Wedge India

High Strength Prefabricated Houses

Insulated | Fire & Earthquake Resistant | Steel Made | >50 Years Life

Wedge HSSF | High Strength Galvanized Steel Prefab Houses

Prefab construction, also known as off-site construction or modular construction, offers several advantages over traditional on-site construction methods.

The amount of cost savings that can be achieved with insulation in a prefab house will depend on various factors, including the size of the house, local climate conditions, energy prices, and the efficiency of the insulation. However, insulation generally offers significant cost savings in the long run.

Advantages & Benefits of Prefab Homes

Lower Heating and Cooling Costs: The improved energy efficiency provided by insulation can result in substantial cost savings on heating and cooling. With proper insulation, the house can retain heat during colder months and remain cooler during hotter months, reducing the reliance on heating and cooling equipment. This can lead to significant savings in energy expenses.

Increased Resale Value: A prefab house with proper insulation and high energy efficiency can have a higher resale value in the real estate market. Energy-efficient homes are in demand, and buyers are often willing to pay a premium for properties that offer lower operating costs and better comfort. Insulation can contribute to the overall value and marketability of the prefab house.

Speed and Efficiency: Prefab construction significantly reduces construction time compared to traditional methods. Since components are manufactured off-site in a controlled environment, construction activities can proceed simultaneously at the site. This parallel processing, along with the elimination of on-site labour-intensive tasks, leads to faster project completion and reduced construction schedules.

Cost Savings: Prefab construction can result in cost savings due to various factors. The controlled factory environment allows for efficient use of materials, reduced waste, and streamlined production processes, leading to lower material costs.

Enhanced Quality Control: Prefab construction takes place in a factory-controlled environment, allowing for meticulous quality control measures. Precise manufacturing techniques, standardized processes, and rigorous inspections ensure consistent quality of prefabricated components. The controlled conditions also minimize the risk of weather-related damage or variations in material performance, leading to a higher-quality end product.

Design Flexibility: Prefab construction offers design flexibility, allowing for a wide range of architectural styles and configurations. The modular nature of prefab components enables easy customization and adaptability to specific project requirements. Components can be easily interchanged, added, or removed to modify the building layout or accommodate future expansion.

Sustainability & Environmental Benefits: Prefab construction aligns with sustainable building practices. The factory-controlled environment facilitates efficient use of materials and reduces waste generation. Precise manufacturing processes optimize material usage, minimizing construction-related environmental impacts. Additionally, prefabricated components can be recycled or repurposed, contributing to a circular economy and reducing overall environmental footprint.

Improved Construction Safety: Prefab construction improves on-site safety conditions compared to traditional construction. With a significant portion of the construction occurring off-site, the on-site activities are minimized, reducing the risk of accidents and injuries. The factory environment allows for standardized safety protocols, controlled working conditions, and better supervision of labour.

Consistent Quality and Performance: Prefabricated components are manufactured using standardized processes and quality control measures. This results in consistent quality and performance across multiple projects. The precise manufacturing techniques, adherence to building codes, and rigorous testing ensure that prefab buildings meet or exceed required performance standards.

Reduced Energy Consumption: Insulation helps reduce heat transfer through the building envelope, which reduces the need for heating and cooling systems. By minimizing heat loss during cold weather and heat gain during hot weather, insulation reduces the workload on HVAC (heating, ventilation, and air conditioning) systems. This leads to lower energy consumption and reduced utility bills over the lifespan of the prefab house.

Longer Equipment Lifespan: Insulation helps stabilize indoor temperatures, reducing the strain on heating and cooling equipment. When HVAC systems are not constantly running at full capacity, they experience less wear and tear, resulting in prolonged equipment lifespan. This can save on maintenance and replacement costs in the long term.

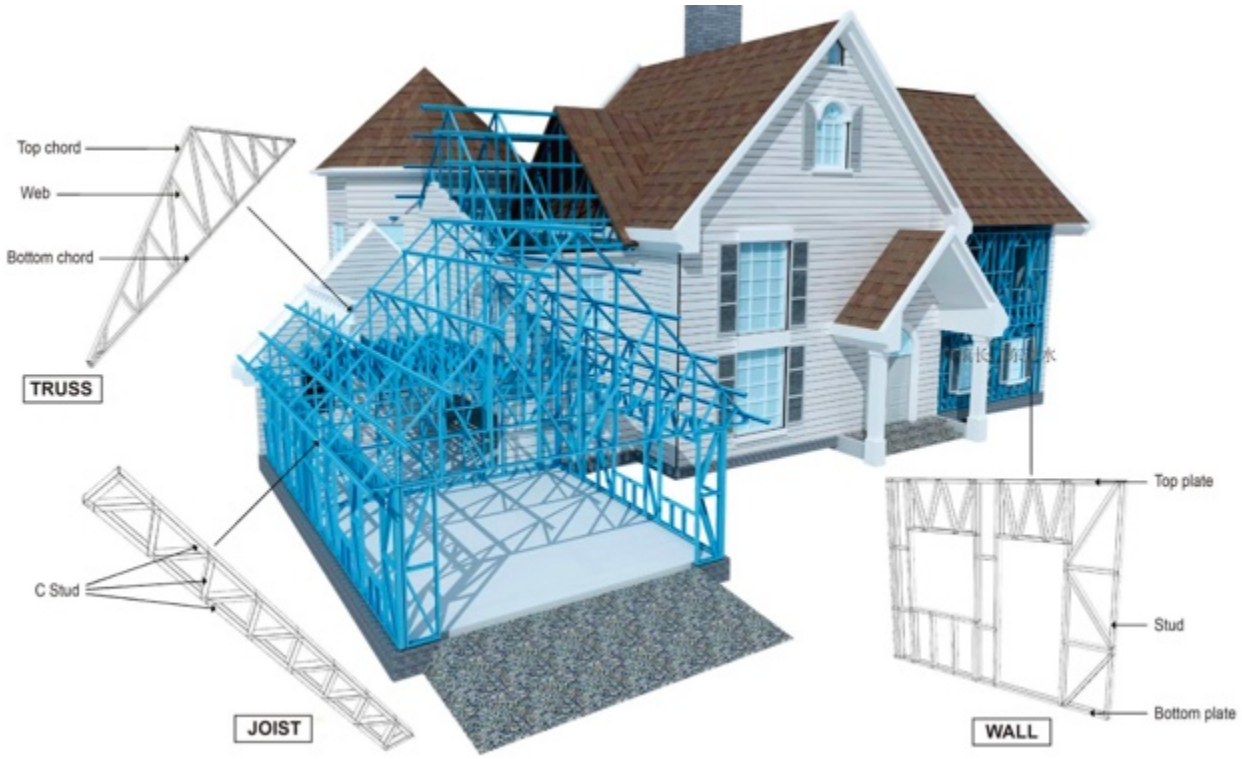
Rebates and Incentives: In some regions, there may be government or utility company incentives or rebates available for implementing energy-efficient measures, including insulation. These incentives can help offset the upfront costs of insulation and provide additional cost savings.

Prefab construction is widely used in various sectors, including residential, commercial, educational, healthcare, and hospitality. Its advantages, including speed, cost savings, enhanced quality control, sustainability, and design flexibility, make it an attractive choice for modern construction projects.

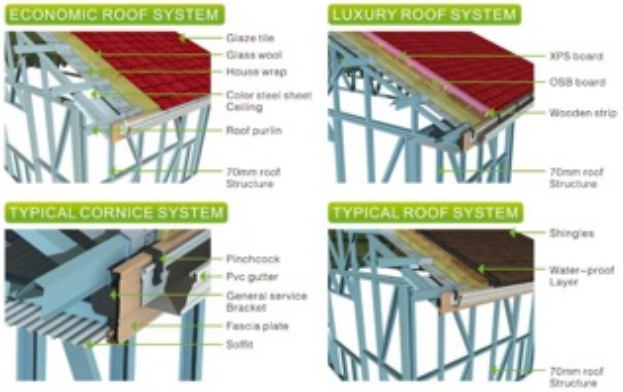
Wedge HSSF | High Strength Steel Frame System Technology

Wedge prefab construction system is made of high strength Light gauge steel framing and weatherproof, moisture resistant, fireproof, insulated Wedge Boards with rigid insulation infill panels or perlite cement concrete which can be used for External as well as internal walls. Light Gauge Steel Framed Structures (LGSF) is based on factory made galvanized light gauge steel components. These components are produced by cold forming method and assembled as panels at site forming structural steel framework of a building of varying sizes of wall and floor. The assembly is done using special types of screws and bolts.

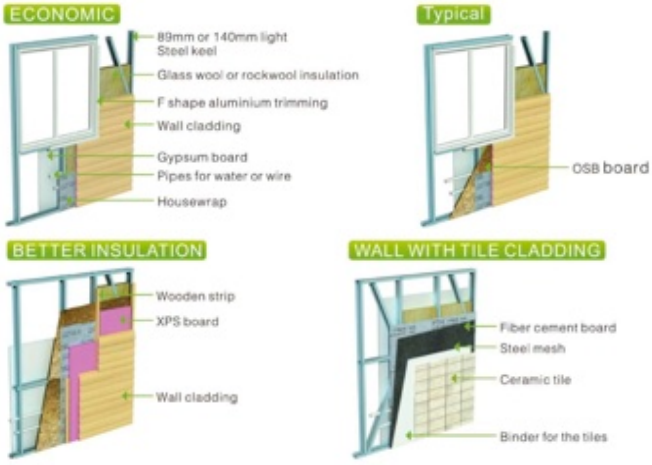
The Light Gauge Steel frames consist of high yield strength (550 MPa) roll formed GI 'C' cross sections of 63 mm to 150 mm with built-in notch, dimpling, slots, service holes etc. The frames are clad with Wedge Boards on both side and in filled with light weight perlite cement concrete of density 700 kg/m3 or perlite cement coated Rockwool Batts.



Roof Systems



Wall Systems



Wedge HSSF | High Strength Insulated Farmhouses

Wedge HSSF made Prefab farmhouse are insulated, high energy efficient, earthquake proof, fire resistant LGFS technology buildings to delivery high performance at lowest construction and maintenance cost. It refers to a prefabricated or modular house designed and built specifically for farm or rural settings. These houses are constructed off-site in a factory and then transported to the farm for assembly. Prefab farmhouses offer several benefits and features tailored to meet the needs of farm living.

Features & Benefits of Wedge Insulated Farmhouses

Customization: Prefab farm houses can be customized to suit the specific requirements and preferences of farm owners. They can be designed to accommodate different family sizes, provide space for farm-related activities, and incorporate desired features such as large kitchens, mudrooms, or storage areas for equipment and supplies.

Quick Construction: Prefab farm houses are manufactured in a controlled factory environment, which allows for faster construction compared to traditional on-site construction. The components are pre-engineered and ready for assembly, reducing construction time and minimizing disruptions to farm operations.

High Durability: Wedge Farm houses are exposed to various weather conditions and may require robust construction to withstand the elements. Prefab farm houses are typically built using high-quality materials and engineered to meet or exceed building codes and standards. This ensures their durability and longevity, even in rural and agricultural settings.

Energy Efficiency: Wedge farm houses are designed with energy-efficient features to reduce energy consumption and associated costs. This can include insulation, energy-efficient windows, LED lighting, and efficient heating and cooling systems. These features contribute to better thermal performance and lower utility bills.

Sustainability: Wedge Prefab farm houses can be designed with sustainable features to minimize environmental impact. This may include using eco-friendly materials, incorporating renewable energy systems like solar panels, or implementing rainwater harvesting and recycling systems. Sustainable practices align with the principles of farming and promote environmental stewardship.

Versatility: Wedge Prefab farm houses can be adapted to serve various purposes on a farm. They can function as primary residences, secondary dwellings for farm workers or guests, or even as dedicated spaces for farm offices, workshops, or farm-to-table businesses. The modular nature of prefab construction allows for flexibility in configuration and future expansion if needed.

Cost-Effectiveness: Wedge Prefab farm houses can offer cost advantages compared to traditional construction. The controlled factory production process allows for better cost management and reduced labor expenses. Additionally, the shorter construction time and potential energy savings can contribute to long-term cost-effectiveness.

Increased Resale Value: Wedge prefab house with proper insulation and high energy efficiency can have a higher resale value in the real estate market. Energy-efficient homes are in demand, and buyers are often willing to pay a premium for properties that offer lower operating costs and better comfort. Insulation can contribute to the overall value and marketability of the prefab house.

Wedge Prefab farm houses provide a convenient and efficient housing solution for farm owners, offering customization, durability, energy efficiency, and sustainability. They are designed to support the unique lifestyle and operational needs of farm living while providing comfortable and functional living spaces.

