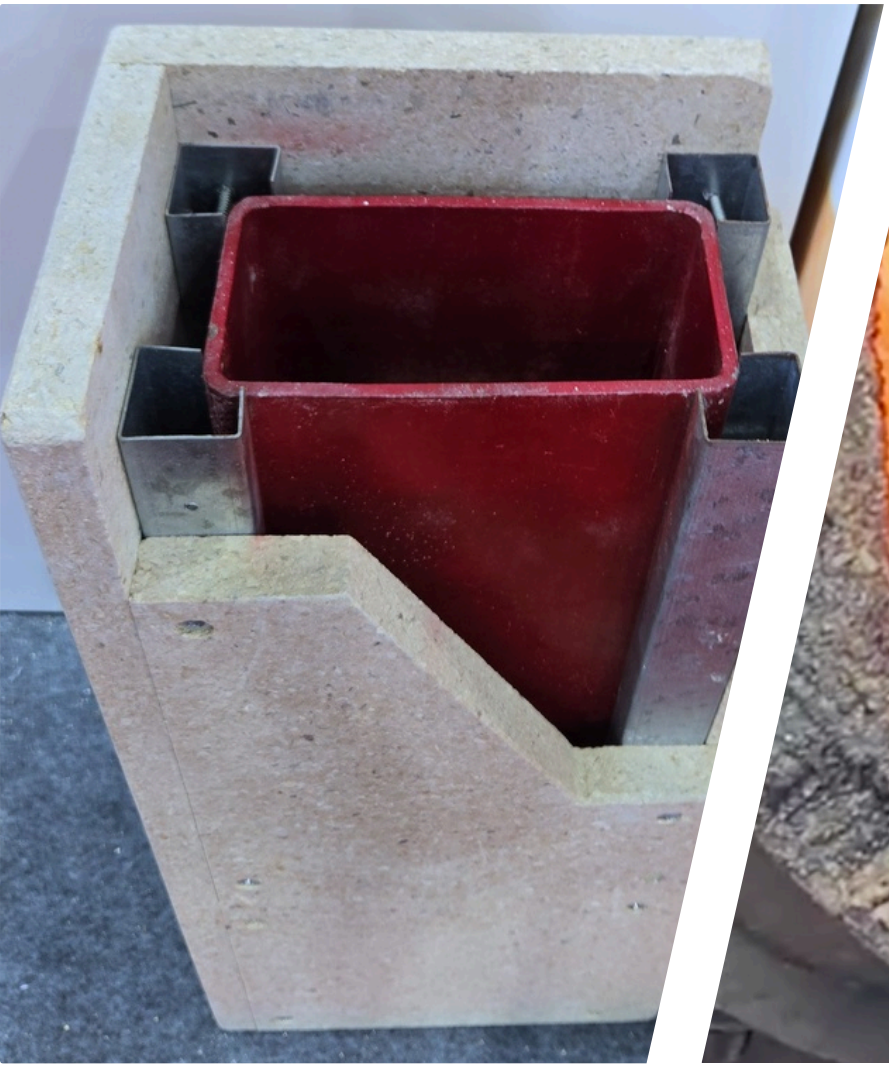
Wedge

Vermiculite Boards

- High Insulation
- Thin & Light Weight
- Fire Resistant
- Water Proof
- High Strength



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WedgeVC | Vermiculite Insulation Boards

Wedge VC Grade Vermiculite boards are manufactured from high temperature exfoliated vermiculite, a naturally occurring mineral that expands when heated. These boards are known for their excellent fire resistance, thermal insulation properties, and lightweight nature. These boards are used in various industries for applications that require high-temperature resistance and insulation.

Technical Properties of Vermiculite Boards

Fire Resistance

WedgeVC Vermiculite boards can withstand very high temperatures without degrading or losing their structural integrity. They are often used as fire barriers in buildings and industrial settings.

Thermal Insulation

Excellent thermal insulation properties make WedgeVC vermiculite boards ideal for reducing heat transfer. They help maintain temperature control in high-heat environments.

Thin & Lightweight

WedgeVC Vermiculite boards are much lighter than many other high-temperature insulation materials. This makes them easier to handle and install.

Non-Toxic and Safe

WedgeVC Vermiculite is non-toxic and does not emit harmful fumes when exposed to high temperatures. It is safe for use in residential and commercial buildings.

Durable and Moisture Resistant

WedgeVC Vermiculite boards are resistant to moisture, preventing mold and mildew growth. They are durable and can withstand mechanical stresses.

