



ABM®



Residential/Commercial Building Insulation



上海新型建材岩棉有限公司
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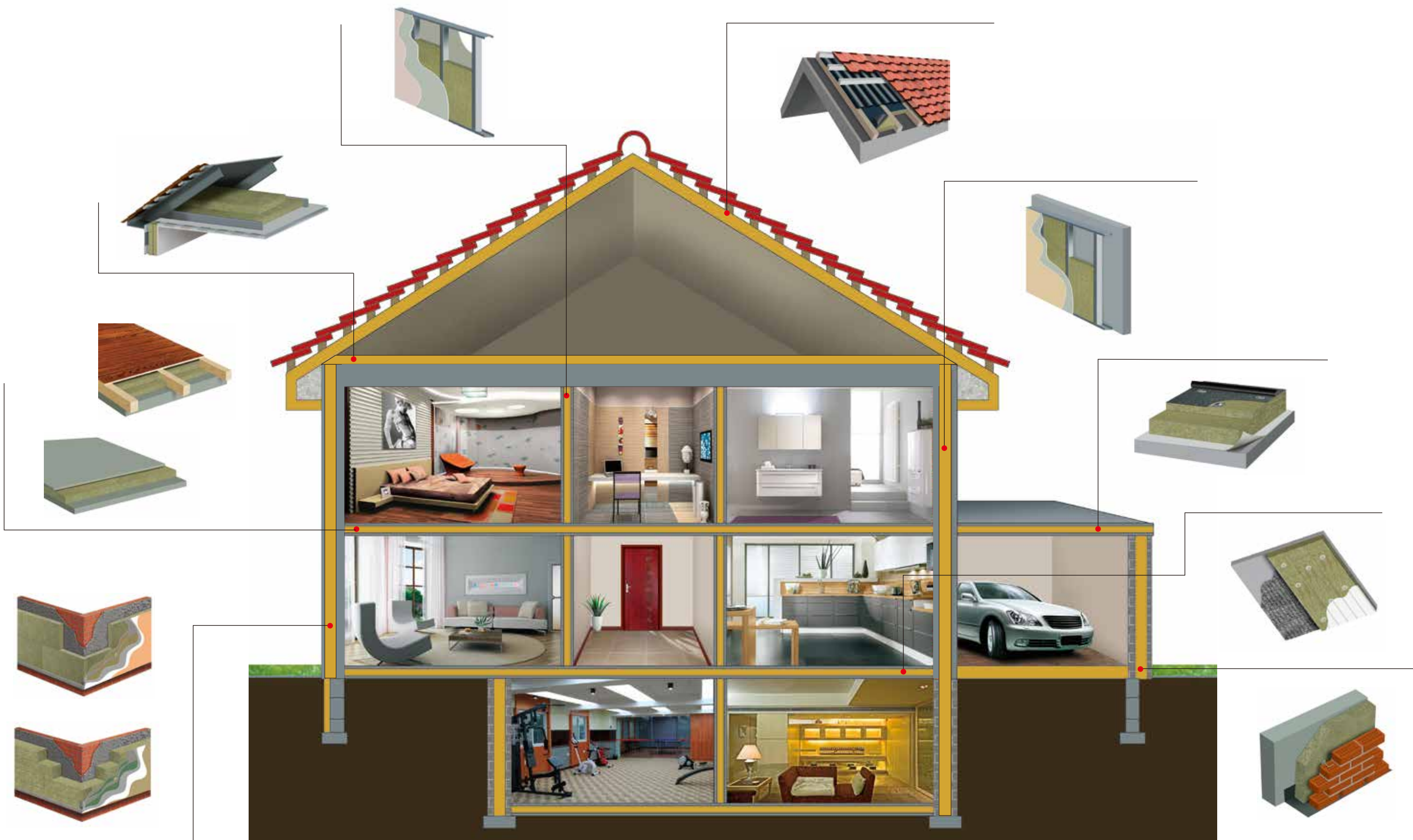
上海新型建材岩棉大丰有限公司
SHANGHAI ABM ROCK WOOL DAFENG CO., LTD.

Add: No 99, West Zhangjian Road, Dafeng District, Jiangsu, China
Tel: +86-515-83369988 Fax: +86-515-83369986