WedGel BL20, BL50 | Aerogel Insulation for Home and Buildings

WedGel Aerogel is a highly effective material for home insulation due to its exceptional thermal insulation properties. It can be used in various forms, such as WedGel Aerogel blankets, panels, or coatings, to provide insulation in residential buildings. WedGel Aerogel is renowned for its extremely low thermal conductivity, which is one of its key properties that makes it an excellent insulating material. The thermal conductivity of WedGel Aerogel is typically in the range of 0.015 to 0.05 W/(m·K) at room temperature. It helps to minimize heat loss or gain, improve energy efficiency, and enhance thermal comfort in different environments.

Features and Benefits

- **Superior Thermal Insulation:** WedGel Aerogel has one of the lowest thermal conductivities of any known solid material. It significantly reduces heat transfer by conduction, convection, and radiation, making it highly efficient at insulating homes. WedGel Aerogel minimizes heat loss during the winter and reduce heat gain during the summer, leading to energy savings and improved comfort.
- **Thin Insulation Profile:** WedGel Aerogel offers high thermal resistance with a relatively thin layer. This is advantageous as it allows for effective insulation without adding excessive thickness to walls or ceilings. It maximizes interior space while still achieving excellent insulation performance.
- **Moisture Resistance:** Many WedGel Aerogel insulation products are hydrophobic, meaning they repel water and resist moisture absorption. This property helps prevent moisture-related issues such as mold growth, rot, or degradation of the insulation material. WedGel Aerogel insulation maintains its thermal performance even in humid or wet environments.
- **Fire Resistance:** WedGel Aerogel insulation offers good fire resistance. Some WedGel Aerogel products are designed to be non-combustible or have high resistance to flames and heat. This can enhance the safety of homes and provide additional fire protection.
- **Versatility:** WedGel Aerogel insulation can be used in various areas of the home, including walls, roofs, floors, and attics. It can be installed during construction or retrofitted into existing homes. It is compatible with different construction materials and can adapt to various architectural designs.
- **Energy Efficiency:** By providing effective thermal insulation, WedGel Aerogel helps improve the energy efficiency of homes. It reduces the need for heating and cooling, resulting in lower energy consumption and reduced utility costs.

Quality ASTM C1728		WedGel BL20	WedGel BL50
Application		Building Cold Insulation	Building Heat & Fire Insulation
Service temperature, ASTM C411/C447		-170 to 100	25 to 1200
Colour		Grey / White	White
Thickness, mm		5, 10, 25, 50	10, 20, 25, 30, 50
Short term Temperature Resistance, ºC		1000	1400
Density (kg/m3) ASTM C303		150	180
Compression Strength, ASTM C165; at 10%, Kpa		80	37
Thermal conductivity, W/m.K, ASTM C177, GB/T10295/4-2008			
	25°C	0.021	0.021
	37.8°C	0.022	0.022
	100°C	0.023	0.024
	200°C	NA	0.029
	300°C	NA	0.036
	400°C	NA	NA
Hydrophobicity GB/T 10299-2011 %		99	99
Complies with ROHS regulation		Complies	Complies
Stress Corrosion Cracking, Tested according to ASTM C692		Pass	Pass
Reaction to fire, ISO 1182, GB/T8624-2012, EN 13501-1		Non-combustible	Non-combustible
Flame spread index (ASTM E84), max FSI		≤ 25	≤ 25
Smoke developed index (ASTM E84) , max ASTM E84 SDI		≤ 50	≤ 50
Classification, Fire Proofing GB/T 8642-2012		A1	A
Water absorption by immersion, max % by weight, ASTM C1763		<5%	<5%

Note: When considering WedGel Aerogel insulation for home use, it's important to consult with insulation professionals or contractors who are knowledgeable about WedGel Aerogel products and their installation.

To put this into perspective, consider that the thermal conductivity of air is around 0.024 W/(m·K), while common insulation materials like fiberglass and mineral wool have thermal conductivities ranging from 0.03 to 0.04 W/(m·K). The low thermal conductivity of WedGel Aerogel is primarily due to its unique nanostructured framework, which consists of a highly porous network of interconnected nanoparticles. This porous structure limits the movement of air molecules and reduces heat transfer through conduction and convection. The exceptional thermal insulation capability of WedGel Aerogel makes it highly desirable for various applications, including home insulation, industrial insulation, cryogenic insulation, and thermal protection in aerospace technologies.

WedgeOSB | Orient Strand Wood Board

WedGel OSB is Oriented strand board, is the upgrading of the traditional particleboard products, its mechanical properties with directionality, durability, moisture resistance, and dimensional stability than ordinary particleboard. With a small expansion coefficient, no distortion, good stability, uniform material and nail holding high performance.

OSB is manufactured in a cross-oriented pattern similar to plywood to create a strong, stiff structural panel. OSB is composed of thin rectangular-shaped wood strands arranged in layers at right angles to one another, which are laid up into mats that form a panel. OSB is bonded with water-resistant adhesives. Most panels are also treated with a sealant on the panel edges to guard against moisture penetration during shipment.

Features and Benefits

Superior Thermal Insulation: WedGel Aerogel has one of the lowest thermal conductivities of any known solid material. It significantly reduces heat As an added feature, panels are often textured on at least one side to provide a slip resistant surface. OSB uses the wood resource very efficiently, in part because sheathing panels can be made using smaller, younger fast-growing tree species, such as aspen and southern yellow pine. Plus, about 85-90 percent of a log can be used to make high quality structural panels, and the remainder--bark, saw trim, and sawdust can be converted into energy, pulp chips or bark dust.

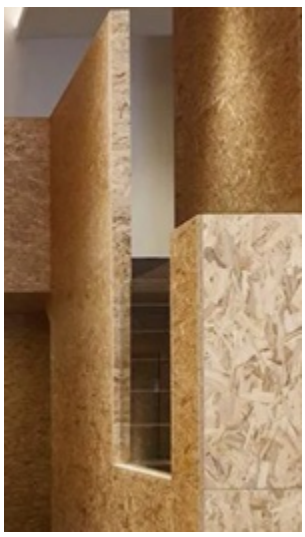
Material : Poplar, Pine, Combi, Hardwood
Glue : WBP / Phenolic /E0 /E1/E2/MDI
Thickness : 6-45mm(8, 9, 9.5, 10, 11, 12, 15, 16, 18 mm
MOQ : 28 CBM
Delivery Time : 2-3 weeks
Thickness Tolerance : Thickness:+/ -0.2mm
Size Tolerance : Length &Width:+/-2mm
Applications and Usage of OSB Boards : Roof decking, furniture, packing, hoarding, signboards and portable building, constructional insulation board, etc.

Density : 600-700 KG/CBM

Benefits & Advantages:

- Tight construction and high strength;
- Minimum twisting, delamination or warping;
- Water proof, consistent when exposed in the natural or wet environment;
- Low formaldehyde emission;
- Good nailing strength, easy to be sawn, nailed, drilled, grooved, planed, filed or polished;
- Good heat and sound resistant, easy to be coated;
  Note the OSB 3 is for use on flat roof situations, a far better product than standard chipboard or particleboard.

Main thicknesses Oriented Strand Board: 9.5mm 11mm 15mm 18mm 22mm. And sizes are 2440 x 1220 mm or 8 x 4 ft.



FP1000, FP900, SP1150 | Fire Resistant Calcium Silicate Board

FP1000, FP900, and SP1150 Insulating boards are made of high temperature resistance fireproof materials, cement, and calcium silicate based asbestos free minerals. These boards are large sized and very easy to handle and work for the production of mechanically strong, self-supporting constructions.

Features & Benefits

- Maximum short term temperature resistance up to 1200 Degree C.
- High fire resistance up to 240 Minutes with maximum 10 mm thickness.
- Continuous operating temperature resistance up to 450 Degree C.
- Longer guarantee life more than 15 Years.
- Good thermal insulation.
- High acoustic insulation.
- Unaffected by humidity.

Applications

- Structural steel protection, Self-supporting ceilings.
- Dryers & Oven Insulation.
- Industrial Furnaces, Apparatus Construction.
- Wet and Damp Rooms.
- Timber floor protection, upgrading of timber floors.
- Cladding to steel ducts, self-supporting ducts.
- M&E services enclosure, Smoke barrier, parapet/spandrel wall.
- Access panels and hatches, fire doors.
- Tunnel lining, concrete/brick floor and wall upgrading.
- Fire Door manufacturing for FD30, FD60, FD120, FD240.

Technical Properties

Properties		FP1000	**FP900**	SP1150
Color		White / Grey	White	White / Light Brown
Short Term Service Temperature °C		1400	1200	1000
Classification Temperature °C		400	280	100
Density, Kg/M3		900 – 1000	900	1150
Thermal conductivity, W/m.K				
	20 °C	0.16	0.17	0.18
	100 °C	0.18		
	200 °C	0.20		
Tensile Strength, Mpa		5		4
Flexural Strength, Mpa		8	6-9	8
Shrinkage % @ 400 °C, 24 h		0.25		-
Compression Strength, Mpa		10	12	14
Fire Rating for 10 mm thick board, Minutes		240	240	120
Building material class		A1, Non-Combustible	Euro Class A1	A1, Non-Combustible
Sizes, mm		2500 x 1220	2440 x 1220	2500 x 1220
Thicknesses, mm		4 – 30	6 – 30	4 – 30
Thickness Tolerances, for < 12 mm		+/- 0.7	+/- 0.7	+/- 0.7
Water content, %		< 10	6	< 10
Moisture Movement		< 0.25	0.05	< 0.25

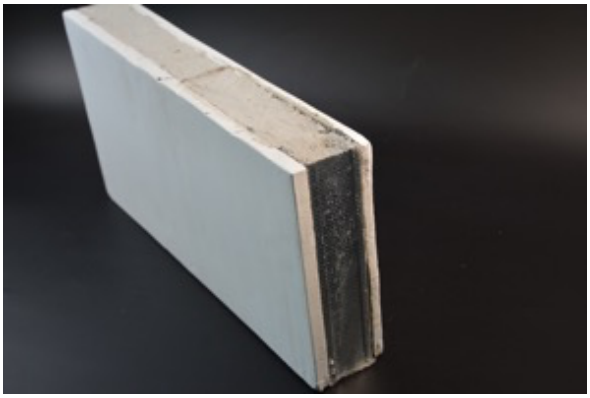
HDSP450 | Calcium Silicate Insulation Sandwich Panel

Wedge CalSil HD450 insulating boards are produced with a special cement technology, calcium silicate based and purely mineral, asbestos-free. These large-sized insulating boards are easy to work and have a favourable combination of special technical properties for the production of mechanically strong, self-supporting constructions.

Their physical behaviour permits combining techniques for thermal insulating, drying technology, humidity, ventilation, fire protection, noise protection, these materials are harmless and not subject to any classification.

Feature & Advantages

- Harmless in terms of working hygiene.
- Large-sized, self-supporting.
- Good insulating effect.
- High permanent temperature resistance.
- Minimum thermal bridges.
- Corrosion and rot-resistant.
- Good chemical resistance.
- Vibration-proof.
- Secure and variable fixings and connections.
- Uncomplicated breakthroughs producible.
- Diffusion open, no condensates.
- Long service life.
- Energy-saving.
- Dimensionally stable, low thermal expansion.
- Variable surface coatings are possible.
- Cost-reducing thanks to ready-to- assemble systems and easy processing.



Application

- Industrial Dryers.
- Apparatus construction.
- Wet and damp rooms.
- Industrial furnaces.
- Hospitals for partition Insulation.
- Fire Protection Walls.
- Fire Resistant Partitions.
- Heat Shield Barriers.
- Interior wall heat Insulation.
- Acoustic Insulation.
- Noise Reduction.
- Heat and moisture protection in industrial plants.
- Replacement for asbestos containing boards.

Technical Properties

Product Name	HDSP450
Color	Light grey / White
Classification temperature	450°C
Shrinkage @ 400 °C – 24h full soak	0.25
Bulk density ρ	870 kg / m 3
Compressive strength	9.3 N/ mm 2
Thermal conductivity λ	0.16 W/ m K
Length mm	2440
Width mm	1220
Thickness mm	6, 8, 9, 10, 12, 15, 20, 25

WegdeCem | UV Coated Fiber Cement Board for Prefab Buildings

WegdeCem Cement Board is a building material that is commonly used in construction and home improvement projects. It is a type of sheet material that is made from a combination of Portland cement, reinforced with fibers like fiberglass or cellulose, and sometimes with additional additives for strength and durability.

WegdeCem Cement Board is known for its resilience and resistance to moisture, making it an excellent choice for applications where traditional drywall or gypsum board would not be suitable.

Here are some key features and common uses of WegdeCem Cement Board:

Water Resistance: WegdeCem Cement Board is highly resistant to moisture, which makes it an ideal choice for areas prone to water exposure, such as bathrooms, kitchens, and wet environments like showers and tub surrounds.

