

Wedge Boards

Prefab & Modular Buildings

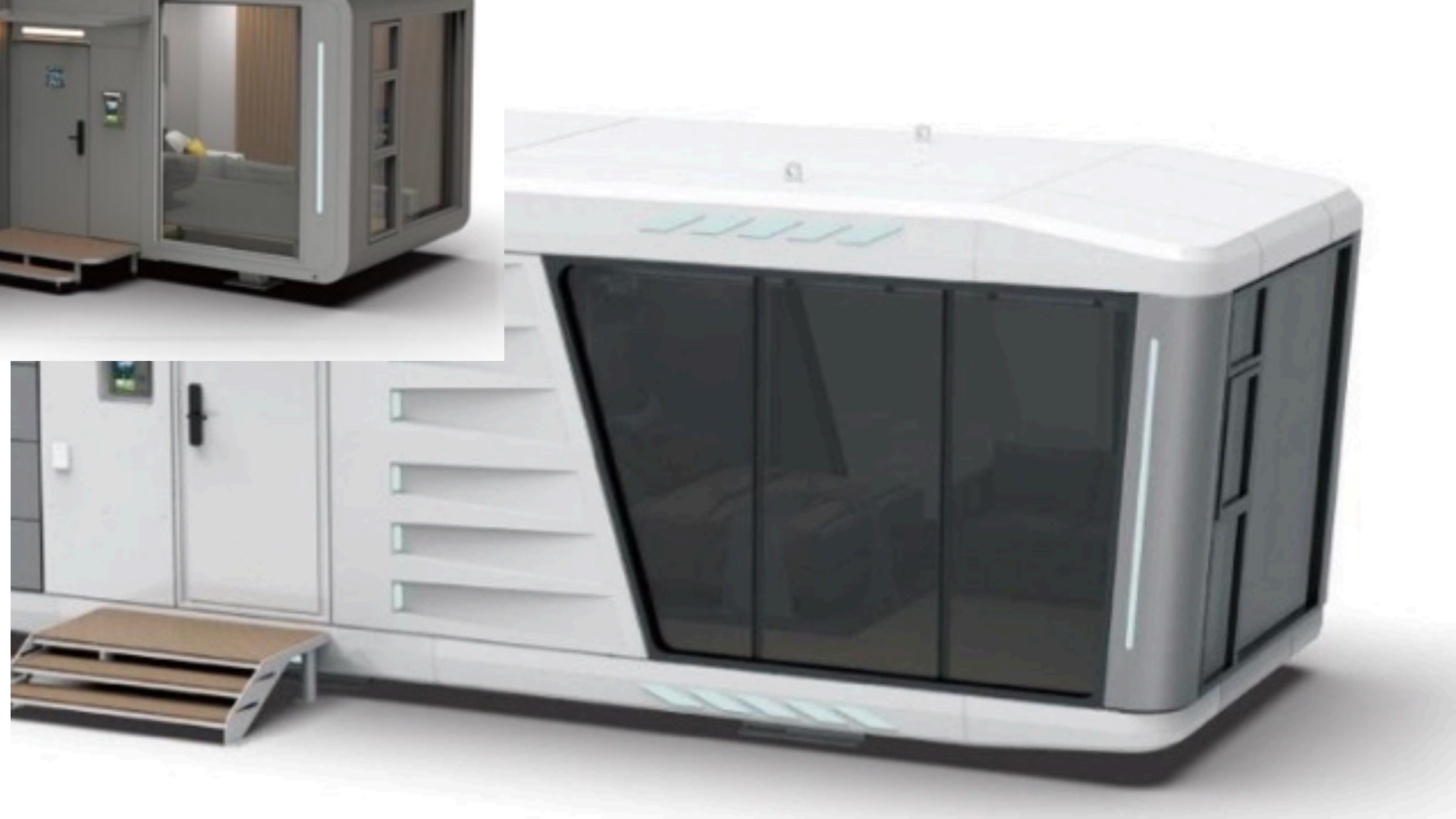


Approved & Certified Technologies



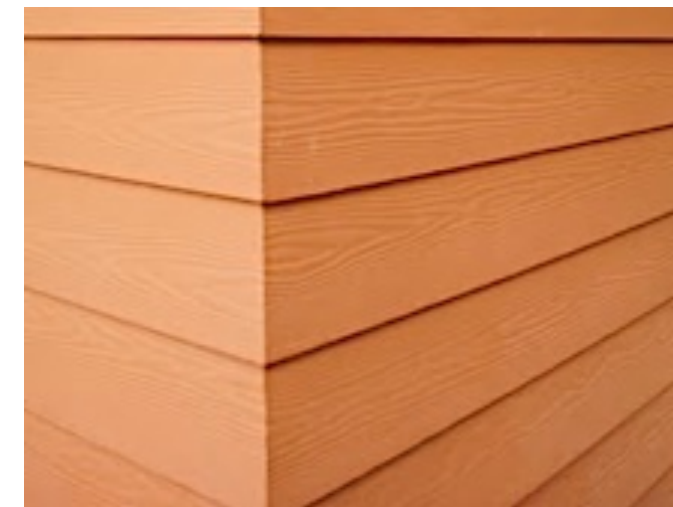


Wedge



Prefab & Modular Construction

Aspect	Conventional Masonry Construction	Prefab / Modular Construction
Construction Time	Longer construction period, several months to over a year.	Shorter construction period, completed in weeks to a few months.
Cost	Higher costs due to labour, materials, and extended construction period.	More cost-effective due to reduced labour costs and quicker construction,
Energy Efficiency	Requires additional insulation for high energy efficiency.	Designed with energy efficiency in mind, better at maintaining interior temperatures.
Durability	Life of 50–75 years with external walls total thickness ~230–350 mm mm (9–12") with Brick/block wall.	Similar life of 50–75 years with external walls total thickness ~120–150 mm mm (4–6") with Wedge Boards LGFS Insulated Panels.
Environmental Impact	Higher environmental impact due to materials and longer construction.	Lower environmental impact, controlled factory construction leads to less waste.
Design Flexibility	Greater flexibility in design, allows for custom layouts.	Growing design options, customizable but somewhat limited.