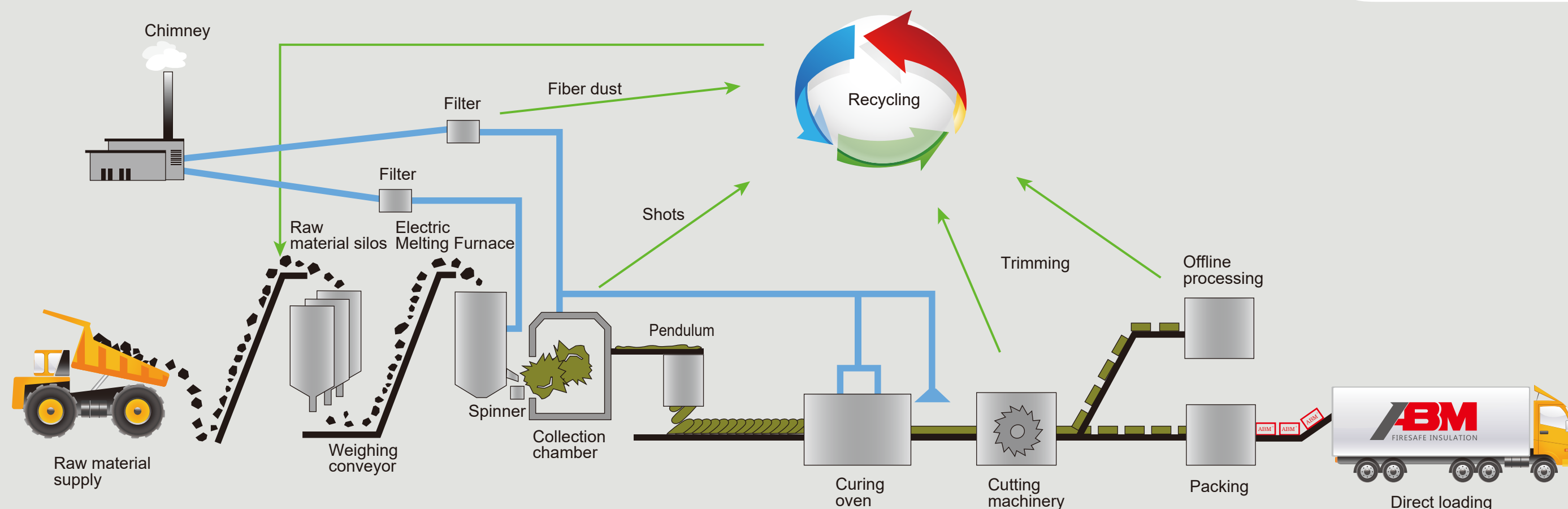


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上海新型建材岩棉有限公司
SHANGHAI ABM ROCK WOOL CO., LTD.



Production Process



Rock Wool Properties



Fire Resistance

ABM rock wool is made of natural rock, it is non-combustible material with melting point above 1000°C ; When setting on fire, ABM rock wool can reraed the five spreading, and doesn't generate any poisonous gas or flaming droplets; The excellent resistance to high temperature and low thermal conductivity at high temperature can make more time to save lives and reduce property loss.



Thermal Insulation

Due to the thin and long fiber (fiber average diameter 5μm, better than national standard's 7μm requirement), and low shot content (shot content is about 5%, much better than national standard's 7% requirement), ABM rock wool has low thermal conductivity and therefore excellent thermal insulation performance.



Stability Durability

Fiber of ABM rock wool is three dimensional distribution, which increases the product's mechanical strength effectively. FR series, HR series and SP series have high tensile and compression strength, can resist against impact, alternate positive and negative wind load very well. ABM rock wool products are able to maintain stable quality within the whole life cycle of buildings.



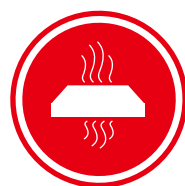
Water Repellence

Hydrophobic rate of ABM rock wool is more than 99%,mass water absorption is less than 0.5%,no wicking permeation. If soaked by high pressure water,no effect on properties when it is dried , Will not have expansion or deformation problems after dry out.



Environment-friendly

ABM rock wool does not contain CFC, HCFC or HFC that may damage the ozone layer. Rock wool is asbestos free, and has been removed from list of potentially carcinogenic substances by IARC (International Agency for Research on Cancer, a WHO affiliate). ABM rock wool is neutral or weak alkaline, which means no corrosion will happen.



Permeability

The open porous fiber structure gives ABM rock wool products perfect vapor permeability and moisture proof ability, therefore condensation and mildew are avoided.



Sound Control

ABM rock wool products are made of porous fiber structures. These structures can transform acoustic energy to heat by vibration and friction, thus greatly reducing the sound reflection and transmission, creates a quiet inside environment.



Weather Resistance

ABM rock wool has good resistance against frost, freeze-thaw and UV. Seasonal temperature changes do not bring it expansion or contraction. If not affected by other materials in the same system, the product is able to keep it's properties under extreme climate.



Energy Saving

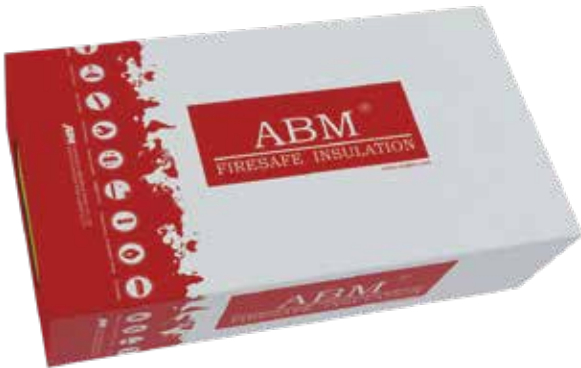
ABM rock wool can save more than 100 times energy than it consumes during production and recycling.



Easy to fit

ABM rock wool products are easy to transport, and also convenient to apply. The products can be cut with a knife easily.