Fire Resistance: WegdeCem Cement Board is non-combustible and provides a good level of fire resistance. It is often used as a base for fire-resistant wall coverings or in applications where fire safety is a concern.

Durability: WegdeCem Cement Board is strong and durable, capable of supporting heavy loads. It resists rot, warping, and insect damage, making it suitable for outdoor and high-impact applications.

Tile Backer: One of the primary uses of WegdeCem Cement Board is as a substrate for ceramic and stone tile installations. It provides a stable and moisture-resistant surface for tiles and helps prevent them from cracking or shifting.

Exterior Siding: WegdeCem Cement Board is also used as an exterior siding material. It can mimic the appearance of wood siding while offering better durability and resistance to weather conditions.

Underlayment: In flooring applications, WegdeCem Cement Board is used as an underlayment for tile, vinyl, and other types of flooring materials. It helps create a level and stable surface.

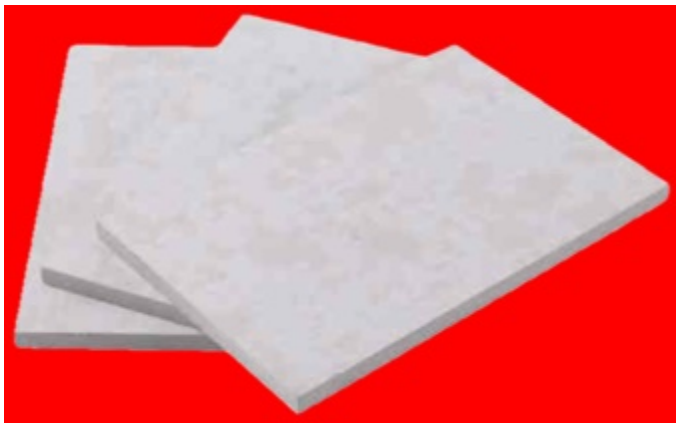
Sheathing: In some construction projects, WegdeCem Cement Board can be used as a sheathing material for walls and roofs. It provides additional strength and insulation in these applications.

Paintable: WegdeCem Cement Board can be painted, allowing for customization to match your desired aesthetic.

It's important to note that working with WegdeCem Cement Board requires proper safety precautions. When cutting or working with WegdeCem Cement Board, it's advisable to wear a mask to avoid inhaling dust, as well as eye protection and gloves to protect your hands and eyes. Additionally, use appropriate tools designed for cutting and fastening WegdeCem Cement Board.

WegdeCem Cement Board comes in various thicknesses and sizes, so you can select the one that best suits your specific project needs. Overall, it is a versatile and reliable building material that is commonly used in both residential and commercial construction.

Fiber cement boards are composite materials made primarily from cement, reinforced with fibers for added strength and durability.



The exact chemical composition of fiber cement boards can vary slightly between manufacturers and product lines, but here are the typical components:

Portland Cement: Portland cement is the primary binding agent in fiber cement boards. It is composed of calcium silicate compounds and is responsible for the board's strength and rigidity.

Cellulose Fibers: Cellulose fibers, often derived from wood pulp, are added to the cement mixture to improve the board's flexibility, impact resistance, and workability during manufacturing.

Silica: Silica is often included as a filler material to enhance the fire resistance and durability of the boards. It also helps reduce the weight of the finished product.

Calcium Carbonate: Calcium carbonate is sometimes added as a filler to improve the board's dimensional stability and reduce production costs.

Other Additives: Manufacturers may include various additives to improve specific properties of the boards, such as mold resistance, water resistance, and coloration. These additives can include proprietary formulations and may vary between different product lines.

Reinforcing Agents: In some cases, other reinforcing agents, such as fiberglass or polyvinyl alcohol (PVA) fibers, may be used to enhance the board's strength and resistance to cracking.

The exact ratios and formulations of these components can vary depending on the specific product and its intended use. Manufacturers may also incorporate technologies and additives to improve the water resistance, fire resistance, and overall performance of their fiber cement boards.

It's important to note that fiber cement boards are engineered to be durable, moisture-resistant, and resistant to various environmental factors, making them suitable for a wide range of applications, including siding, roofing, cladding, and interior wall systems. When working with or installing fiber cement boards, it's essential to follow the guidelines and safety precautions to ensure the best results and product longevity.

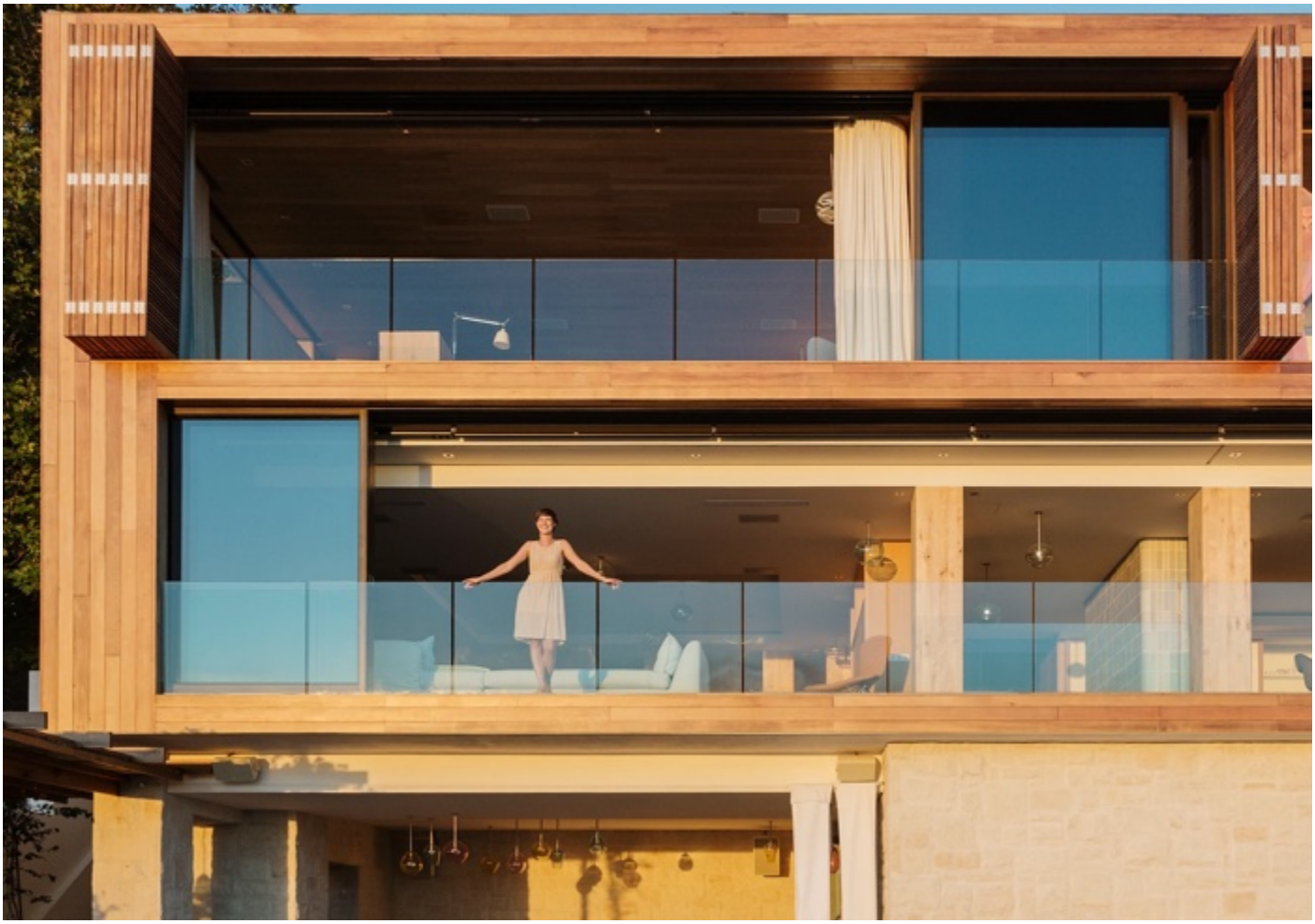
WegdeCemTC | Through Coloured Cement Board for Prefab Building

Through-colored WedgeCem cement board, also known as pre-colored or pre-finished cement board, is a type of fiber cement board that is manufactured with pigments and colorants integrated throughout the material. This means that the color is not merely a surface finish or paint; instead, it runs consistently through the entire thickness of the board. Through-colored cement board offers several advantages and is commonly used in architectural and construction applications.

Features, Benefits, and Uses of Through Coloured WedegCemTC Cement Boards:

- **Uniform Color:** Through-colored WedgeCem cement board maintains its color throughout the board's thickness, ensuring that any surface scratches or chips won't reveal a different color underneath. This results in a consistent and long-lasting appearance.
- **Fade Resistance:** The color is UV-stable and less prone to fading due to prolonged exposure to sunlight compared to traditional painted surfaces.
- **Low Maintenance:** Because the color is integral to the board, through-colored WedgeCem cement boards generally require less maintenance and repainting than other siding or cladding materials.
- **Custom Colors:** Manufacturers offer a range of pre-finished color options, allowing architects and builders to choose from a variety of hues and shades to match specific design preferences.
- **Moisture Resistance:** Like standard fiber cement boards, through-colored versions are moisture-resistant, making them suitable for exterior applications and areas prone to wet conditions.
- **Fire Resistance:** Through-colored WedgeCem cement boards maintain the fire-resistant properties of traditional fiber cement, making them suitable for fire-rated assemblies.
- **Versatility:** Through-colored WedgeCem cement boards are versatile and can be used for various applications, including siding, cladding, fascia, soffits, and interior wall paneling.
- **Ease of Installation:** They are typically installed using similar methods as standard fiber cement boards, making them accessible for experienced contractors.

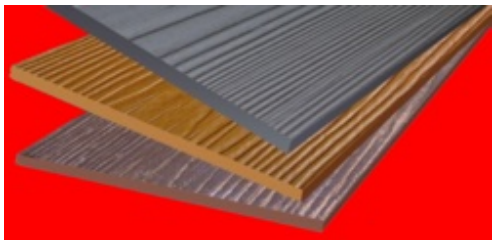
It's important to choose a through-colored WedgeCem cement board product from a reputable manufacturer to ensure quality and color consistency. Additionally, follow the manufacturer's installation guidelines and recommendations for proper care and maintenance to ensure the longevity and appearance of the material. Through-colored cement boards have become popular for contemporary architectural designs and applications where durable, low-maintenance, and aesthetically pleasing building materials are desired.



WegdeCem | Cement Board Siding Planks

WedgeCem Cement board siding planks, also known as fiber cement siding planks, are building materials used for exterior siding on residential and commercial structures. These planks are engineered to mimic the appearance of traditional wood siding while offering the advantages of cementitious materials.

Composition: WedgeCem Cement board siding planks are typically composed of Portland cement, sand, cellulose fibers (usually wood pulp or other organic fibers), and various additives. These materials are mixed and then formed into planks of various lengths, widths, and thicknesses.

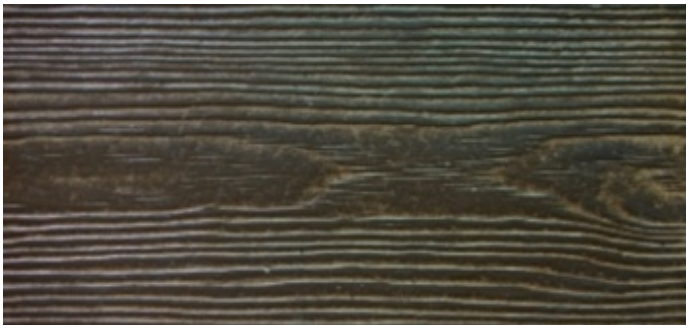


Appearance: WedgeCem Cement board siding planks come in various styles and textures to resemble natural wood siding. They can be found in styles like lap siding (where planks overlap horizontally), shingles (for a cedar shingle look), and vertical siding. The planks can also be pre-finished with a through-color finish or primed for painting.

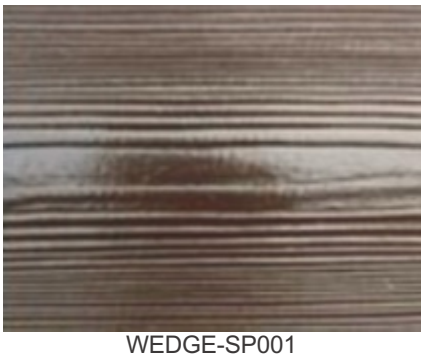
Features & Benefits:

- **Durability:** WedgeCem Cement board siding is highly durable and resistant to many environmental factors, including rot, insect damage, and moisture. It can withstand harsh weather conditions, making it a long-lasting option.
- **Fire Resistance:** WedgeCem Cement board siding is non-combustible and offers excellent fire resistance.
- **Low Maintenance:** While it may require occasional cleaning, cement board siding typically requires less maintenance than wood siding. Pre-finished planks may require even less maintenance as they resist fading and peeling.
- **Pest Resistance:** Cement board siding is not attractive to termites and other wood-damaging pests.
- **Paintability:** You can paint cement board siding planks in the color of your choice to match your home's aesthetics.
- **Installation:** Installing cement board siding planks requires skill and precision.

