



Green Building Material Label

Background of Promoting Green Building Material Label

In line with low-carbon policy trends around the world, the government has promoted the Green Building Material (GBM) labelling policy in Taiwan. First implemented in 2004, and the GBM labelling policy was developed based on the ISO15686 series, ISO21930 series, and ISO14040 series, as well as the Integrated Building Performance system proposed by the EU. With **"Humanistic Health; Sustainable Earth"** as the main concept of the GBM Label and considering the methodology of the **Life-Cycle Assessment**, the GBM was separated into four categories defined based on those concepts: ecological GBM, healthy GBM, high-performance GBM, and recycling GBM.

Life Cycle of the Building Materials

	Resource	Product	Usage / Promotion	Recycle
Content	Ecological	Healthy	High-performance	Recycling
Principle	Natural Materials / Less label treatment involved	Low health impact	High efficiency	Domestic waste recycle
Qualified Items	No resource scarcity crisis Less artificial treatment	HCHO TVOC	Sound insulation Permeability Energy saving	Renewable materials / ingredients Mixing Proportion
Extension	Save energy / Save resource Obtain through local industry Decomposability / Renewability Lifespan Extension	Positively promote Health	High Efficiency High-Performance	High Reproduce Rate/ Required Performance
	Earth Sustainability	Humanistic Health		Earth Sustainability



Achievements of the GBM policy

Since 2006, the building code has required usage of 5% GBM products for the interior surface of public use buildings. The requirement was raised to 30% in 2009 and then to 45% of interiors and 10% of outdoor areas in 2012. Recently, the quality and reputation of GBM products have improved, and many consumers are requesting that GBM products be used in their private buildings as well.

General Guidelines

The General Guidelines is the prerequisites for filing green building material labels application, including principles of environmental protection, performance standard, and safety regulations.

Evaluation Criteria

General Guidelines for GBM	Restricted Substance		
	Heavy-metal	Asbestos	Radioactive rays
	Toxic	Chemicals restrained	Chlorine ion
General Requirements			
no-harmful to environment	specification standard	laws and regulations	

Restricted Substances

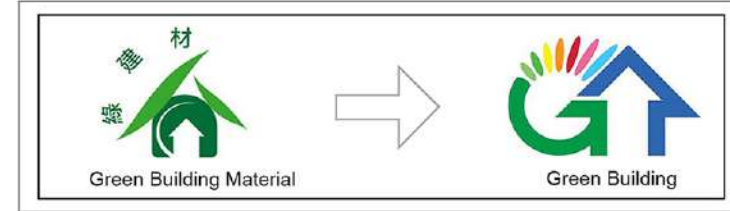
- Detection value of heavy-metal component of non-metallic material shall not exceed the standard value based on Toxicity characteristic leaching procedure (TCLP).
- Shall not contain asbestos components.
- The contained natural radioactive material shall not have any risk of public safety. Once the radiation dose rate at 0.1 meters on the surface of the building material which exceed 0.2 micro-Sievert per hour (excluding background value), the activity concentration analysis shall be carried out. The index and the scope of use are in accordance with the "Administrative Measures on Natural Radioactive Substances".
- Shall not contain toxic chemicals published and controlled by Environmental Protection Administration, Executive Yuan.
- Shall not contain chemicals restrained by Montreal Protocol on Substances that Deplete the Ozone Layer.
- Total amount of Chloride ion detected from cement-related products shall less than or equal to 0.1%.
- Chlorine-containing polymer materials are not allowed to apply for the healthy and ecological green building material label. When applying for recycling or high-performance green building material labels, all the sub-items of this manual shall be applied.
- Indoor decoration materials should be tested for HCHO and TVOC fugitive emissions. The fugitive rate must comply with HCHO less than or equal to 0.05mg / m³.hr, TVOC less than or equal to 0.19mg / m³.hr. However, when the product obviously does not produce fugitives, after approved by the classification assessment team of the professional institution, it's not limited to the above-mentioned criteria.