ABM® External Thermal Insulation Board



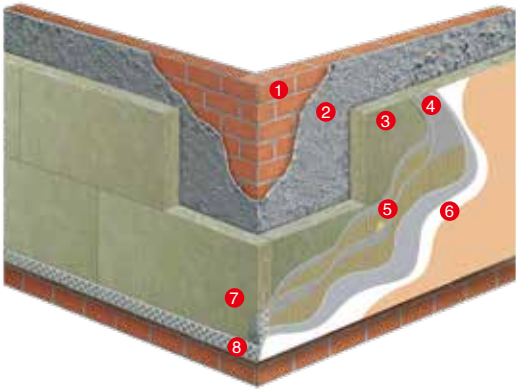
Standard Specification

Product Type	FRB 75	FRB 100	FRB 150
Nominal Density, kg/m³	≥ 140	≥ 140	≥ 150
Thickness, mm	40~150		
Size(L × W), mm	1200x600		

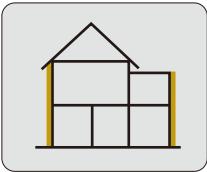
Other size or density may be available on request.

Product Application

External Thermal Insulation Composite System with FRB Series



- 1 Substrate
- 2 Adhesive Mortar
- 3 ABM External Thermal Insulation Board (FRB series)
- 4 Base Coat
- 5 Anchors
- 6 Finishing Coat
- 7 Corner Protection Rail
- 8 Starter Rail



★ In order to give full play to rock wool's vapor permeability, impermeable facing materials such as ceramic tile, high elastic paint should be avoided when rock wool external thermal insulation composite system is applied, so the mildew and condensation of the building can be prevented.

Product Description

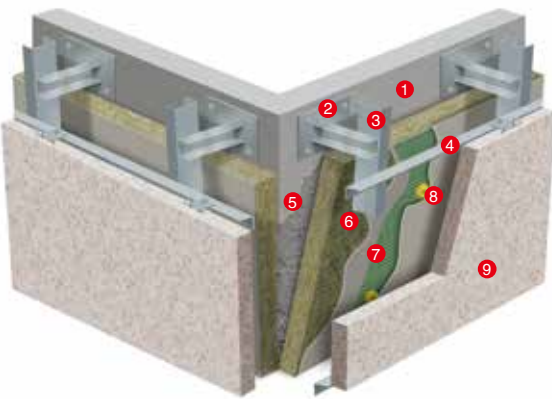
ABM® External Thermal Insulation Board (FRB series) is designed for external thermal insulation composite system and dry-hanging curtain wall system as a fire proof insulation material. With high compressive and tensile strength, excellent hydrophobic and moisture proof property, it can be applied on all kinds of solid wall substrate such as masonry and concrete, and both suitable for new/expansion project and retrofitting project of existing buildings. When a fire breaks out, the product's class-A non-combustibility and fire-proof performance can effectively prevent the spread of fire.

Physical Properties

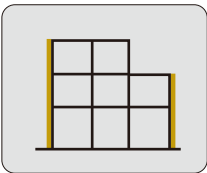
Properties	FRB 75	FRB 100	FRB 150	Unit	Test Method
Tensile Strength (perpendicular to surface)	≥ 7.5	≥ 10	≥ 15	kPa	GB/T 30804
Compressive Strength (10% deformation)	≥ 40	≥ 45	≥ 60	kPa	GB/T 13480
Thermal Conductivity(25℃)	≤ 0.039			W/(m·K)	GB/T 10295
Reaction to Fire	Class A			---	GB 8624
Melting Temperature	≥ 1000			℃	---
Fibre Diameter	≤ 6			mm	GB/T 5480
Acidity Coefficient	≥ 1.8			---	GB/T 5480
Water Repellence	≥ 99			%	GB/T 10299
Mass Moisture Absorption	≤ 0.5			%	GB/T 5480
Short-term Water Absorption (partial immersion, 24h)	≤ 0.2			kg/m²	GB/T 30805
Long-term Water Absorption (partial immersion, 28d)	≤ 0.6			kg/m²	GB/T 30807
Dimensional Stability	≤ 0.5			%	GB/T 30806
K ₂ O + Na ₂ O	≤ 5.0			%	GB/T 1549

Other properties meet GB/T 25975's requirements.

Dry-hanging Curtain Wall Thermal Insulation System



- 1 Substrate
- 2 Embedded Parts
- 3 Vertical Keel
- 4 Horizontal Keel
- 5 Adhesive Mortar
- 6 ABM External Thermal Insulation Board (FRB series)
- 7 Base Coat
- 8 Anchors
- 9 Stone Cladding



For system applications, see JGJ/T 480-2019 «Technical standard for engineering of external thermal insulation composite system based on rock wool»

ABM® External Thermal Insulation Lamella



Product Description

ABM® External Thermal Insulation Lamella (FRL series) is designed for external thermal insulation composite system and dry-hanging curtain wall thermal insulation system as a fire proof insulation material, or applied together with other insulation materials whose combustion performance inferior to class-A such as EPS, XPS, PU to improve the fire performance of the whole system. It can also be applied to cold ceiling for fire protecting, thermal insulating and sound absorbing. Suitable for new/expansion project and retrofitting project of existing buildings.

Standard Specification

Product Type	FRL 80	FRL 100	FRL 120
Nominal Density, kg/m ³	80	100	120
Size(L × W), mm	1200x150, 1200 x200, 1200 x250		
Thickness, mm	30~200		

Other size or density may be available on request.