It's crucial to follow the manufacturer's installation guidelines, which often involve nailing or screwing the planks to a properly prepared substrate, such as plywood or a house wrap. Proper flashing and sealing at corners and joints are essential to prevent moisture infiltration.



WegdeCem | Colour Code Pre-painted Siding Planks


WEDGE-SP001


WEDGE-SP002

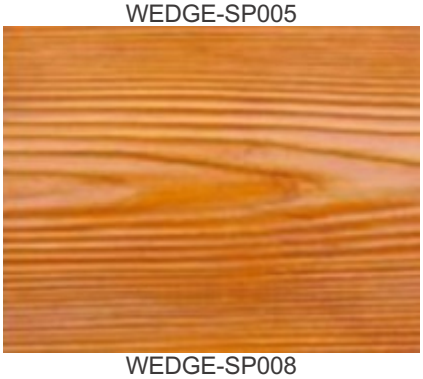

WEDGE-SP003

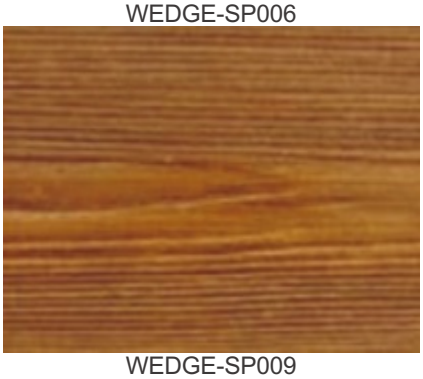

WEDGE-SP004


WEDGE-SP005


WEDGE-SP006


WEDGE-SP007


WEDGE-SP008


WEDGE-SP009


WEDGE-SP010

WegdeCem | Technical Properties & Specifications

Common standards for Fiber Cement Boards are ASTM C1185 - Standard Test Methods for Sampling and Testing Non-Asbestos Fiber-Cement Flat Sheet, Roofing and Siding Shingles, and Clapboards: This standard outlines procedures for sampling and testing non-asbestos fiber-cement flat sheets, roofing and siding shingles, and clapboards. It includes methods for assessing properties such as flexural strength, impact resistance, and moisture absorption. ISO 8336:2006 – Fibre-cement flat sheets – Product specification and test methods: This standard provides specifications and test methods for fiber-cement flat sheets. It covers aspects such as dimensions, surface quality, and physical properties, including flexural strength, moisture movement, and freeze-thaw resistance. ISO 8337:2006 – Fibre-cement flat sheets – Methods of test: This standard outlines the methods of testing fiber-cement flat sheets, including procedures for determining flexural strength, moisture movement, and density.

- **Length:** Fiber WegdeCem Cement Boards typically come in various lengths, such as 8 feet, 10 feet, or 12 feet.
- **Width:** The width of fiber WegdeCem Cement Boards usually ranges from 5.5 inches to 12 inches.
- **Thickness:** Common thickness options include 5/16 inch (8 mm), ½ inch (12 mm), and 5/8 inch (16 mm).
- **Density:** The density of fiber WegdeCem Cement Boards can vary, but they are generally denser and heavier than many other building materials, such as gypsum board or plywood.
- **Natural Finish:** Some fiber WegdeCem Cement Boards come with a natural gray color that can be painted or finished on-site to achieve the desired color.
- **Pre-Finished:** Others are pre-finished with through-color pigments, offering a wide range of color options.
- **Paintability:** Even pre-finished boards can be repainted if desired.
- **Fire Resistance:** Fiber WegdeCem Cement Boards are non-combustible and offer excellent fire resistance. They are often used in fire-rated assemblies.
- **Moisture Resistance:** Fiber WegdeCem Cement Boards are generally moisture-resistant, making them suitable for exterior applications and wet areas when properly installed.
- **Pest Resistance:** Fiber cement is not attractive to termites and other pests.
- **Installation:** Fiber WegdeCem Cement Boards are typically installed using nails, screws, or adhesives. Proper installation techniques and fasteners are essential for their performance.

Technical properties of WegdeCem Boards

Parameters	WedgeCB13	WedgeCB14	WedgeCB16
Make OEM	Wedge	Wedge	Wedge
Non-combustibility	Non-combustible	Non-combustible	Non-combustible
Insulation	Very High	High	Medium
Strength	Medium	High	Very High
Lifespan, year	> 40	> 50	> 60
Surface spread of flame	Class 1	Class 1	Class 1
Fire Resistance, Minutes	60 @12mm	60 @12mm	60 @12mm
Thickness, mm	6 to 20	4.5 to 20	4.5 to 20
Length, mm	1220 to 3050	1220 to 3050	1220 to 3050
Width, mm	610 to 1220	610 to 1220	610 to 1220
Dimensional Tolerances, ISO 8336:2009	Pass	Pass	Pass
Density, kg/m3	1300	1450	1500 to 1600
Non Combustibility BS 476 Part IV	A1	A1	A1
Acoustic Sound Insulation System, DB	51 @6mm	51 @6mm	51 @6mm
Impact Shock Resistance, kJ/m2	9 @6mm	9 @6mm	12 @9mm
Bending strength dry, Mpa	13	15	22
Bending strength wet, Mpa	10	12	16
Screw Withdrawal Strength, N	1200	1200	1200
Moisture content, %	7.5	6 to 8	6 to 8
Frost resistance, freeze-thaw cycles	25	25	25
Moisture movement, %	0.07	0.04 to 0.07	0.07 to 0.12
Water absorption, %	35	30	32
Thermal conductivity, ASTM C177 W/(m·K)	0.167	0.25	0.27
Warm water performance, ISO 8336:2009	Pass	Pass	Pass
Soak-dry performance, ISO 8336:2009	Pass	Pass	Pass
Asbestos	None	None	None
Portland Cement, %	40	40	40
High Purity Quartz Flour, %	50	50	50
Lime, %	2	2	2
Fiber, %	8	8	8
Chemical Composition			
Calcium silicate, %	90	90	90
Cellulose fiber, %	10	10	10

WRRB | Rigid Mineral Wool Insulation Boards

Wedge RRB are Rigid Mineral Wool boards made of pure stone wool bonded with high quality thermosetting resin binders. These Rockwool boards are multifunction boards non-asbestos, non-combustible type having extremely high melting temperature. It do not produce toxic smoke in the event of a fire and are an excellent barrier against the spread of flames to help protect occupants and reduce property damage. We offer wide range of densities from 48 – 160 Kg/M3.

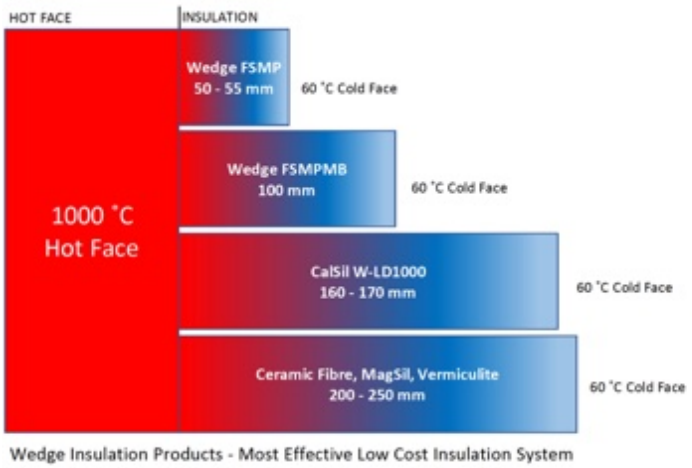
Features & Advantages:

- Very high acoustic / sound insulation performance.
- High Thermal Integrity.
- It will not slump, shrink, expand
- Excellent moisture control.
- Water proof / water repellent option available
- Non-combustible & High fire resistance
- Cost-efficient insulating effect
- Stable and jolt-proof
- High permanent temperature resistance
- Low thermal conductivity
- Low organic binder content
- Rot-resistant and non-ageing
- Chemically neutral
- Water-repellent
- Easy to machine

Applications:

- Production of Sandwich Panels
- Fire Doors Manufacturing
- Fireproof of power plant, oil deport.
- Exterior or interior thermal & acoustical insulation.
- External wall, roofing, partition, curtain wall, etc
- Fire Resistant Doors, Lifts, Safes, Cupboards.

Rockwool Boards	Density, Kg/M3	Temperature, °C	Thickness, mm	Thermal conductivity 40 °C, W/m K
WRRB 48	48	750	50 - 200	0.039
WRRB 64	64	750	40 - 150	0.038
WRRB 80	80	750	25 - 150	0.038
WRRB 100	100	750	25 - 100	0.038
WRRB 128	128	750	25 - 100	0.038
WRRB 144	144	750	25 - 100	0.038
WRRB 160	160	750	25 - 75	0.038
WRRB 900	900	1000	1 - 25	0.08



Wedge Insulation Products - Most Effective Low Cost Insulation System

Wedge AlSi1260 | Fire Resistant Aluminium Silicate Sheet

Wedge AlSi1260 is Aluminium Silicate sheets are most useful infill materials for increasing fire resistance of Fire Doors. These sheets are made of high temperature resistant special types of ceramic fibres with high R-Value and low thermal conductivity. These aluminium silicate ceramic fibres are produced by the most modern spinning needling and thermal forming processes. These insulation materials are available in shape of mattress and semi rigid boards and are thermally efficient high temperature insulating materials that combine the advantages of both low heat storage and complete resistance to thermal shock. These Insulation materials have extremely high resistance against fire.

.

Features & Benefits

- High thermal shock resistance
- Heat resistance, High fire resistance
- Suitable for making Fire Doors & Fire walls
- Low thermal conductivity
- Excellent chemical stability
- Low shot content
- Low heat storage
- High tensile strength

Applications

- Industrial furnace lining
- Fire Wrap & infill materials in Fire Doors
- Fire resistant wall & partitions making
- High temperature pipes heat preserve
- Heat resistant sealing gasket
- Glass tank furnace thermal insulation
- Power boiler and nuclear heat insulation
- Ceramics kilns thermal insulation
- High temperature filter materials

Item	AlSi96 1260			AlSi98 1260			1430 ASZ Blanket		
Chemical Composition（%）									
Al2O3	44			≥45			≥34		
Al2O3+SiO2	≥96			≥98			≥85		
ZrO2	-			-			≥15		
Al2O3+SiO2+ZrO2	-			-			≥99		
Fe2O3+RTiO2	1.0			≤0.5			≤0.5		
K2O+Na2O	1.0			≤0.2			≤0.2		
Density（Kg/M3）	80	96	128	96	128	160	96	128	160
Classification Temperature（℃）	1260			1260			1430		
Shot Content(%)	≤15			≤15			≤12		
Fiber Diameter（um）	3.5			3.5			3.5		
Permanent Heating Linear Change %				1100℃X24h≤-2.5			1350℃X24h≤-2.5		
Thermal Conductivity（W/m.k）									
400℃	0.100	0.090	0.095	0.124	0.114	0.101	0.138	0.122	0.118
500℃	0.122	0.119	0.123	0.145	0.135	0.120	0.179	0.153	0.145
600℃	0.155	0.152	0.158	0.202	0.191	0.175	0.220	0.184	0.172
Tensile Strength （Mpa）	0.040	0.040	0.050	0.050	0.060	0.075	0.050	0.060	0.075
Specifications（mm）	Length X Width：14400/7200/3600X1220/610;Thickness： 6~60mm								
Packing	Plastic bag inside, carton box outside or with pallet or woven bags Can be customized by specific requirement.								
Quality Certificate	ISO9001-2008 ISO14001-2004								

WegdeMAG | Wedge Chloride Free Prefab MgO Board

WegdeMAG MgO board, also known as magnesium oxide board or MgO panel, is a type of building material that has gained popularity in construction and interior design due to its various beneficial properties. It is a versatile and environmentally friendly alternative to traditional construction materials like gypsum board (drywall) or cement board.

WegdeMAG MgO boards have gained popularity as a versatile building material due to their fire resistance, moisture resistance, durability, and eco-friendliness. They are used in residential and commercial construction projects for various applications, including wall and ceiling systems, flooring, and exterior cladding. However, it's important to follow the manufacturer's guidelines for installation and use to ensure the best performance and longevity of WegdeMAG MgO boards in specific applications.