Resale Value	Typically holds its value well over time.	Higher Resale value, improving with growing acceptance of prefabricated homes
Maintenance Cost	Requires regular maintenance, especially for vulnerable materials.	Requires much lower maintenance due to modern materials.
Heat / Cold Insulation	Very low and in extreme climates heating or cooling cost is very high	Made of pre-insulated designed to perform with almost zero heating or cooling cost.



Wedge Boards | Technical Details

LGFS Wall Panel Specification – Wedge High-Durability Design (120 mm Total Thickness)

Wedge LGFS insulated walls are superior in thermal, seismic, and lateral performance, with a lightweight and flexible frame.
High compressive strength is achieved with LGFS skeleton to match the overall strength & durability of Brick Walls.

Construction Breakdown (Outside to Inside):

LN.	Component	Thickness	Description
1	Cladding	8 mm	Wedge UV-coated High Strength Cement Board
2	External Board	12 mm	High Strength Waterproof Wedge Perlite-Magnesia Board
	LGFS Frame Cavity	90 mm	Light Gauge Galvanized Steel (LGFS) C-Sections
	Insulation	90 mm	Wedge HD Perlite Stone Wool
5	Internal Board	10 mm	Wedge Perlite-Magnesia Board, interior-grade finish-ready
	Total Wall Thickness	120 mm	Compact, durable, and thermally insulated