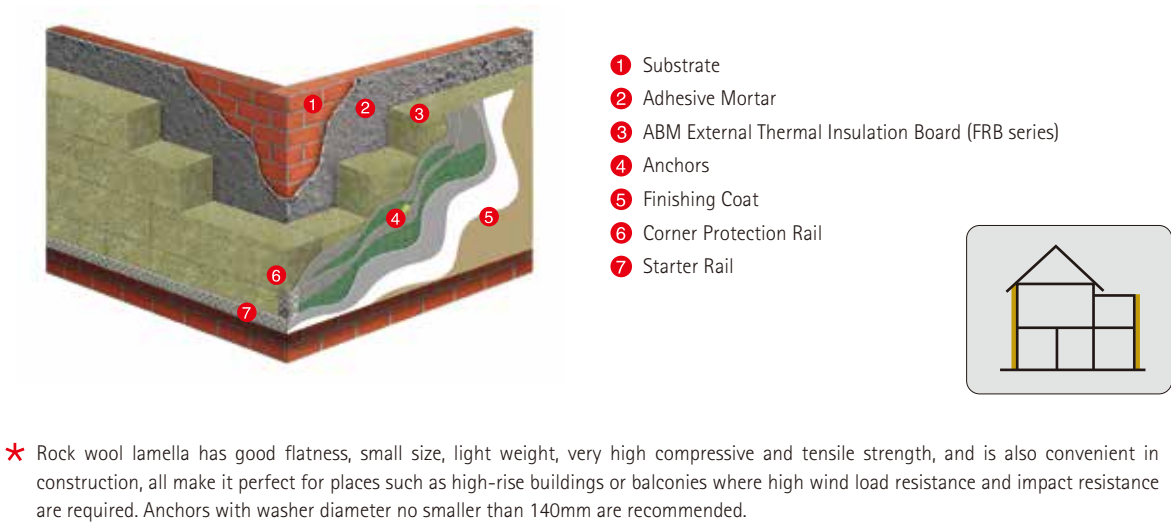
Physical Properties

Properties	FRL 80	FRB 100	FRL 120	Unit	Test Method
Tensile Strength (perpendicular to surface)	≥ 100	≥ 140	≥ 140	kPa	GB/T 30804
Compressive Strength (10% deformation)	≥ 40	≥ 60	≥ 80	kPa	GB/T 13480
Thermal Conductivity(25℃)	≤ 0.045			W/(m•K)	GB/T 10295
Reaction to Fire	Class A			---	GB 8624
Melting Temperature	≥ 1000			℃	---
Fibre Diameter	≤ 6			mm	GB/T 5480
Acidity Coefficient	≥ 1.8			---	GB/T 5480
Water Repellence	≥ 99			%	GB/T 10299
Mass Moisture Absorption	≤ 0.5			%	GB/T 5480
Short-term Water Absorption (partial immersion, 24h)	≤ 0.2			kg/m ²	GB/T 30805
Long-term Water Absorption (partial immersion, 28d)	≤ 0.8			kg/m ²	GB/T 30807
Dimensional Stability	≤ 0.5			%	GB/T 30806
K ₂ O + Na ₂ O	≤ 5.0			%	GB/T 1549

Other properties meet GB/T 25975 requirements.

Product Application

External Thermal Insulation Composite System with Rock Wool Lamella



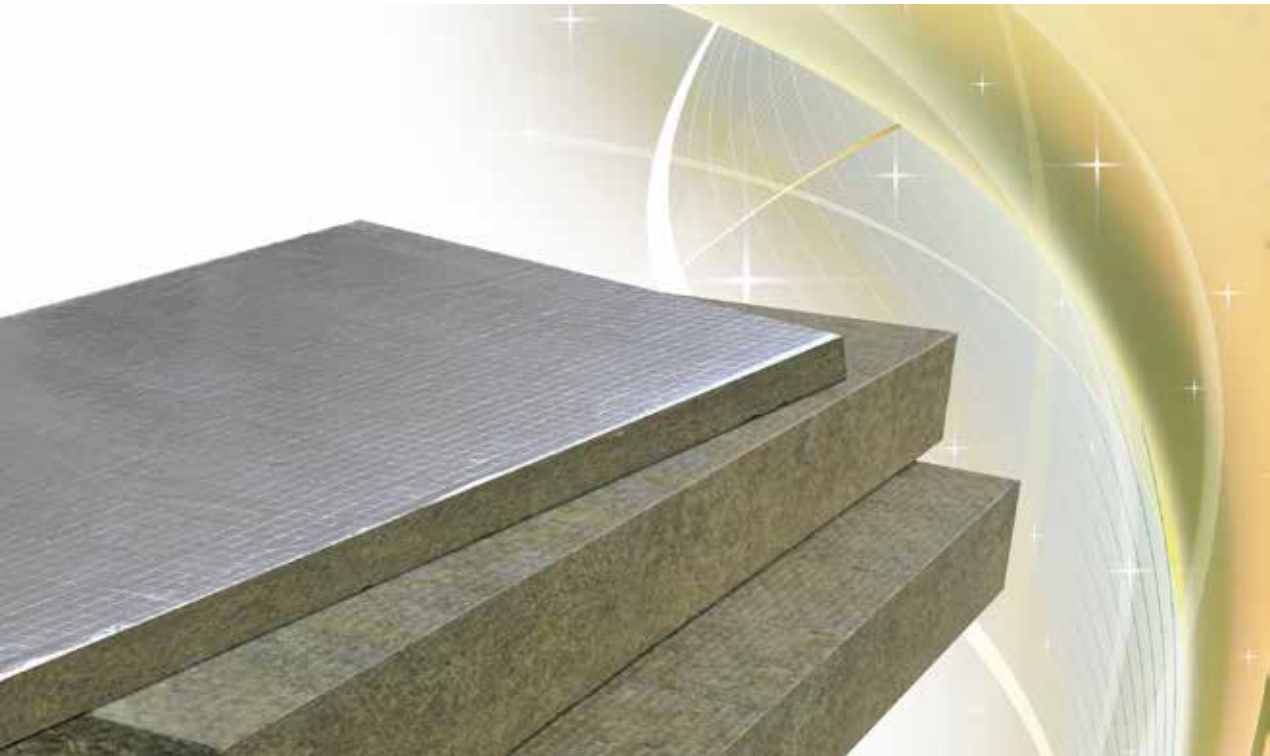
Fireproof Belt for External Thermal Insulation System