Features & Benefits of WegdeMAG Boards

Composition: WegdeMAG MgO boards are typically composed of magnesium oxide (MgO), magnesium sulphate ($MgSO_4$), perlite, wood chips, and fiberglass mesh. These materials are mixed and formed into sheets, which are then cured to create the finished product.

Fire resistance: One of the primary advantages of WegdeMAG MgO boards is their exceptional fire resistance. They are non-combustible and can withstand high temperatures without releasing toxic fumes. This makes them suitable for applications where fire safety is a concern.

Moisture resistance: WegdeMAG MgO boards are also highly resistant to moisture, making them suitable for use in areas prone to dampness or humidity, such as bathrooms and kitchens. They do not rot, warp, or degrade when exposed to water.

Mold and mildew resistance: Due to their moisture resistance, WegdeMAG MgO boards are less susceptible to mold and mildew growth compared to materials like drywall. This makes them a good choice for environments where maintaining indoor air quality is important.

Strength and durability: WegdeMAG MgO boards are strong and durable, with good impact resistance. They can be used for various applications, including as wall and ceiling panels, exterior cladding, and subflooring.

Ease of installation: WegdeMAG MgO boards are relatively lightweight and easy to work with. They can be cut, drilled, and fastened using standard tools. Their versatility makes them a practical choice for DIY projects as well as professional construction.

Environmental considerations: WegdeMAG MgO boards are considered environmentally friendly because they are made from natural and recyclable materials. They do not contain harmful substances like asbestos, and the production process generates minimal waste.

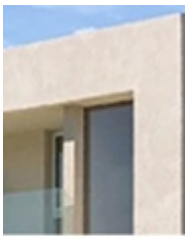
Insulation properties: WegdeMAG MgO boards have some insulating properties, both in terms of thermal and sound insulation. They can help improve the energy efficiency and acoustic performance of buildings.

Exterior applications: WegdeMAG MgO boards can be used as exterior cladding or siding for buildings. They are weather-resistant and can provide an attractive and durable finish to structures.

Printability and finishes: WegdeMAG MgO boards can be painted, textured, or coated to achieve various aesthetic effects. They can be finished to match different design preferences.

WedgeMAG | Applications

MgO (Magnesium Oxide) boards are versatile construction materials known for their durability, fire resistance, and moisture resistance. They find applications in various areas of construction and interior design. Here are some common applications of WegdeMAG MgO boards:

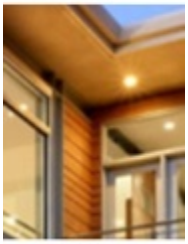


Interior Wall and Ceiling Panels
WegdeMAG MgO boards are often used as interior wall and ceiling panels in residential and commercial buildings. They provide a smooth and durable surface that can be painted or finished to suit the design aesthetics.

Exterior Cladding
WegdeMAG MgO boards can be used as exterior cladding or siding for buildings. They are weather-resistant and provide an attractive and long-lasting finish.

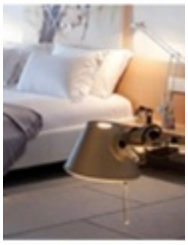
Flooring
In some cases, WegdeMAG MgO boards can be used as a flooring material, especially in areas where moisture resistance is required. They can be covered with various flooring materials, such as tiles or laminate.

Subflooring
WegdeMAG MgO boards can serve as a subflooring material, providing a stable and moisture-resistant base for finished flooring materials like hardwood or tile.



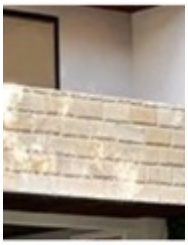
Tile Backer Board
WegdeMAG MgO boards are commonly used as tile backer boards in bathrooms and kitchens. They provide a strong and moisture-resistant substrate for tile installations.

Fire-Rated Applications
Due to their exceptional fire resistance, WegdeMAG MgO boards are used in fire-rated wall assemblies and ceilings to enhance fire safety in buildings.



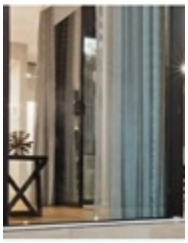
Partition Walls
WegdeMAG MgO boards can be used to create partition walls in interior spaces, providing separation and sound insulation between rooms.

Exterior Sheathing
WegdeMAG MgO boards can be used as exterior sheathing in residential and commercial buildings to provide additional insulation and weatherproofing.



Facade Systems
In architectural designs, WegdeMAG MgO boards are used in facade systems to achieve a specific aesthetic while providing durability and protection against the elements.

Furniture and Cabinetry
WegdeMAG MgO boards can be used to make custom furniture pieces, cabinets, and shelving due to their strength and versatility.



Decorative Features
WegdeMAG MgO boards can be cut and shaped to create decorative features, such as wall panels, moldings, and decorative ceilings.

Acoustic Insulation & Soundproofing
WegdeMAG MgO boards can be used in soundproofing applications to reduce noise transmission between rooms or floors in multi-story buildings.

Roof Underlayment
In some cases, WegdeMAG MgO boards are used as roof underlayment to provide additional protection and insulation under roofing materials.

Eco-Friendly Building
WegdeMAG MgO boards are considered environmentally friendly because they are made from natural and recyclable materials, making them suitable for eco-conscious building projects.

The versatility of WegdeMAG MgO boards and their excellent fire and moisture resistance properties make them suitable for a wide range of applications in the construction industry.

WedgeMAG | Advantages & Benefits Wedge MgO Boards

Wedge MgO (Magnesium Oxide) boards offer several advantages that make them a popular choice in the construction industry. Here are some of the key advantages of WegdeMAG MgO boards.

Fire Resistance
WegdeMAG MgO boards are highly fire-resistant and non-combustible. They can withstand high temperatures without releasing toxic fumes, making them an excellent choice for fire-rated applications.

Moisture Resistance
WegdeMAG MgO boards are highly moisture-resistant and do not degrade or warp when exposed to water. This property makes them suitable for use in areas prone to dampness or high humidity, such as bathrooms and kitchens.

Mold and Mildew Resistance
Due to their moisture resistance, WegdeMAG MgO boards are less susceptible to mold and mildew growth compared to materials like drywall. This contributes to better indoor air quality.

High Strength and Durability
WegdeMAG MgO boards are strong and durable, with good impact resistance. They can be used for various structural and non-structural applications, providing stability and longevity to structures. When properly installed and maintained, WegdeMAG MgO boards can have a long service life, reducing the need for frequent replacements or repairs.

Versatility
WegdeMAG MgO boards are versatile and can be used for a wide range of applications, including interior and exterior wall and ceiling panels, flooring, exterior cladding, subflooring, and as a substrate for tile installations.

Environmental Friendliness
WegdeMAG MgO boards are considered environmentally friendly because they are made from natural and recyclable materials. They do not contain harmful substances like asbestos, and the production process generates minimal waste.

Ease of Installation
WegdeMAG MgO boards are relatively lightweight and easy to work with. They can be cut, drilled, and fastened using standard tools. Their ease of installation makes them suitable for both DIY projects and professional construction.

Paintability and Finishes
WegdeMAG MgO boards can be painted, textured, or coated to achieve various aesthetic effects. They can be finished to match different design preferences.

Acoustic Insulation Sound Proofing
WegdeMAG MgO boards have some insulating properties, both in terms of thermal and sound insulation. They can help improve the energy efficiency and acoustic performance of buildings.

Longer Life in Exterior Applications
WegdeMAG MgO boards can be used as exterior cladding or siding for buildings. They are weather-resistant and can provide an attractive and durable finish to structures.

Compatibility with Other Building Materials
WegdeMAG MgO boards are compatible with a wide range of construction materials and systems, making them adaptable to various building designs and requirements.

WedgeMAG | Material Test Report ASTM & EN12467, 12667

Item Details & Test Standards	WEMAG S12
Base Materials	MgO, MgSO4, Perlite
Thickness, mm	12
Short term Temperature Resistance °C	1400
Long term Temperature Resistance °C	800
Resistance to freezing °C	- 20
Density, kg/m3, BS EN 12467 -2012, ASTM C 1186, minimum	1050
Fire Rating, Minutes	240
Reaction to fire, Non Combustibility BS 476 Part4, EN13501-1	A1
Acoustic Sound Insulation, DB	43
Impact Shock Resistance ASTM D5328, kJ/m2	6
Compressive strength, Mpa	18
Bending strength dry, ASTM C 1185/ISO 8335, Mpa, EN12467:2012 +A1:2016	16
Bending strength wet, Mpa	13
Screw Pull out Strength, N	1480
Direct Screw Withdrawal, ASTM D1037-12, N	1000
Moisture content %	6.50 to 8.9
Frost resistance Freeze Thaw cycles, EN12467:2012+A1:2016	50
Moisture movement, ASTM C1185, EN12467:2012 +A1:2016 %	0.18
Water absorption, ASTM C1185, %	10
Water permeability after 24 hours, water gauge 5 cm	Lack of leakage
Water Vapour Permeability, EN12467:2012+A1:2016	Water vapour resistance value µm: 31
Water Impermeability, EN12467:2012+A1:2016	Passed
Dry Shrinkage, ASTM C 1186-08, maximum %	0.2
Wet expansion ASTM C 1186-08, maximum %	0.1
Thermal conductivity, ASTM C177, EN12667:2001, W/(m·K)	0.186
Thermal Resistance, EN12667:2001, (m²·K)/W	0.065
Asbestos or formaldehyde	None
Warranty, Years	50
Fire Resistant, EN ISO1182 &1176	A1
Surface burning and smoke, ASTM E 84-12	A
Free chloride content, %	None
Growth of Mold & Mildew ASTM D3273	No Growth
MgO %	50 to 60
MgSO4	25 to 30
MgCl2	None
Fiber	5 to 6
Perlite	3 to 4
Chloride content, ASTM C 871 maximum %	0.1
Dimensional Tolerance, EN12467:2012 +A1:2016, Width	±2mm
Dimensional Tolerance, EN12467:2012 +A1:2016, Thickness	±0.2mm
Dimensional Tolerance, EN12467:2012 +A1:2016, Edge Straightness, %	±0.02mm
Dimensional Tolerance, EN12467:2012 +A1:2016, Squareness, mm/m	±0.08mm

WedgeMAG | Comparison with other Prefab Building Boards

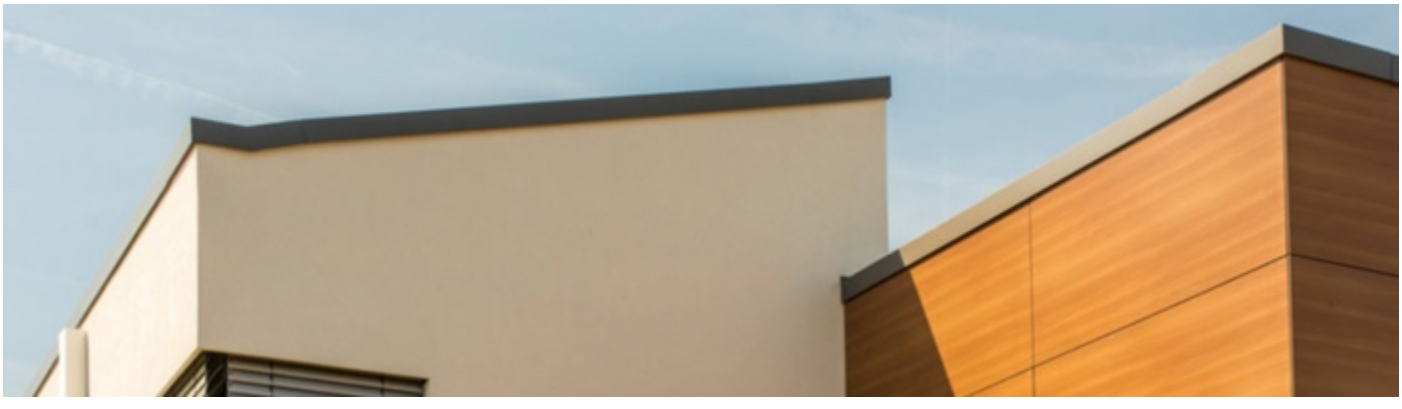
Products & Features	WedgeMAG MgO Board	Fiber Cement Board	MgO Board Standard	Gypsum Board	OSB / Plywood
Weight	Medium	High	Medium	Low	Medium
Fire Resistant, 120 minutes	9 - 12 mm	20 mm	12 mm	48 mm	NA
Water Resistant	Very High	Medium	Medium	Poor	Poor
Mould/Insect Resistant	Excellent	Good	Excellent	Poor	Poor
Flexibility	Excellent	Poor	Excellent	Poor	Poor
Fasten Strength	Excellent	Poor	Excellent	Poor	Excellent
Environmental	Good	Asbestos Risk	Good	Poor	Good
Chloride %	None	Yes	High	None	None
Impact Resistance	Very High	Very High	High	Very Low	Medium
Bending Strength	Very High	Very High	High	Very Low	High
Compressive Strength	Very High	Very High	High	Very Low	High
Durability Life, Years	30 - 50	40 - 50	25	15 - 20	30 to 50
External Wall Use	Yes	Yes	Required Coat	No	Required Coat