Performance Characteristics

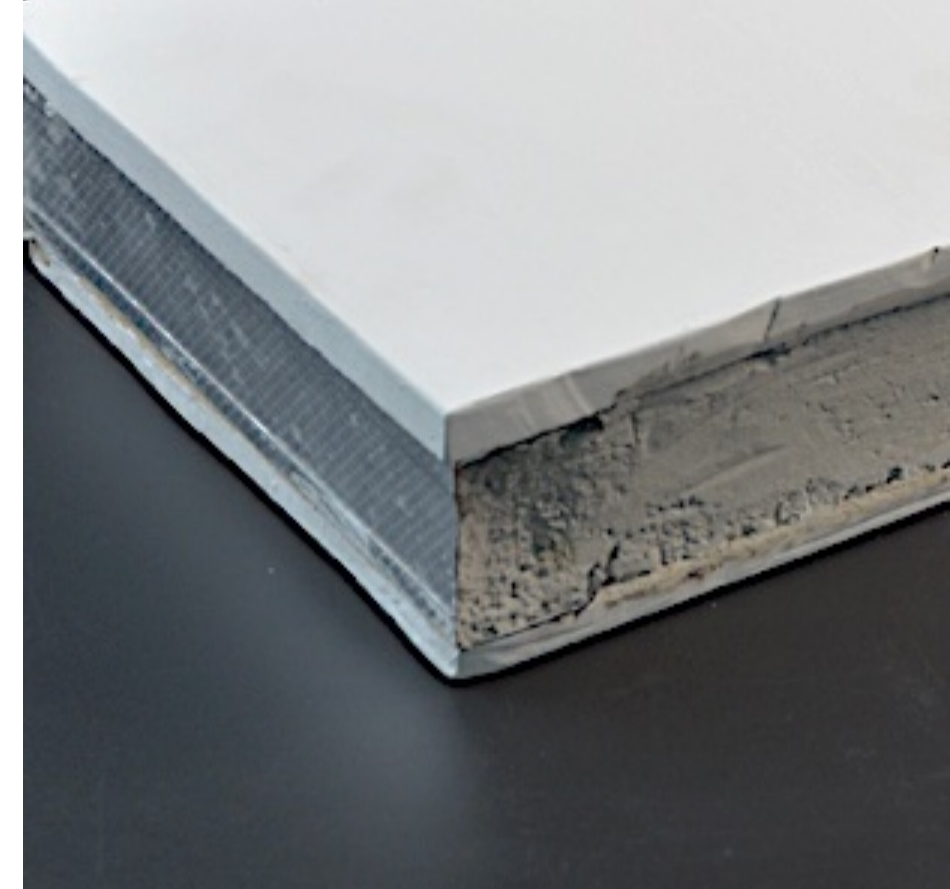
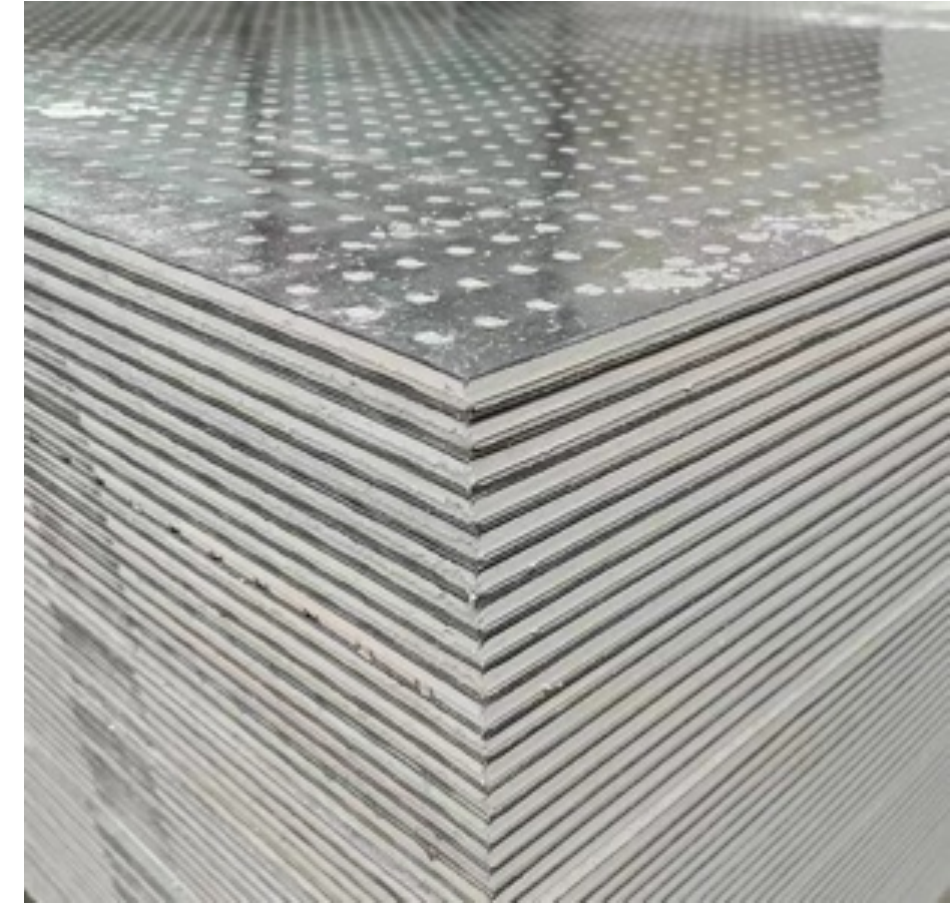
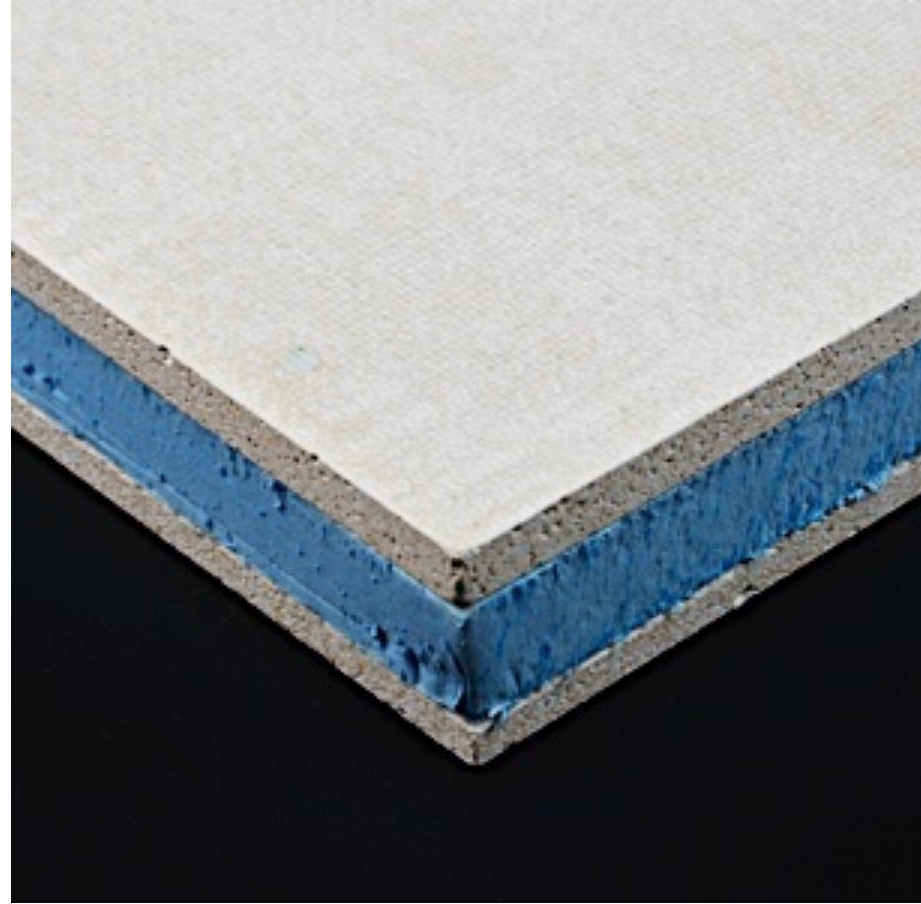
Parameter	Value / Grade
Insulation	R20 – R30
Thermal Conductivity	~0.03–0.04 W/m·K
Acoustic Insulation	48–55 dB
Durability	50+ years (with zinc-aluminum LGFS)
Fire Resistance	Very High