Connection from Green Building Material to Green Building

"Green Building Label System" is also an important policy established by the Architecture and Building Research Institute, Ministry of the Interior. The green building labeling system and the seven indicators were launched in 1999 and were then extended to nine indicators with the development of the "Biodiversity" indicator and "Indoor Environment" indicator in 2003. Furthermore, to continually developing green buildings based on previous accomplishments correspond to the impacts of global warming and urban heat island effects, the Institute extended the green building promotion into a large-scale practice of the "EEWH system". The system covers a variety of aspects of ecology, energy saving, waste reduction, environmental protection in building correlated to the "Ecological", "Health", "Recycling", "High performance" campaign of the Green Building Material Label.

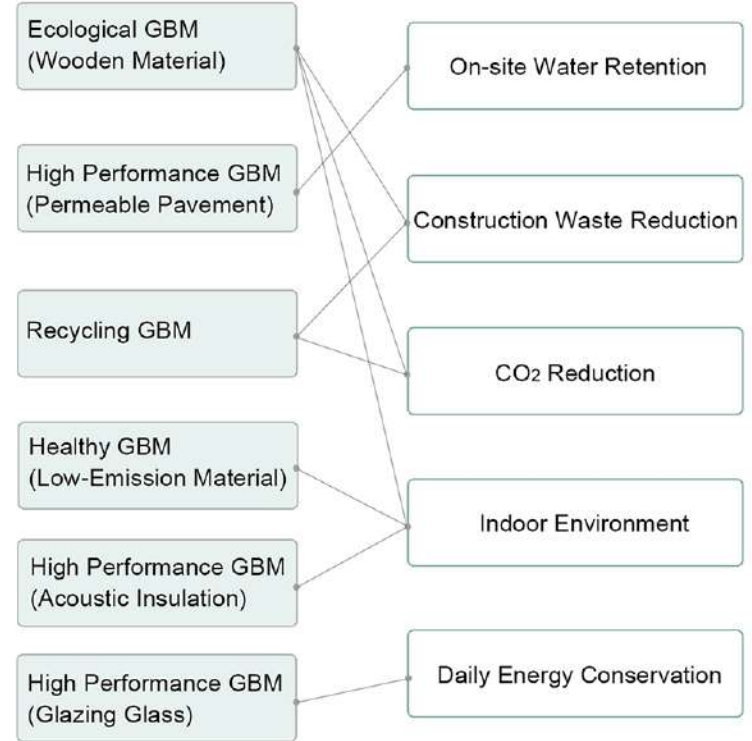
The EEWH rating system of GB labels in Taiwan

Ecology	Energy Saving
1. Bio-diversity 2. Greenery 3. Water content of the site	4. Daily Energy Conservation
Waste Reduction	Health
5. CO ₂ Emission Reduction 6. Construction Waste Reduction	7. Indoor Environment 8. Water Conservation 9. Sewage and waste disposal facility improvement



GBM Category

GB (EEWH) Indicator



High Performance GBM (Acoustic Insulation)

High Performance GBM (Glazing Glass)



Recycling GBM

High Performance GBM (Permeable Pavement)



Ecological GBM (Wooden Material)

Healthy GBM (Low-Emission Material)



High Performance GBM (Acoustic Insulation)



Architecture and Building Research Institute, Ministry of the Interior
Humanistic Health, Sustainable Earth

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綠建材解說與評估手冊
 EVALUATION MANUAL FOR GREEN BUILDING MATERIAL