☒ Example: **Gypsum Board** Not termite resistant

☒ Example: **Gypsum Board** Not humidity resistant

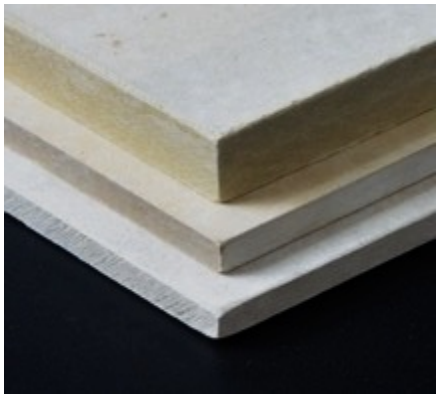
☒ Example: **Wood / Plywood** Not termite resistant

☒ Example: **Wood / Plywood** Not humidity resistant



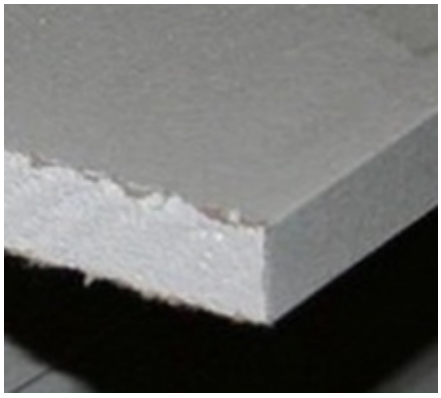
WedgeMAG | Comparison with Cement Boards

Cement board and magnesium oxide (MgO) board are both popular construction materials used for a variety of applications in building and construction. Each material has its advantages and disadvantages, and the choice between them depends on the specific needs of a project. Here's a comparison of cement board vs. WegdeMAG MgO board:

Features & Details	WegdeMAG MgO boards	Cement Board
Composition	WegdeMAG MgO boards are primarily composed of magnesium oxide (MgO), magnesium sulphate ($MgSO_4$), perlite, and fiberglass mesh.	Cement boards are typically made of a mixture of Portland cement, sand, and fibers. Some varieties may include additives to enhance moisture resistance.
Fire Resistance	WegdeMAG MgO boards are highly fire-resistant and non-combustible. They are often chosen for applications where fire safety is a concern. They can sustain higher than 1200 Degree temperatures.	Cement boards are fire-resistant and have short time fire-resistant properties. They cannot sustain higher than 300 Degree temperatures as spalling starts above 180 Degree C.
Moisture Resistance	WegdeMAG MgO boards are highly moisture-resistant and do not degrade or warp when exposed to water. They are suitable for high-humidity environments.	Cement boards are resistant to moisture but not entirely waterproof. They can swell or degrade when exposed to prolonged moisture.
Strength and Durability	WegdeMAG MgO boards are also strong and durable, with excellent impact resistance. They can be used for a wide range of applications, including structural and non-structural.	Cement boards are strong and durable, suitable for use as a substrate for tile and stone installations, as well as for exterior cladding. These boards brittle and have lower impact resistance.
Weight & Load on Building	WegdeMAG MgO boards are lighter with density of 1000 to 1100 Kg/M3, Whereas Cement boards have much higher density more than 1300 to 1400 Kg/M3	Cement boards are heavier than WegdeMAG MgO boards, which can make handling and installation more challenging.
Building Maintenance Cost	Very low maintenance cost due to its extremely low moisture absorption.	High maintenance cost due to its higher absorption of moisture in humid areas.
Installation Cost	Almost 20 to 30% lower than Cement Boards.	Higher Installation cost due to heavier weight and brittleness.
Durability & Guarantee Life	30 to 50 years.	30 to 50 years if maintained regularly.
Product Photos		

WedgeMAG | Comparison with Gypsum Boards

WegdeMAG MgO board and gypsum board (also known as drywall or plasterboard) are two commonly used construction materials with distinct characteristics and applications. Below, we compare WegdeMAG MgO board and gypsum board in terms of various properties and use cases:

Features & Details	WegdeMAG MgO boards	Gypsum Board
Composition	WegdeMAG MgO boards are made of magnesium oxide, magnesium sulphate ($MgSO_4$), perlite, fiberglass mesh.	Gypsum boards are composed of gypsum plaster, which is sandwiched between layers of paper.
Fire Resistance	WegdeMAG MgO boards are highly fire-resistant and non-combustible. They are often chosen for applications where fire safety is a concern. They can sustain higher than 1200 Degree temperatures.	Gypsum boards have some fire resistance but are not as fire-resistant as WegdeMAG MgO boards. They can be used in fire-rated assemblies with the addition of fire-resistant materials.
Moisture Resistance	WegdeMAG MgO boards are highly moisture-resistant and do not degrade or warp when exposed to water. They are suitable for high-humidity environments.	Gypsum boards are susceptible to moisture damage and can degrade when exposed to water. Moisture-resistant or waterproof is required.
Strength and Durability	WegdeMAG MgO boards are also strong and durable, with excellent impact resistance. They can be used for a wide range of applications, including structural and non-structural.	Gypsum boards are relatively fragile and less durable than WegdeMAG MgO boards. They are primarily used for interior wall and ceiling applications. Not suitable for high traffic partitions.
Building Maintenance Cost	Very low maintenance cost due to its extremely low moisture absorption.	High maintenance cost due to its higher absorption of moisture in humid areas.
Durability & Guarantee Life	30 to 50 years.	12 to 20 years if maintained well.
Mold and Mildew Resistance	WegdeMAG MgO boards are resistant to mold and mildew due to their moisture resistance properties.	Gypsum boards are not naturally mold-resistant, but mold-resistant varieties are available with special additives.
Product Photos		

WedgeMAG | FAQ of WegdeMAG MgO boards

What is WegdeMAG MgO board?
WegdeMAG MgO board, short for Magnesium Oxide board, is a construction material made primarily from magnesium oxide, magnesium sulphate, perlite, wood chips, and fiberglass mesh. It is known for its fire resistance, moisture resistance, and durability.

What are the advantages of WegdeMAG MgO boards?
WegdeMAG MgO boards offer several benefits, including high fire resistance, moisture resistance, resistance to mold and mildew, strength and durability, eco-friendliness, and versatility in applications.

Where are WegdeMAG MgO boards commonly used?
WegdeMAG MgO boards are used in a wide range of applications, including wall and ceiling panels, flooring, exterior cladding, subflooring, and as a substrate for tile installations.

Are WegdeMAG MgO boards environmentally friendly?
Yes, WegdeMAG MgO boards are considered environmentally friendly because they are made from natural and recyclable materials. They do not contain harmful substances like asbestos, and the production process generates minimal waste.

Are WegdeMAG MgO boards waterproof?
WegdeMAG MgO boards are highly moisture-resistant and do not degrade or warp when exposed to water. While they are not entirely waterproof, they are suitable for use in areas with high humidity and occasional moisture exposure.

Do WegdeMAG MgO boards resist fire?
Yes, WegdeMAG MgO boards are highly fire-resistant and non-combustible. They can withstand high temperatures without releasing toxic fumes, making them suitable for fire-rated applications.

How do you install WegdeMAG MgO boards?
WegdeMAG MgO boards are typically installed using standard construction techniques, such as cutting, drilling, and fastening. However, they may require specialized fasteners and techniques due to their hardness. Follow the manufacturer's guidelines for the best installation practices.

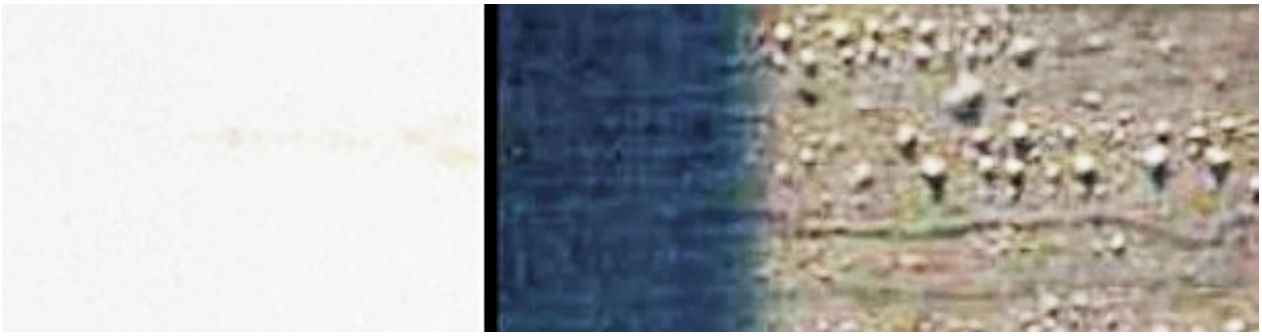
Can WegdeMAG MgO boards be used for exterior applications?
Yes, WegdeMAG MgO boards can be used as exterior cladding or siding for buildings. They are weather-resistant and can provide a durable finish to structures.

Are WegdeMAG MgO boards suitable for DIY projects?
Yes, WegdeMAG MgO boards can be used for DIY projects, but it's essential to follow proper installation procedures and safety precautions. Some experience with construction materials and techniques is beneficial.

What is the cost of WegdeMAG MgO boards compared to other materials like gypsum board?
The cost of WegdeMAG MgO boards can vary depending on factors such as thickness, brand, and region. In some cases, WegdeMAG MgO boards may be more expensive than gypsum board, but the prices can fluctuate.

How do WegdeMAG MgO boards compare to other construction materials, such as gypsum board or cement board?
WegdeMAG MgO boards offer unique advantages, such as high fire resistance and moisture resistance, making them suitable for specific applications where these properties are crucial. The choice between WegdeMAG MgO boards and other materials should be based on project-specific requirements.

What is problem with MgO Boards made of Magnesium Chloride?
Magnesium chloride oxide board has weakness of halogenide. When it occurs, you can see water droplets lying on the surface of the board. It looks like the board is “sweating”. The “sweats” will corrupt board, which may crack and even fall apart over time. The main reason causing halogenide is excess free available chlorine in the board. Factories and research institutes have made a lot of efforts to ensure the removal of excess free available chlorine.



CCXP | Wedge Prefab Foam Insulation Board

Wedge CCXP are Closed-cell extruded polystyrene insulation foam boards, often abbreviated as XPS foam, is a type of rigid foam insulation commonly used in construction and various other applications. It is known for its excellent thermal insulation properties, moisture resistance, and durability. Key features of XPS Insulation boards are:

- **Structure:** XPS foam is made from polystyrene resin, which is mixed with additives and a blowing agent.
- **Insulation Properties:** XPS foam has a high R-value, it effectively resists the transfer of heat, making it an excellent choice for insulating walls, roofs, floors, and foundations.
- **Moisture Resistance:** Closed-cell XPS foam is inherently resistant to moisture and does not absorb water.
- **Durability:** XPS foam is resistant to rot, decay, and many chemicals, making it a long-lasting insulation material. It can also withstand high loads without significant compression, which makes it suitable for use in various construction applications.
- **Dimensional Stability:** XPS foam maintains its shape and insulation properties over time, even in the presence of temperature variations and moisture.

Applications Wedge CCXP Boards

Closed-cell extruded polystyrene foam board is used in a wide range of applications, including:

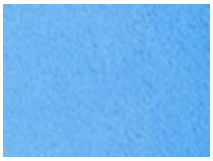
- **Insulation:** It is commonly used in residential and commercial buildings to insulate walls, roofs, floors, and foundations.
- **Under Slab Insulation:** XPS foam is often used beneath concrete slabs to provide insulation and prevent heat loss.
- **Exterior Sheathing:** It can serve as a sheathing material for exterior walls, helping to improve energy efficiency.
- **Waterproofing:** Due to its moisture resistance, XPS foam is used in waterproofing applications, such as protecting foundations from water intrusion.
- **Civil Engineering:** It is used in civil engineering projects for insulation and moisture control.