Thermal Insulation System for Ceiling



ABM® Curtain Wall Fire Stop Board



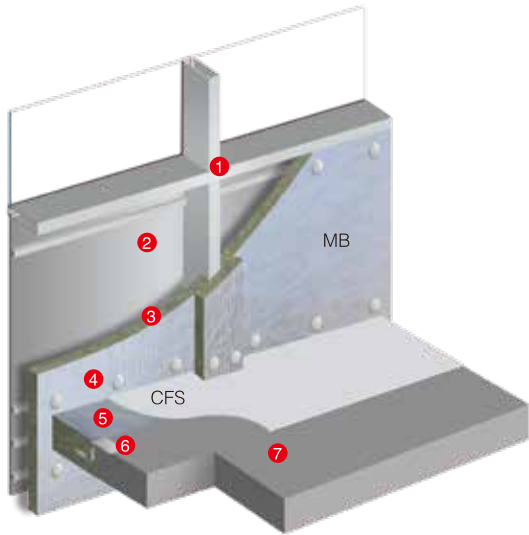
Standard Specification

Product Type	CFS 64	CFS 80		CFS 110		CFS 120
Nominal Density, kg/m ³	64	80		110		120
Thickness, mm	135	100	200	100	200	100
fire resistance, hour	1	1	3	2	4	4
Size(L×W), mm	1200x600					

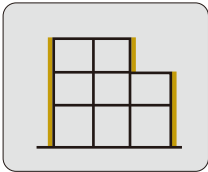
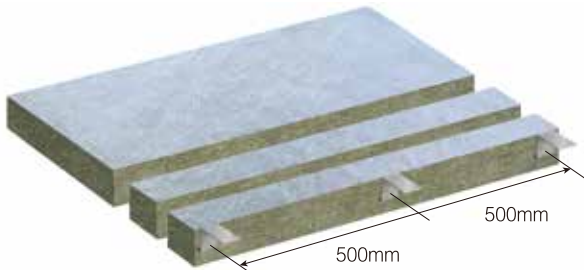
Other size or density may be available on request.

Product Application

Fire & Thermal Insulation for Curtain Wall System



- ① Frame
- ② Non-transparent Part of the Curtain Wall
- ③ ABM® Curtain Wall Fire Stop Board (MB series)
- ④ Facing
- ⑤ ABM® Curtain Wall Fire Stop Board (CFS series)
- ⑥ "Z" Shape Fixing Bracket
- ⑦ Floor



* During on-site installation, the ABM CFS series should be cut lengthwise according to the gap width and should be 15% larger than the gap width, then press the rock wool belt into the gap to make sure the best fire and smoke sealing effect.
"Z" Shape Fixing Bracket should penetrate 75% width of the CFS series at 500mm centers.

Product Description

ABM® Curtain Wall Fire Stop Board is designed specially for all types of curtain walls. The product has higher temperature resistance, higher melting point, longer fire resistance time and smaller high-temperature linear shrinkage.

CFS series can be applied not only as the fire and smoke barrier between curtain wall and floor slab or curtain wall and partition, but also as the barrier between other construction gaps around wall penetration pipes or floor penetration pipes. In order to enhance the smoke barrier capability of CFS series, fire proof aluminum foils can factory-laminated to the rock wool board.

Physical Properties

Properties	CFS	Unit	Test Method
Fibre Diameter	≤6	mm	GB/T 5480
Thermal Conductivity(25℃)	≤0.038	W/(m•K)	GB/T 10295
Reaction to Fire	A1	---	GB 8624
Melting Temperature	≥1000	℃	---
Surface Burning Characteristics	Smoke Development≤5, Flame Spread=0	---	ASTM E84
Linear shrinkage at maximum use temperature (650℃)	<2	%	ASTM C356
Acidity Coefficient	≥2.0	---	GB/T 5480
Water Repellence	≥99	%	GB/T 10299
Mass Moisture Absorption	≤0.5	%	GB/T 5480
Short-term Water Absorption (partial immersion, 24h)	≤0.5	kg/m ²	GB/T 30805
Corrosiveness	Corrosion Free	---	ASTM C665

Other properties meet GB/T19686 and ASTM C612's requirements.

