有耐震能力的輕鋼構框架系統，不但達到結構輕量化，同時也能達到居家寧靜品質與居家安全等需求。節能磚具有防火、隔音、隔熱、環保、無毒、減震等 6 大特性，而且重量只有傳統磚的 1/8 重，單手即可拿起，極具市場潛力。我們的作品優勢是施工很快，比一般的磚作快 4 倍，可以減省人力。連工帶料，節能磚的成本比磚牆還便宜 10%。

Turn recycled glasses into valuable energy-saving bricks.

Chun-Chi glass company is the biggest glass recycling center which helps processing 70% of waste glass in Taiwan. Their goal is to protect the environment and produce more oxygen for the ecosystem. In order to achieve the goal, they started the green manufacturing process that reduces the energy consumption. Moreover, the company developed light building materials used for both insulation and thermal insulation. At the same time, they widely spreaded the idea of using green building materials, bringing great benefit to the improvement of circular economy and energy saving.

Because of the special honeycomb structure, AH LIGHTWEIGHT INSULATION BLOCK can be effectively used on fire prevention and insulation. The block made by inorganic substance won't emit any toxic gas when being burned by fire. If the block is at the same time used with the aseismatic light weight steel structure, it can not only lighten the building structure but also improve the safety of the buildings and the living quality of residents.

AH LIGHTWEIGHT INSULATION BLOCK has the six major characteristic of being fireproof, soundproof, heat insulated, environmentally friendly, non-toxic, and damping. Moreover, the AH LIGHTWEIGHT INSULATION BLOCK only weigh of the traditional block, which can be lifted by one hand. This speciality increases the market potential of this product.

"The advantages of our product: Can be made 4 times faster compared to the traditional block. The cost of AH LIGHTWEIGHT INSULATION BLOCK is 10% cheaper from the traditional block due to its reduction of cost on labor and raw material."



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安新輕質節能磚

AH LIGHTWEIGHT INSULATION BLOCK

回收玻璃變身節能磚，綠建材身價翻倍

春池玻璃秉持「為地球減壓，為環境造氧」的使命，每年回收處理的廢玻璃占全台70%，是全台最大的廢玻璃回收廠。春池玻璃積極投入綠色製程的改善，降低環境衝擊減少能源的消耗，透過創新研發，以廢玻璃為原料開發出輕質隔熱、隔音建材，擴大推廣節能綠色建材，對循環經濟及節能帶來極大貢獻，

節能磚

廢玻璃



設計說明&目的

安新輕質節能磚透過特殊的蜂巢結構，達到良好的隔音與防火特性，此外，安新輕質節能磚由全無機質製成，在遭受火焰噴燒時，完完全全不會產生任何有毒有害的氣體，也不會產生濃霧，大大增加居家與建築物的安全保障。

特殊蜂巢構造的安新輕質節能磚，具有良好的防火、隔熱、隔音效果，搭配上具有好耐震能力的輕鋼構框架系統，不但達到整體的結構輕量化，同時也能達到居家寧靜品質與居家安全等需求。

- 利用熔點高的特質做成防火建材
- 許多人的屋子因隔熱不佳，耗費多能源並沒有達到相對應的效果
- 有獨立的氣孔泡，隔熱效果非常明顯，節省能源並創造室內外極大的溫差
- 讓我們用回收玻璃創造新的意義，也間接的幫助這個社會，成為隱身在背後的隱形英雄

產品規格

組成成分

安新輕質節能磚的主要成分為：水泥、面板玻璃砂(氧化矽、氧化鋁成分)氧化矽這樣的成分是作阻熱材的絕佳成分。將這樣不容易取得的材料，結合水泥成分，形成蜂巢結構，應用於建築材料、隔音材料、防火材料上，是一種全新的突破。

相關認證

- 台灣TAF耐燃一級
- 綠建材標章
- 內政部防火二小時認證
- 新加坡TUV四小時防火認證
- 新加坡TUV兩小時防火認證

0.5 Mpa 抗壓強度	防火測試 (整體牆面) 一小時通過 1hr fireproof passed	40 dB 隔音係數	耐燃測試 耐燃一級 First Class	0.3 g/cm3 密度
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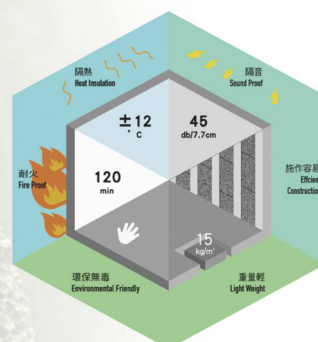
實際應用

節能磚從2013年量產，以新加坡當主要市場，是東南亞最先進的國家，對新建材的接受度也最高。如果節能磚能通過新加坡的法規，週邊的泰國、印尼、馬來西亞各國也會逐步跟進。節能磚在歐美市場的詢問度也頗高，要讓春池的節能磚走向國際，讓世界認識台灣的回收創意。



主要效能

節能磚具有防火、隔音、隔熱、環保、無毒、減震等6大特性，而且重量只有傳統磚的1/8重，單手即可拿起，極具市場潛力。「我們的優勢是施工很快，比一般的磚作快4倍，可以減省人力。連工帶料，節能磚的成本比磚牆還便宜10%。」



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Energy-saving bricks



Waste glass



Introduction and purpose

Because of the special honeycomb structure, AH LIGHTWEIGHT INSULATION BLOCK can be effectively used on fire prevention and insulation. The block made by inorganic substance won't emit any toxic gas when being burned by fire. If the block is at the same time used with the aseismatic light weight steel structure, it can not only lighten the building structure but also improve the safety of the buildings and the living quality of residents.

- The constructing process of normal houses are energy-intensive which is because they were built by building materials that aren't effective on thermal insulation.
- Independent and separated stomas on it are effective on thermal insulation.
- Using fireproof building materials with high melting point.
- We reused the recycled glass, and at the same time benefits the society.

Specification

Product parts

Main constituents of the AH LIGHTWEIGHT INSULATION BLOCK: concrete, penel silica sand (silica and alumina) this combination creates the best component to make building materials for thermal insulation. The honeycomb building structure made by the combination of the rare penel silica sand, concrete is an innovation in this field.

Certifications

- First class of Flame resistance
- Ecomark of Green Building Materials
- Singapore TUV four-hour fireproof test certification

0.5 Mpa Compressive strength	Fireproof test (the entire wall) 1hr fireproof passed	40 dB Coefficient of sound insulation	Flame resistance rating First Class	0.3 g/cm ³ density
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Application

Singapore is chosen to be AH LIGHTWEIGHT INSULATION BLOCK's major market because it is the most advanced country in Southeast Asia, which has the highest level of acceptance to new building material. Moreover, if the blocks can be examined under the strict rules of Singapore, other asian countries such as Thailand, Indonesia, and malaysia will also want to pursue our product. This marketing strategy enables the AH LIGHTWEIGHT INSULATION BLOCK and this great recycling idea of Taiwan be seen worldwide.



Main purpose

AH LIGHTWEIGHT INSULATION BLOCK has the six major characteristic of being fireproof, soundproof, heat insulated, environmentally friendly, non-toxic, and damping. Moreover, the AH LIGHTWEIGHT INSULATION BLOCK only weigh 1/6 of the traditional block, which can be lifted by one hand. This speciality increases the market potential of this product.

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