Benefits of Wedge CCXP Boards

XPS (Extruded Polystyrene) foam board offers several benefits, which is why it is a popular choice for insulation and various other applications. Here are some of the key benefits of XPS foam board:

- **Excellent Thermal Insulation:** XPS foam board has a high R-value, which means it provides effective thermal insulation. It helps to keep indoor spaces comfortable by minimizing heat transfer through walls, roofs, and floors.
- **Moisture Resistance:** XPS foam is inherently resistant to moisture. Its closed-cell structure prevents water absorption, making it an ideal choice for areas prone to moisture, such as basements and crawl spaces. It also resists water vapor transmission.
- **Durability:** XPS foam is a robust and long-lasting material. It can support heavy loads without significant compression, making it suitable for use in various construction applications.
- **Dimensional Stability:** It maintains its shape and insulation properties over time, even in the presence of temperature fluctuations. This ensures long-term performance.
- **Ease of Installation:** XPS foam boards are lightweight and easy to handle. They can be cut and shaped with common tools, simplifying the installation process for professionals and DIYers alike.
- **Versatility:** XPS foam is versatile and finds applications in a wide range of scenarios. It is commonly used for insulating walls, roofs, foundations, and floors in residential and commercial construction. It is also used in civil engineering projects and has applications in crafting and hobbies due to its ease of manipulation.
- **Chemical Resistance:** XPS foam is resistant to many chemicals and solvents, making it suitable for use in environments where exposure to chemicals is a concern.
- **Low Thermal Expansion:** XPS foam has minimal thermal expansion and contraction, reducing the likelihood of cracks or gaps developing in the insulation over time.
- **Sound Insulation:** XPS foam can also provide some degree of sound insulation when used as part of a building's construction.
- **Energy Efficiency:** By effectively insulating a building's envelope, XPS foam board can contribute to increased energy efficiency and reduced heating and cooling costs.
- **Environmental Considerations:** Some XPS foam products are manufactured with a low global warming potential (GWP) blowing agent, which reduces their impact on the environment.



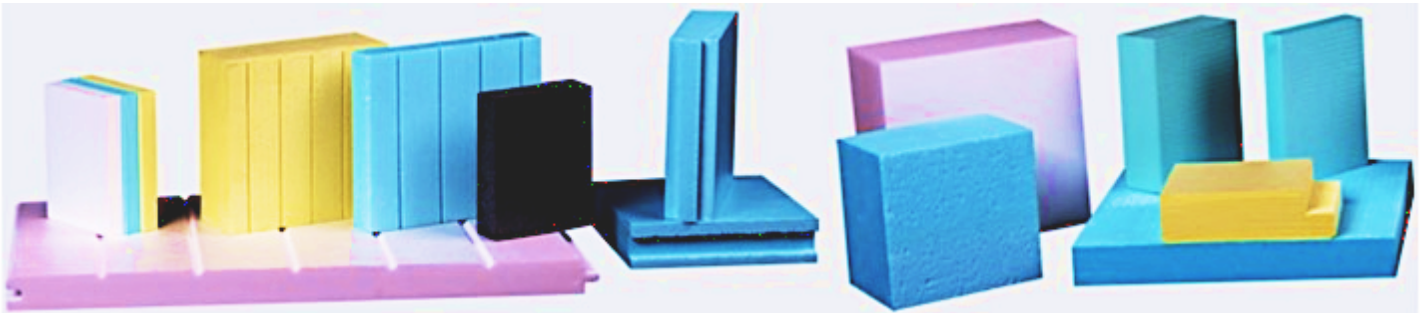



CCXP | Wedge Foam Board Technical Data Sheet

Wedge CCXP foam board is a popular building material known for its excellent insulation properties and durability. Wedge CCXP foam boards have a high R-value, which means they provide effective thermal insulation. They help maintain stable indoor temperatures by reducing heat transfer through walls, roofs, and floors. Wedge CCXP foam has a closed-cell structure, which means the individual cells are closed off from each other. This structure provides resistance to moisture penetration and makes Wedge CCXP highly waterproof and resistant to water vapor.

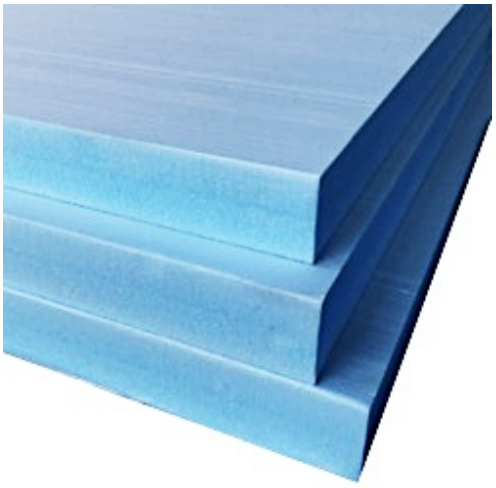
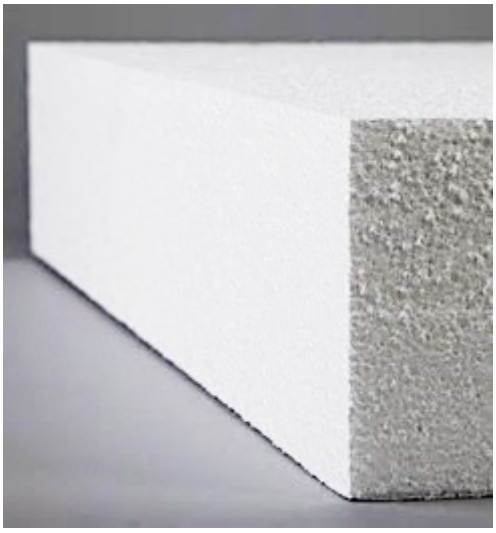
Wedge CCXP foam is inherently resistant to moisture and does not absorb water. This property makes it suitable for use in damp or humid environments and helps prevent mold and mildew growth. Wedge CCXP foam is a durable material that can withstand heavy loads without significant compression. It retains its insulating properties over time and does not deteriorate easily. Wedge CCXP foam is resistant to most chemicals, making it suitable for use in a variety of applications where exposure to chemicals or solvents may occur. Wedge CCXP foam has minimal thermal expansion and contraction, reducing the risk of cracks or gaps developing in the insulation over time. When using Wedge CCXP foam boards, it's crucial to follow technical guidelines, local building codes, and safety precautions to ensure effective insulation and a safe installation.

Technical Properties	Wedge CCXP 30	Wedge CCXP 35	Wedge CCXP 36	Wedge CCXP 45	Wedge CCXP 60	Wedge CCXP 70
Application Temperature °C	-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80
Thermal conductivity, ASTM C518						
at 10 °C, W/mK	0.028	0.028	0.028	0.028	0.028	0.028
at 25 °C, W/mK	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Bulk Density, Kg/m3, ASTM D1622	30	35	37	40	45	48
Compressive strength ASTM D1621, kPa	200	300	350	450	600	700
Compressive strength, psi	29	44	51	65	87	102
Flexural Strength, ASTM C203 kPa	345	400	410	425	525	690
Water vapour permeability at 25 mm ASTM E96, ng/Pa.s.m2	<85	<80	<80	<70	<65	<60
Water absorption by immersion, %	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7
Limiting Oxygen Index, ASTM D 2863, %	24	24	24	24	24	24
Dimensional Stability, ASTM D2126, %	2	1.5	1.5	1	1	1
R-Value 1 Inch Thickness	R 5.1	R 5.1	R 5.1	R 5.2	R 5.2	R 5.2
R-Value 2 Inch Thickness	R 10.2	R 10.2	R 10.2	R 10.4	R 10.4	R 10.4
Thermal resistance RD, m2*K/W (ASTM C177 / C518 at Thickness mm						
10	0.29	0.29	0.29	0.29	0.29	0.29
25	0.88	0.88	0.88	0.88	0.88	0.88
50	1.47	1.47	1.47	1.47	1.47	1.47
75	2.06	2.06	2.06	2.06	2.06	2.06
80	2.35	2.35	2.35	2.35	2.35	2.35
100	2.94	2.94	2.94	2.94	2.94	2.94
125	3.82	3.82	3.82	3.82	3.82	3.82
150	4.41	4.41	4.41	4.41	4.41	4.41
180	5.29	5.29	5.29	5.29	5.29	5.29
200	5.88	5.88	5.88	5.88	5.88	5.88
Colour	White, Yellow, Blue, Pink					
Thickness, mm	6 to 100					
Length, mm	1200 to 3000					
Width, mm	600 to 1200					
Edge Type	Square Edge, Shiplap, Tough and Groove					



CCXP vs EPS | Comparison of Foam Board

XPS (Extruded Polystyrene) and EPS (Expanded Polystyrene) are both types of rigid foam insulation boards commonly used in construction and building applications. They have some similarities but also important differences that make them suitable for different situations. Here's a comparison of XPS vs. EPS insulation boards:

	Wedge CCXP Foam Board	EPS Foam Board
Composition	Extruded Polystyrene insulation boards are made by melting and then extruding polystyrene polymer mixed with various additives. The extruded material is formed into boards of various thicknesses.	Expanded Polystyrene insulation boards are created by expanding and molding polystyrene beads using heat and pressure. The beads are fused together to form the insulation board.
Insulation Performance	XPS typically has a slightly higher R-value (thermal resistance) compared to EPS of the same thickness.	EPS typically has a lower R-value (thermal resistance) compared to XPS of the same thickness.
Water Resistance	XPS is inherently more resistant to moisture compared to EPS. It has a closed-cell structure that makes it less permeable to water and more suitable for applications where moisture resistance is crucial, such as below-grade insulation or in areas prone to high moisture levels.	EPS Foam Boards have lower resistant to moisture compared to XPS.
Compression Strength	XPS tends to have higher compressive strength compared to EPS. This makes it more suitable for applications where the insulation will be subjected to heavy loads or compression, such as under concrete slabs.	EPS Boards has Lower compressive strength than XPS Foam Boards.
Durability	It is a robust and long-lasting material. It can support heavy loads without significant compression, making it suitable for use in various construction applications.	EPS Boards are loose it performance if exposed above 45 Degree C in summer and not suitable for longer life roof insulation.
		

Both XPS and EPS are relatively easy to install and can be cut to fit various shapes and sizes. They are lightweight and can be adhered or mechanically fastened to building surfaces. In summary, the choice between XPS and EPS insulation boards depends on your specific project requirements and priorities. If you need higher R-values, moisture resistance, or greater compressive strength, XPS may be the better option. On the other hand, if cost is a significant factor and you don't require the highest R-value or moisture resistance, EPS could be a more cost-effective choice. Consider consulting with a construction professional to determine the best insulation material for your specific needs. Additionally, always check local building codes and regulations when selecting insulation materials for your project.