Key Comparisons

Criteria	Masonry Wall	Wedge LGFS Insulated Wall
Overall Strength	Strong in compression	Strong in frame performance
Flexibility / Ductility	Very Low (brittle)	High (LGFS steel + boards)
Seismic Suitability	Poor	Excellent
Insulation	Poor	Excellent (built-in)
Time of Construction	8-12 Months	< 1 Month
Weight per m ²	~400-500+ kg	~90-120 kg



Wedge Boards



OEM | Wedge Boards Production



SGS

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Test Results

Test Item Description

Specimen No.	SGS Sample ID	Description
1	C000101001001	Concrete material

Remarks

(1) 11 kg/m³ ± 1 ppm ± 0.001%

(2) NDL = Not Detected Limit

(3) ND = Not Detected ± 1 MSL

(4) 11 = Not Required

Adhesive

Test Method: With reference to ASTM D690, analysis was performed by WTD.

Test Method	SGS ID	Unit	MSL	Result
Compressive	010001-00-0	N (cm ²)	0.1	Negative
Adhesive	010101-00-0	N (cm ²)	0.1	Negative
Flexural	010201-00-0	N (cm ²)	0.1	Negative
Adhesive	010301-00-0	N (cm ²)	0.1	Negative
Adhesive	010401-00-0	N (cm ²)	0.1	Negative

Note:

(1) Negative = 0.1 (cm²), Positive = 0.1 (cm²)

(2) 11 will be used to confirm when the result is positive by WTD method.

SGS

00000 0000000



SGS

TEST REPORT No. : C000101001001 Date: May 08, 2014 Page: 2 of 10

Test Information

Sample description: See photo

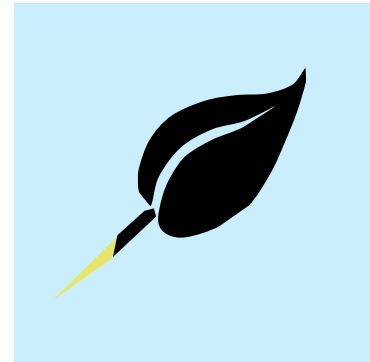
No.	Test Item	Test Method	Test condition	Test result	Client's requirement	Conclusion
1	Density	ASTM C136M (M2F10) Section 5	Temperature: 20°C ± 1°C Drying condition: 105°C ± 5°C for 24 hours	1.24 g/cm ³	1.24 ± 0.02 g/cm ³	Pass
2	Flexural strength (Dry condition)	ASTM C109M (M2F10) Section 5	Temperature: 20°C ± 1°C Drying condition: 105°C ± 5°C for 24 hours	10.0 MPa	≥ 10.0 MPa	Pass
3	Water absorption	ASTM C136M (M2F10) Section 5	Temperature: 20°C ± 1°C Drying condition: 105°C ± 5°C for 24 hours	20.0%	≤ 20.0%	Pass
4	Moisture content	ASTM C136M (M2F10) Section 5	Temperature: 20°C ± 1°C Drying condition: 105°C ± 5°C for 24 hours	10.0%	≤ 10.0%	Pass

Note: To be continued

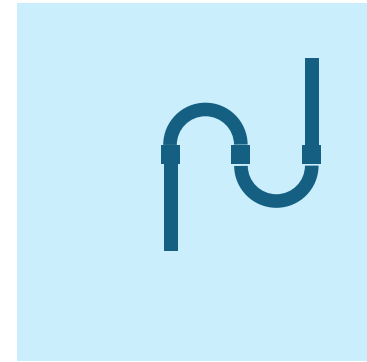
SGS

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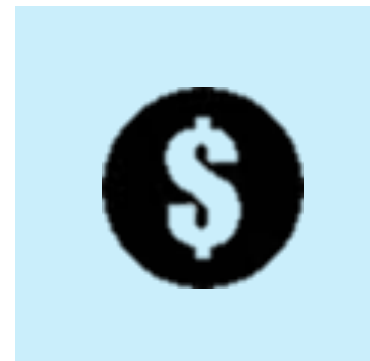
Benefits | Wedge Boards