ABM® Rock Wool Board



Product Description

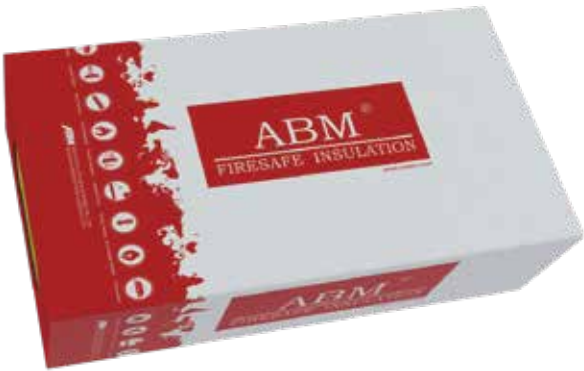
ABM® Rock Wool Board (MB series) has a wide range of density and thickness,are widely used in building insulation. The product is mainly applied in partitions, metal/stone cladding curtain walls, light steel roofs, wall frames, ceilings, fire doors and floors.Offer conserve energy,control sound,and provide fire protection.

According to customer requirements, the product can attached to single-sided or double-sided aluminum foil, glass fiber tissue or aluminium glass cloth.

Physical Properties

Properties	MB 40	MB 50	MB 60	MB 80	MB100	MB120	Unit	Test Method
Thermal Conductivity(25℃)	≤0.037						W/(m•K)	GB/T 10295
Reaction to Fire	Class A						---	GB 8624
Melting Temperature	≥ 1000						℃	---
Surface Burning Characteristics	Smoke Development≤5, Flame Spread=0						---	ASTM E84
Acidity Coefficient	≥ 1.6						---	GB/T 5480
Water Repellence	≥99						%	GB/T 10299
Mass Moisture Absorption	≤0.5						%	GB/T 5480
Short-term Water Absorption (partial immersion, 24h)	≤0.2						kg/m²	GB/T 30805
Dimensional Stability	≤0.5						%	GB/T 30806
Corrosiveness	Corrosion Free						---	ASTM C665
Formaldehyde Emission	≤0.5						mg/(kg•h)	GB/T 32379
Noise Reduction Coefficient(NRC)	≥0.80						---	GB/T 18696

Other properties meet GB/T 19686 and ASTM C612's requirements.



Standard Specification

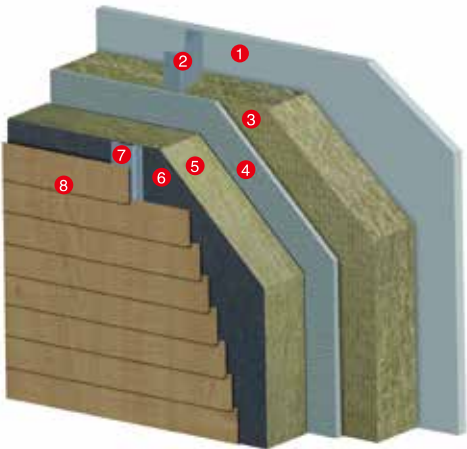
Product Type	MB 40	MB 50	MB 60
Nominal Density, kg/m³	40	50	60
Thickness, mm	50~150	40~150	40~250
Size(L × W), mm	1200x600		

Product Type	MB 80	MB 100	MB 120
Nominal Density, kg/m³	80	100	120
Thickness, mm	25~250	25~200	25~150
Size(L × W), mm	1200x600		

Other size or density may be available on request.

Product Application

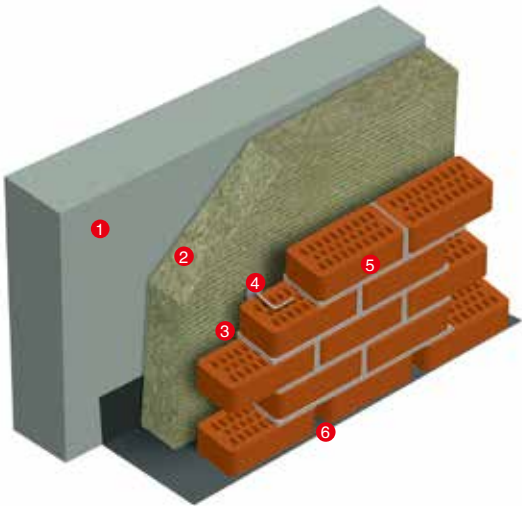
Thermal Insulation System for Light Steel Structure



- 1 Gypsum Board
- 2 Light Steel Frame
- 3 ABM® Rock Wool Board (MB series)
- 4 Fiber Cement Board
- 5 ABM® Rock Wool Board (MB series)
- 6 Facing
- 7 Stud
- 8 Cladding