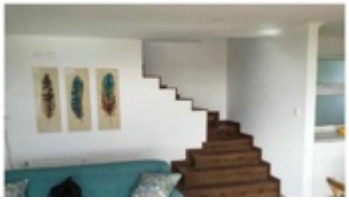










PU metal carved sandwich panel

Fiber cement wall cladding

Embossed pu Sandwich panel

Gypsum board

PVC wall cladding

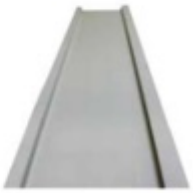
Verge board

Steel sheet corrvgated

OSB board

Light steel keel

PVC ceiling

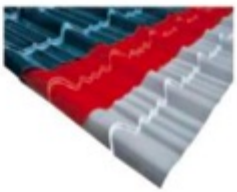


Steel ceiling

House wrap

XPS

Rockwool



Steel tile

Asphalt shringle tile

Colorful metal roof tile





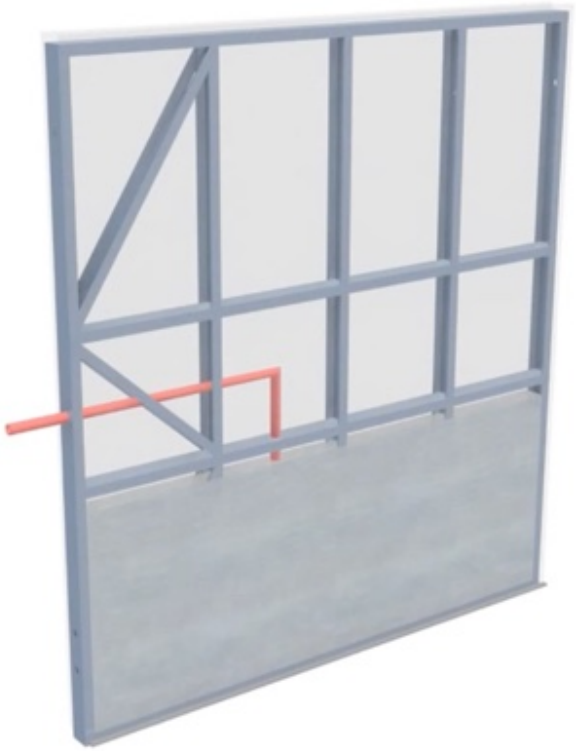


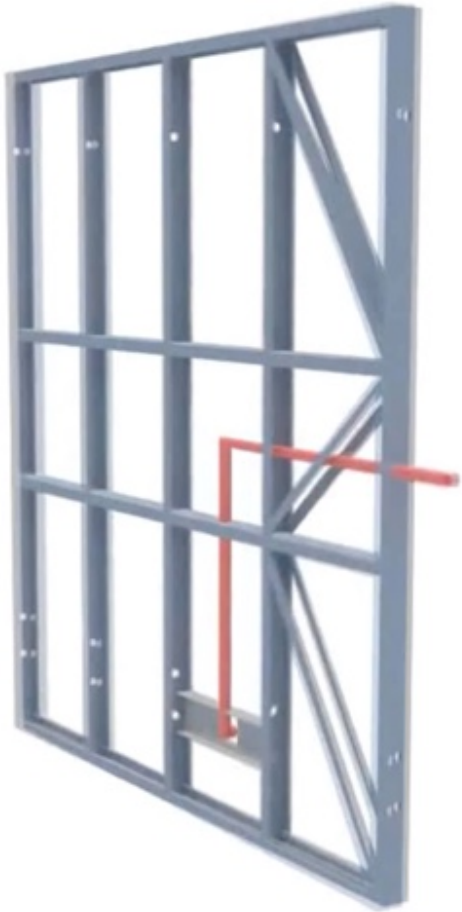


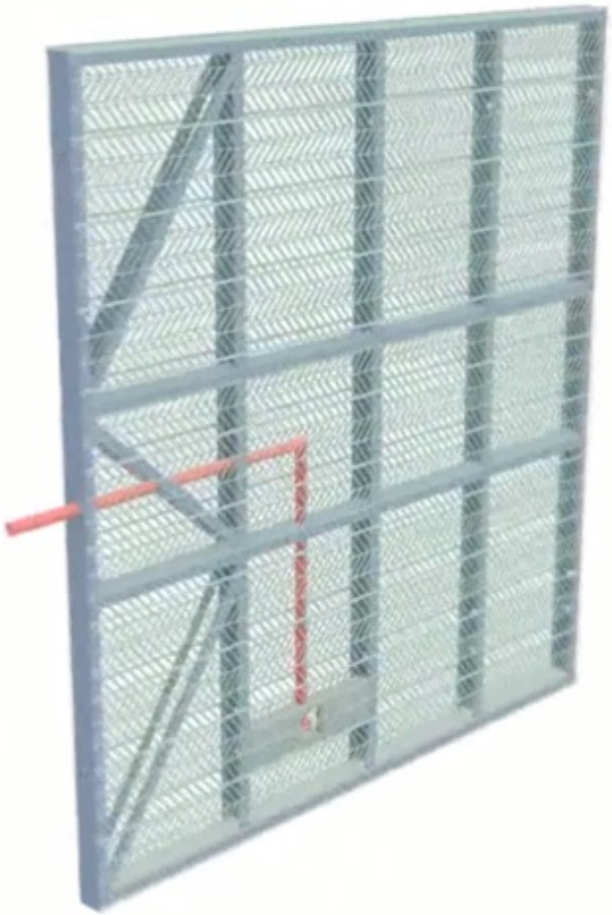


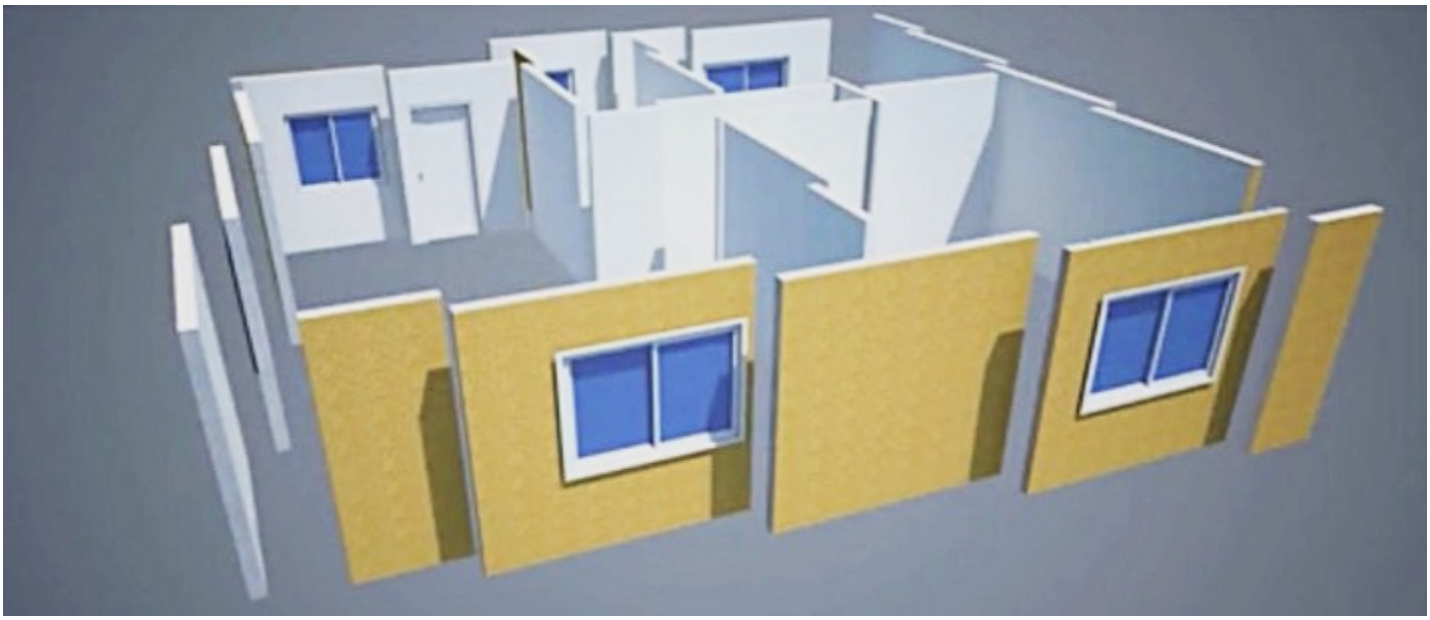


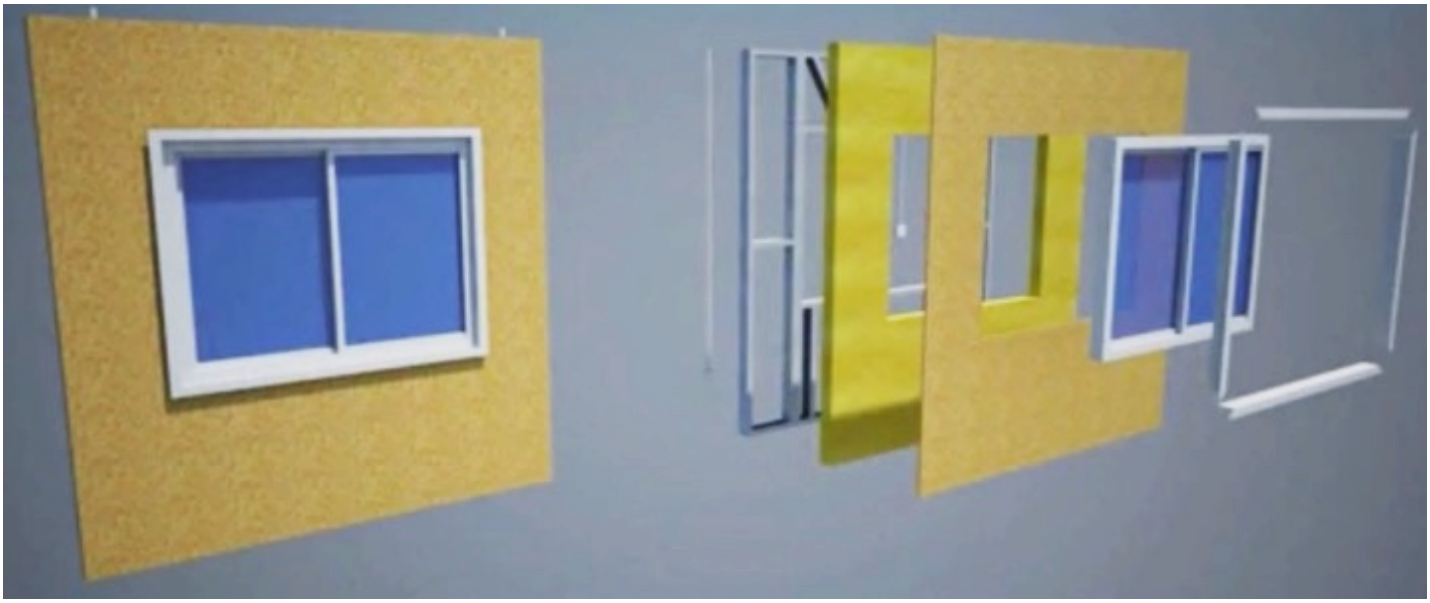

21

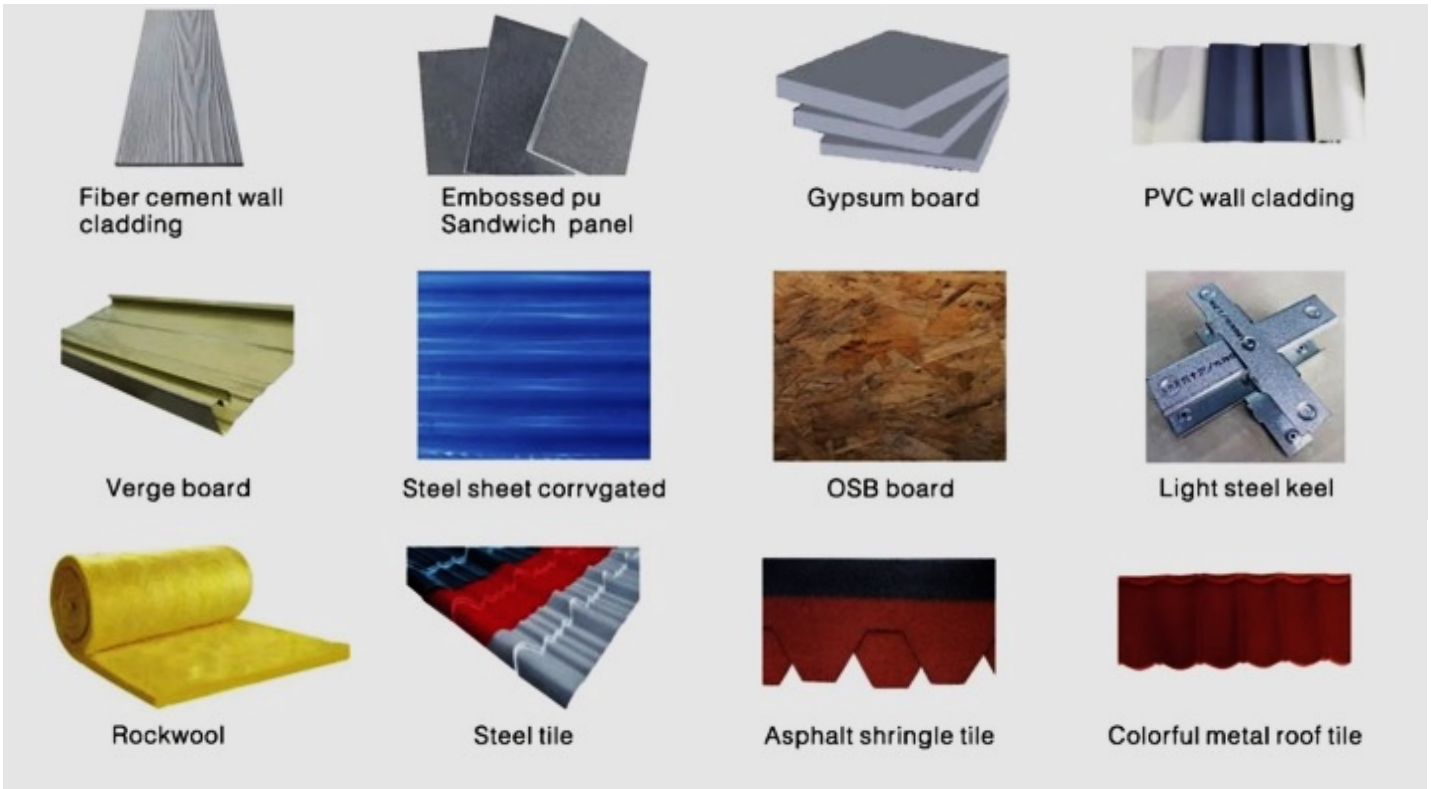











Fiber cement wall cladding
Embossed pu Sandwich panel
Gypsum board
PVC wall cladding
Verge board
Steel sheet corrvgated
OSB board
Light steel keel
Rockwool
Steel tile
Asphalt shringle tile
Colorful metal roof tile

Wedge Industries Limited

615 Galleria Tower DLF Phase 1
Gurgaon – 122002, New Delhi Region,
Haryana India