Green & Sustainable



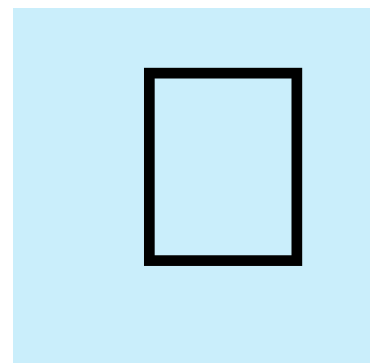
Easy installation
of services



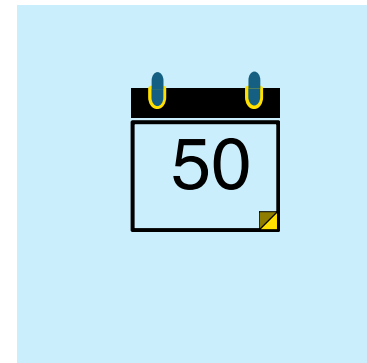
Cost Effective



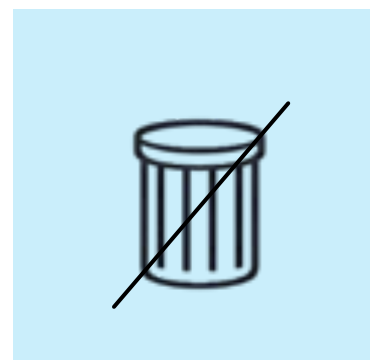
High Strength



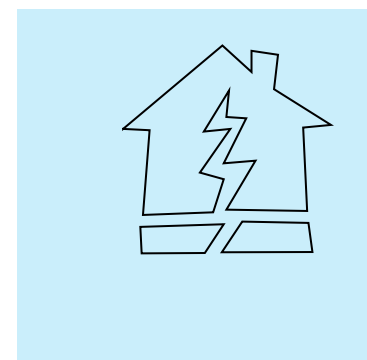
Rapid Installation



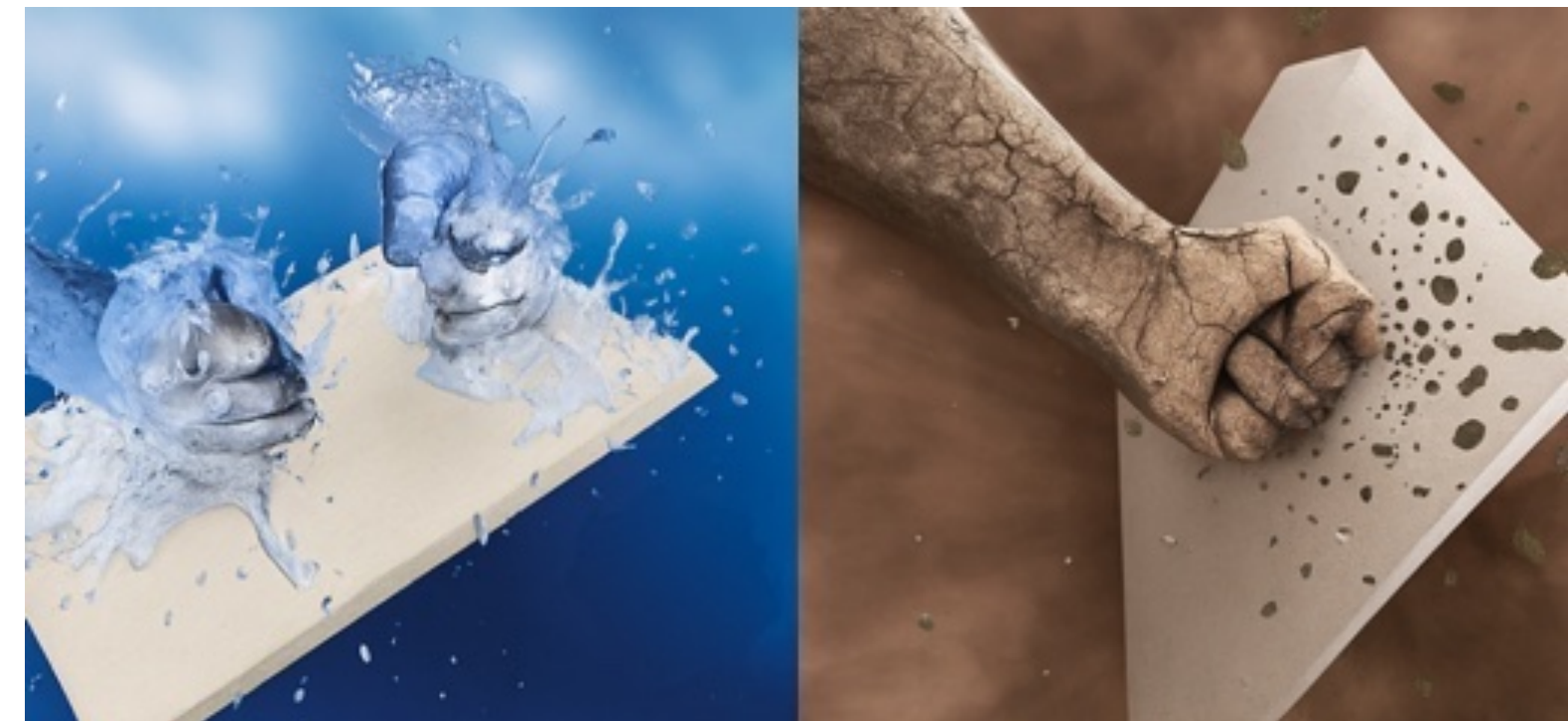
Waterproof
& Durable



Reduced wastages



Seismic resistant

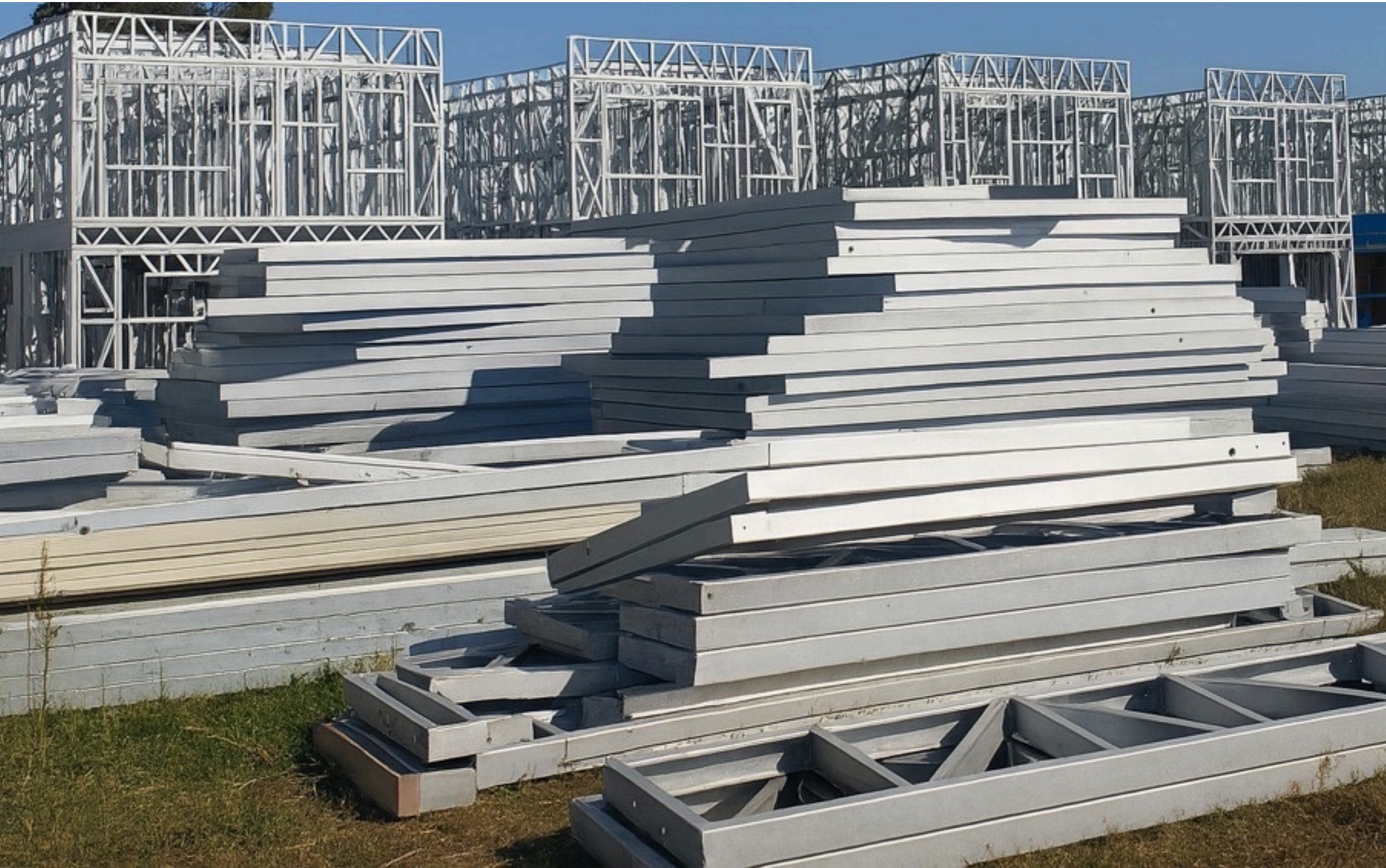