WedgeVC | Vermiculite Insulation Boards

WedgeVC Vermiculite boards are versatile, high-performance insulation materials with excellent fire resistance and thermal insulation properties. Their lightweight nature, durability, and non-toxic composition make them ideal for use in construction, industrial, automotive, aerospace, and consumer applications. By enhancing fire safety, improving energy efficiency, and offering ease of installation, WedgeVC vermiculite boards are a valuable addition to any project requiring reliable thermal management and fire protection.

Benefits of WedgeVC Vermiculite Boards

- Energy Efficiency: By reducing heat loss, vermiculite boards contribute to energy efficiency in buildings and industrial processes.
- Safety: Their fire-resistant properties enhance safety in various applications.
- Ease of Installation: Lightweight and easy to cut, vermiculite boards can be quickly and efficiently installed.
- Versatility: Suitable for a wide range of applications across different industries.

Applications of Wedge Vermiculite Boards

Construction

- Fireproofing: Used as fireproof panels in walls, ceilings, and floors to enhance fire safety in buildings.
- Thermal Barriers: Installed in areas requiring high levels of thermal insulation, such as around fireplaces, stoves, and boilers.

Industrial

- Furnace and Kiln Linings: Used as insulation linings for furnaces, kilns, and other high-temperature industrial equipment.
- Gasket and Seal Production: Utilized in the production of gaskets and seals that require heat resistance.

Automotive

- Heat Shields: Employed as heat shields in automotive applications to protect components from high temperatures.
- Engine Insulation: Used to insulate engine compartments and exhaust systems.

Aerospace

- Thermal Protection: Used in the aerospace industry for thermal protection of spacecraft and aircraft components.

Consumer Goods

- Fireplace Surrounds: Installed around fireplaces to provide a fire-resistant barrier
- Pizza Ovens: Used in the construction of high-temperature pizza ovens.

WedgeVC | Technical Specifications

WedgeVC Vermiculite boards are valued for their exceptional thermal and fire-resistant properties, making them ideal for various applications. Below are the typical technical specifications for vermiculite boards:

General Specifications
- Material: Exfoliated vermiculite
- Form: Rigid boards or panels
- Color: Typically light brown or beige

Physical Properties
- Density: 400 to 600 kg/m³ (can vary based on specific formulations)
- Thickness: Commonly available in thicknesses ranging from 10 mm to 100 mm
- Dimensions: Standard sizes include 1200 x 600 mm, 1000 x 610 mm, and custom sizes as required

Thermal Properties
- Thermal Conductivity: 0.04 to 0.12 W/m·K (at 20°C)
- Maximum Service Temperature: Up to 1150°C
- Specific Heat Capacity: Approximately 1.0 kJ/kg·K

Mechanical Properties
- Compressive Strength: 2.5 to 6.5 MPa
- Flexural Strength: 0.5 to 2.5 MPa

Fire Resistance
- Fire Rating: 120 - 240 Minutes, Non-combustible (class A1 according to EN 13501-1)
- Smoke Emission: Negligible
- Flame Spread Index: 0