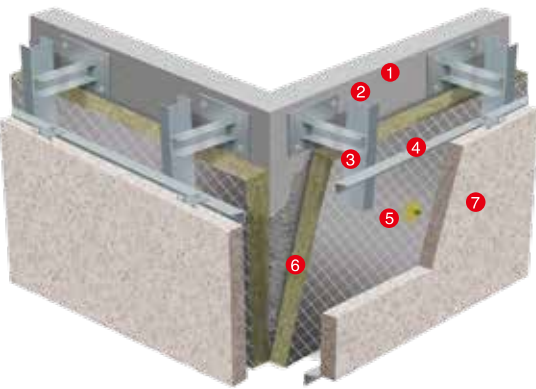
Thermal Insulation System for Sandwich Wall



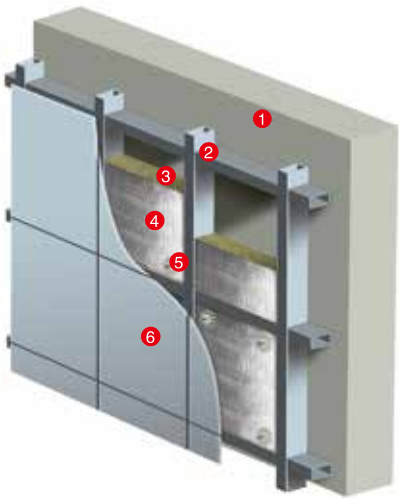
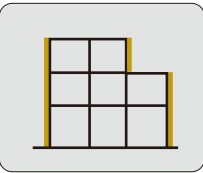
- 1 Substrate
- 2 ABM® Rock Wool Board (MB series)
- 3 Ventilation Layer
- 4 Fixings
- 5 Brick Wall
- 6 Ventilation Hole



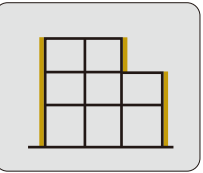
Thermal Insulation System for Curtain Wall



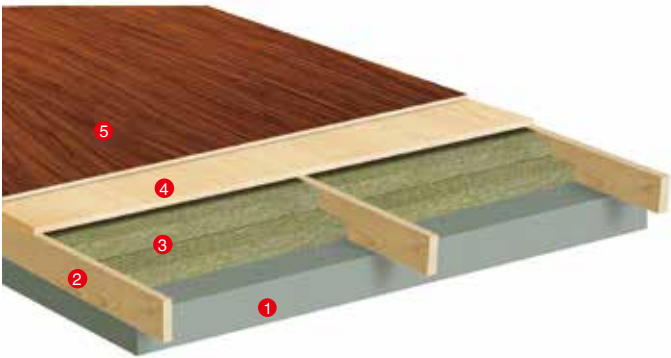
- 1 Substrate
- 2 Embedded Parts
- 3 Vertical Keel
- 4 Horizontal Keel
- 5 Anchor
- 6 ABM® Rock Wool Board (MB series)
- 7 Stone Cladding



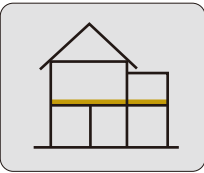
- 1 Substrate
- 2 Steel Frame
- 3 ABM® Rock Wool Board (MB series)
- 4 Facing
- 5 Anchor
- 6 Metal Panel



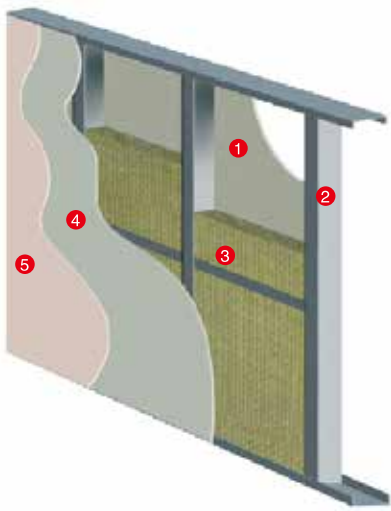
Thermal Insulation System for Floor



- 1 Floor
- 2 Timber
- 3 ABM® Rock Wool Board (MB series)
- 4 OSB Board
- 5 Wooden Flooring



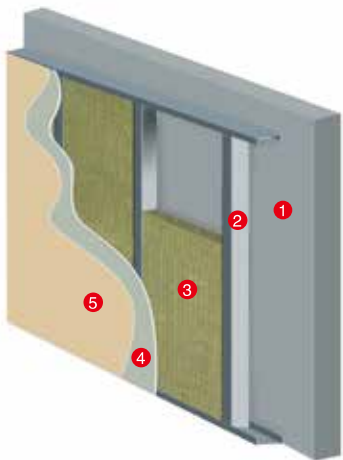
Thermal Insulation System for Partition Wall



- 1 Gypsum Board
- 2 Frame
- 3 ABM® Rock Wool Board (MB series)
- 4 Gypsum Board
- 5 Finishing Coat