2020 Edition Manual
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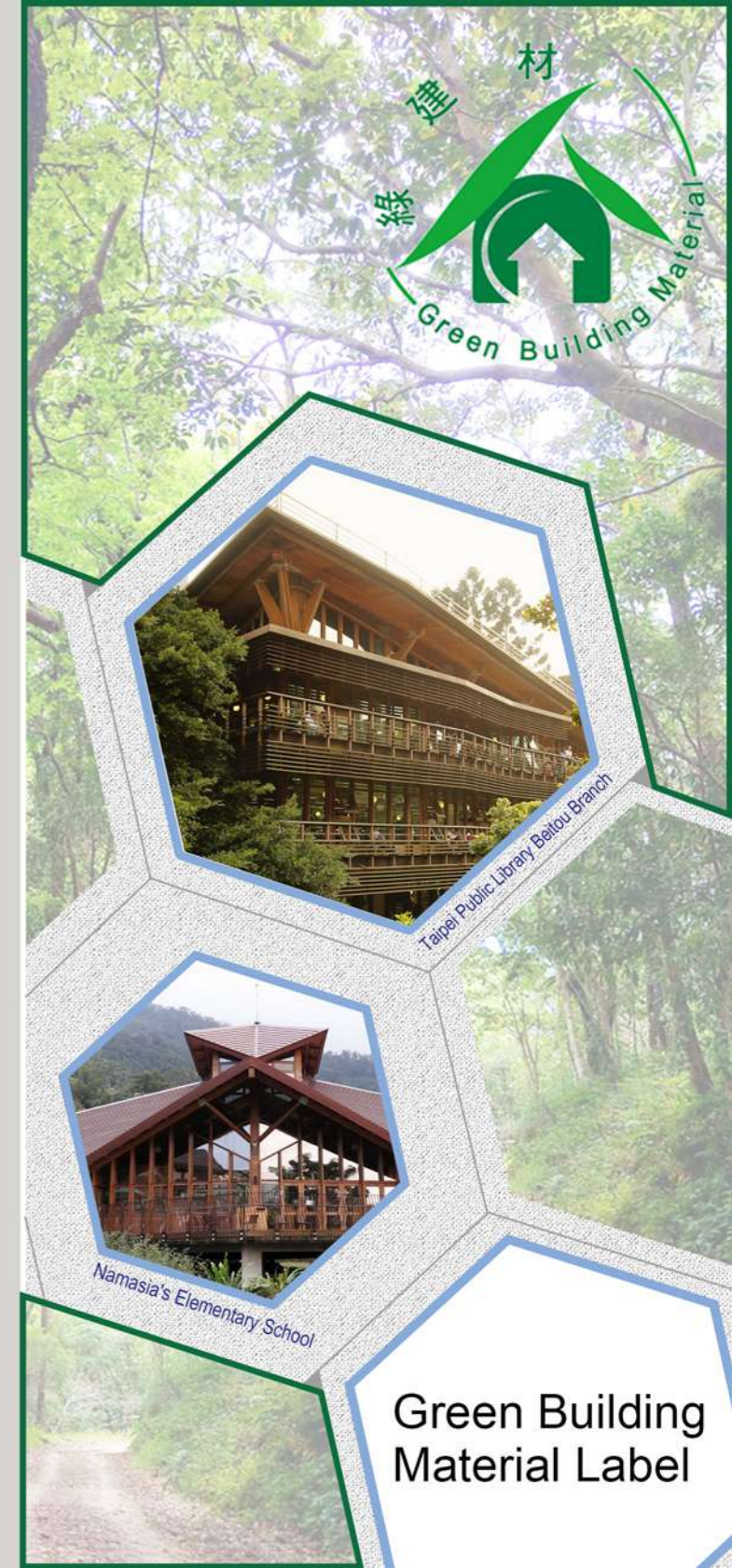
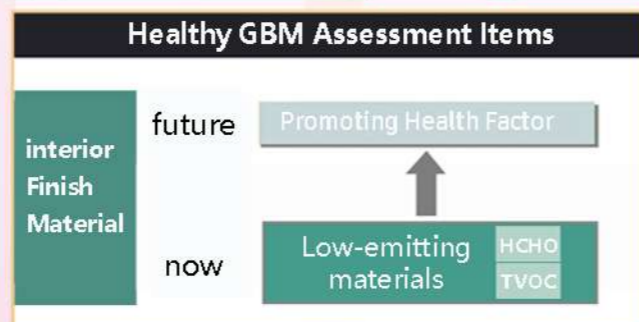
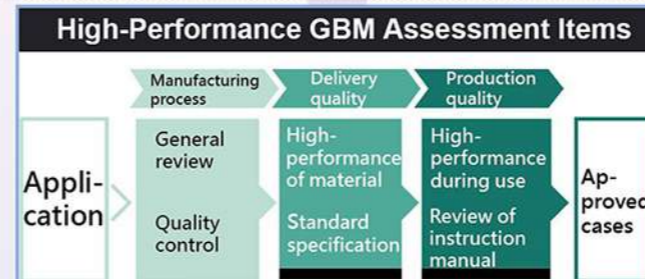
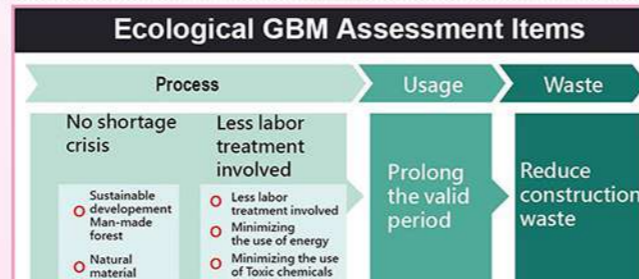
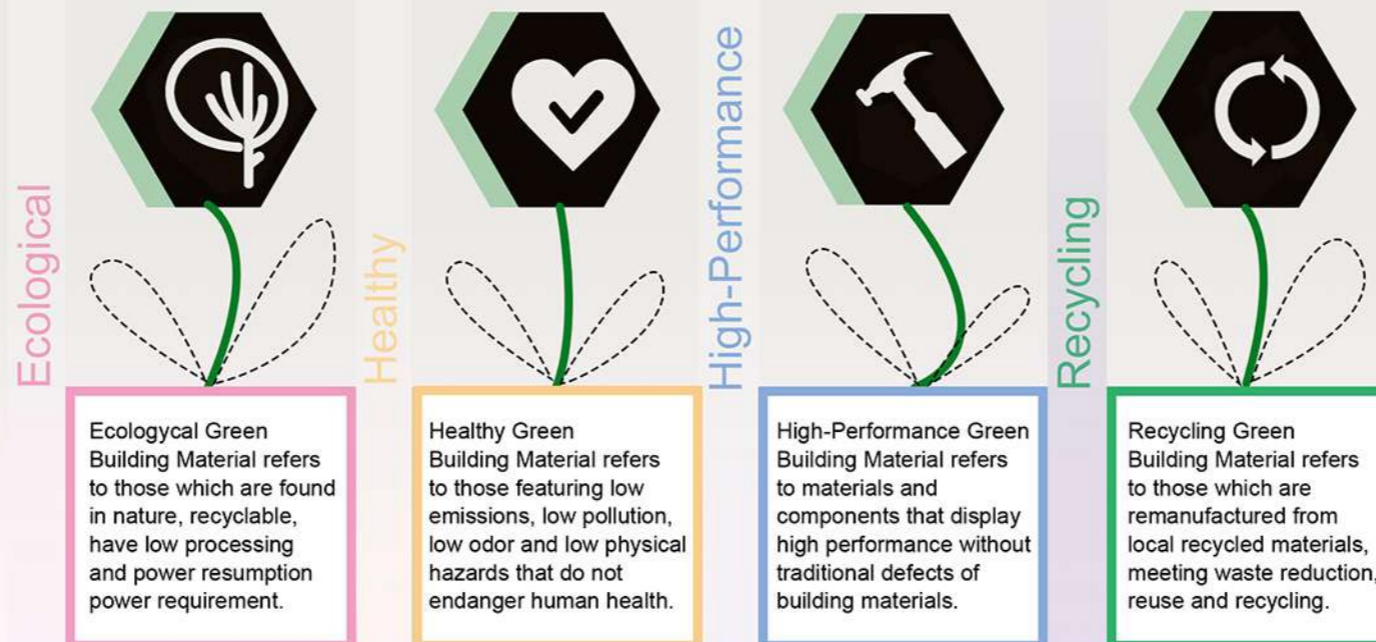
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The policy of green building materials in Taiwan

Since 1999, the Architecture and Building Research Institute, Ministry of the Interior promoted the "Green Building Material Labeling System", carried out researches on building material volatility analysis and established the material-testing equipment. After thorough investigations from 2003, the institute started to plan the "Green Building Material Labeling System", and it was officially launched in July 2004. Firstly, the "Healthy" and "Recycling" Green Building Materials were examined and the labels were certificated. Furthermore, the institute implemented "General Principles" and four types of green building materials evaluation standards: "Healthy", "Ecology", "Recycling", and "High performance" to meet the technical criteria.



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