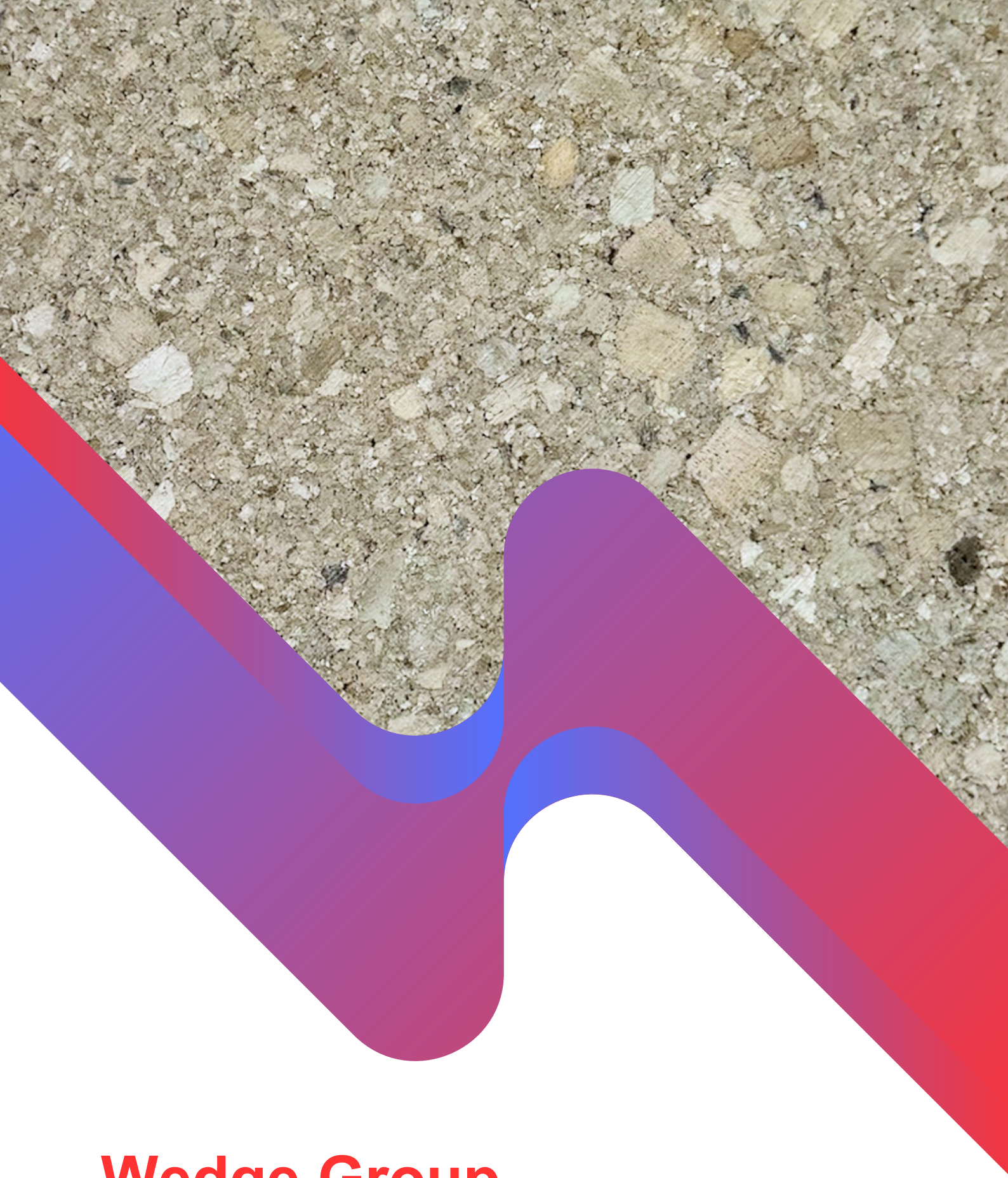
Moisture Resistance
- Water Absorption: <2% by volume
- Moisture Content: Typically less than 1% when supplied

Acoustic Properties
- Sound Absorption Coefficient: Effective at reducing sound transmission.

Chemical Properties
- pH Value: Neutral to slightly alkaline
- Resistance: Chemically stable and resistant to most acids and alkalis

Environmental and Safety Properties
- Toxicity: Non-toxic and asbestos-free
- Recyclability: Fully recyclable
- Environmental Impact: Low environmental impact due to natural composition and recyclability.

Quality		WedgeVC450	WedgeVC600	WedgeVC700	WedgeVC900
Colour		Brown	Brown	Brown	White / Brown
Service temperature	°C	1100	1100	1100	1150
Bulk density	kg/m3	450 - 475	600	700 - 800	900
Porosity	%	81	76	74	57
Cold compressive strength	MPa	2.5	4.2	4.5	6.3
Thermal Shock Resistance	Cycles	>10	>10	>10	>8
Flexural strength	MPa	0.6 - 0.8	1.6	2	2.1
Linear shrinkage	%	1	1	1	1.2
Thermal conductivity at 25 °C	W/m K	0.048	0.056	0.058	0.056
Thermal conductivity at 200 °C	W/m K	0.14	0.16	0.19	0.18
Thermal conductivity at 400 °C	W/m K	0.17	0.18	0.2	0.19
Thermal conductivity at 600 °C	W/m K	0.19	0.2	0.21	0.2
Thermal conductivity at 800 °C	W/m K	0.21	0.22	0.22	0.23
Specific heat capacity @ 400 °C	kJ/kg K	0.94	0.94	0.94	1.14
Chemical Properties					
SiO2	%	43 - 46	43 - 46	43 - 46	43 - 45
MgO + CaO	%	20 - 22	20 - 23	22 - 25	24 - 28
Al2O3	%	8 - 12	8 - 12	8 - 12	10 - 12
Fe2O3	%	5.5	5.5	5.5	7.1
K2O	%	10	10	10	6.9
LOI	%	6 - 7	6 - 7	6 - 7	4 - 6
Standard Sizes					
Length	mm	For Insulation: 1000 - 1260 | For Fire Protection: 1220 - 2440			
Width	mm	330, 610, 1000, 1220			
Thickness	mm	10 - 100			



Wedge Group

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