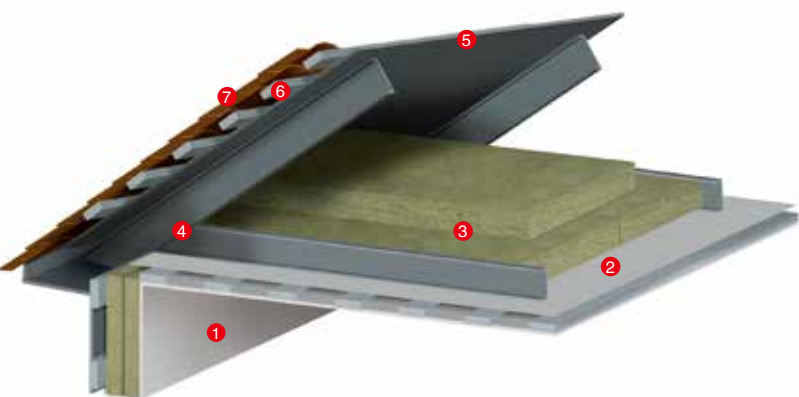
Thermal Insulation System for Sandwich Wall



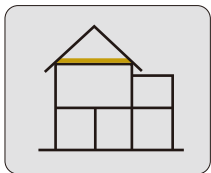
- 1 Gypsum Board
- 2 Frame
- 3 ABM® Rock Wool Board (MB series)
- 4 Gypsum Board
- 5 Finishing Coat



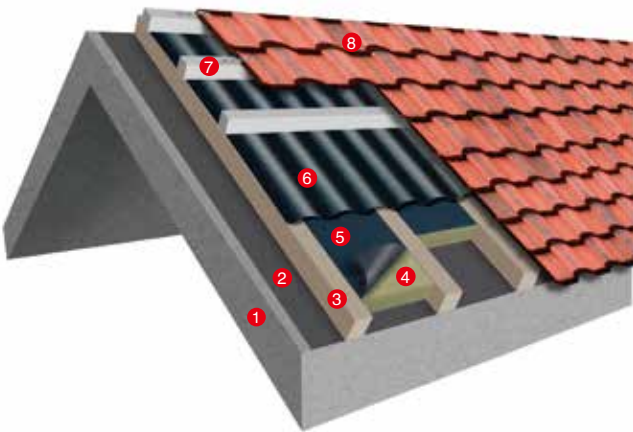
Thermal Insulation System for Attic



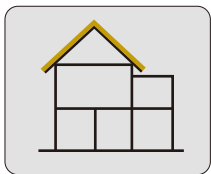
- 1 Interior Decorative Board
- 2 Waterproof and Vapor Permeable Membrane
- 3 ABM® Rock Wool Board (MB series)
- 4 Stud
- 5 Fiber Cement
- 6 Hanging Tile
- 7 Roof Tile



Thermal Insulation System for Pitched Roof



- 1 Concrete Floor
- 2 Waterproof Layer
- 3 Downstream Article
- 4 ABM® Rock Wool Board (MB series)
- 5 Facing
- 6 Drainage Board
- 7 Hanging Tile
- 8 Roof Tile



Reference
List



Shanghai World Trade Center	Shanghai Qibao Vanke
The Oriental Pearl	Jinan Zhonghai Huashan Long City
Global financial center	Jinan Zhonghai international community
Yuexing global port	Changsha Wanda
Shenzhen Huawei Bantian base	Beijing Daxing Airport
Suzhou Huawei global R & D Center	Satellite Hall of Shanghai Pudong Airport
Suzhou Bay Green Space Center	Shanggang District 14, Baoshan new town
World Trade Sheshan Shengkeng Hotel	Zhuzhou venture Plaza
Hangzhou Alibaba	Jinan hi tech Phoenix Plaza
Xi'an International Medical Center	Taiyuan China Resources Mixc
BASF Innovation Park Phase III	Zhengzhou Zhengshang economic development Plaza
Zhengzhou Longhu financial center	Harbin Capital of Huilong Peninsula
Hangzhou Binjiang Jinmao Mansion	Kunshan Duke University
Emmy Shanghai World Trade Center	Chengdu poly Tianyue
Suzhou Olympic Sports Center	Wuhan No.1 Hospital
Suzhou Cultural Expo Center	Hangzhou Langshi Yuefu
Xinchenghui of Suzhou High Speed Rail New Town	Shenyang Shengjing Hospital Group Yongsan Hospital
Chongqing Raffles	Changchun workers' Gymnasium
Nanjing Aomei building	Chengdu western suburb international financial center
Nanjing Financial City	Cixi aiqinhai Shopping Park
Shanghai Xinggang International Center	Wuhan green city Huangpu Bay
Shenyang Qishi Heyue	China Resources Center
Shanghai Pujiang high tech Park	Shangluo International Medical Center
Wuhan Center Building	Changzhou Wanli Hotel



Changsha Wanda



Zhuzhou venture Plaza



Longbrook



Central South Junshan peninsula



Hunan Zhuzhou Hui Nature City Park



World Trade Sheshan Shengkeng Hotel



China Resources Center



Zhenzhou Longhu financial centre



Jinan China shipping international



Jinan Huashan Long city



Shanggang District 14



Wuhan Center Building



Jinmao Land Limited



Global financial center
The Oriental Pearl



Hangzhou Binjiang Jinmao Mansion



Hangzhou Alibaba



Xi'an International Medical Center



Shangluo International Medical Center



Suzhou Huawei global R & D Center