Cost Effectiveness | Wedge Boards



- Affordable luxury construction: ₹850 – ₹1280 / SQF
- Longer guaranteed life > 50 – 75 years
- High strength & maintenance free
- Faster construction < 1 month
- Less labour requirement
- Less materials requirement
- Less space requirement
- Lower materials transportation cost <10%
- Less Wastage > 90% materials can be re-used
- Green Building – 100% recyclable
- Easy & simple installation processes
- Order and cleanliness
- Lower direct and indirect costs

OEM | Wedge Steel Production



Accessories



Screws
(board to metal frame)



Multi-purpose
Joint Compound



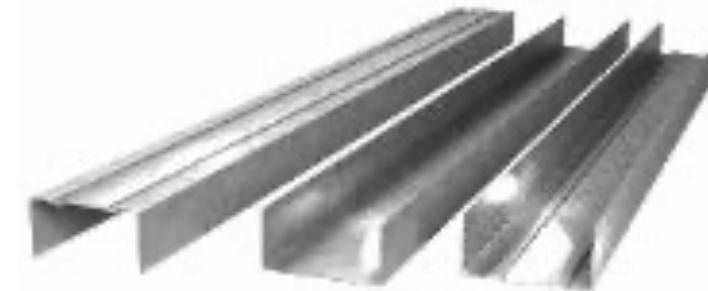
Metal Stud / Runner



Screws
(metal frame)



2" fiberglass
Mesh tape



Metal Chanel



Anchors



Backer rod



Clip



PU Sealant

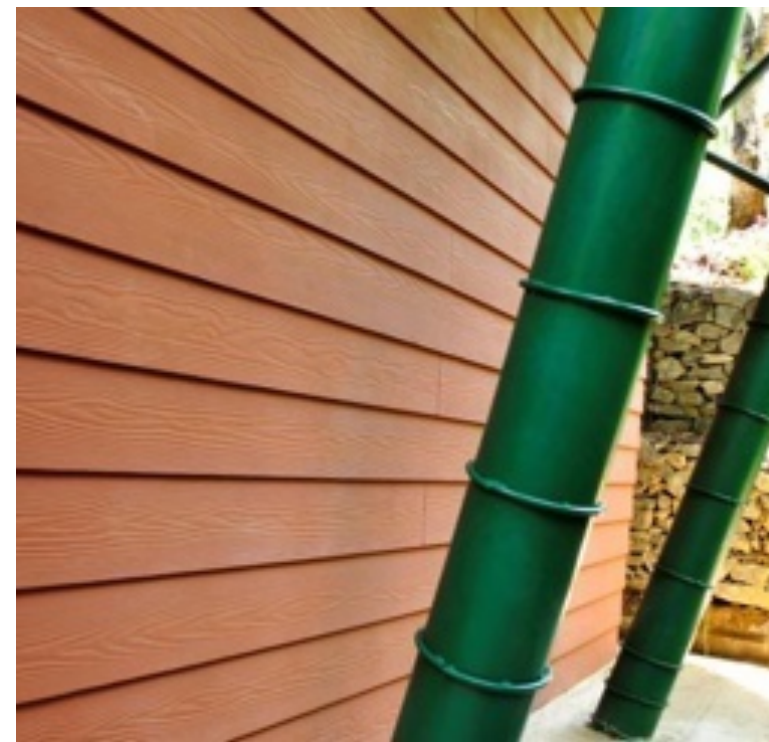


Wedge Stone Wool
Board





Wedge









Wedge





Wedge







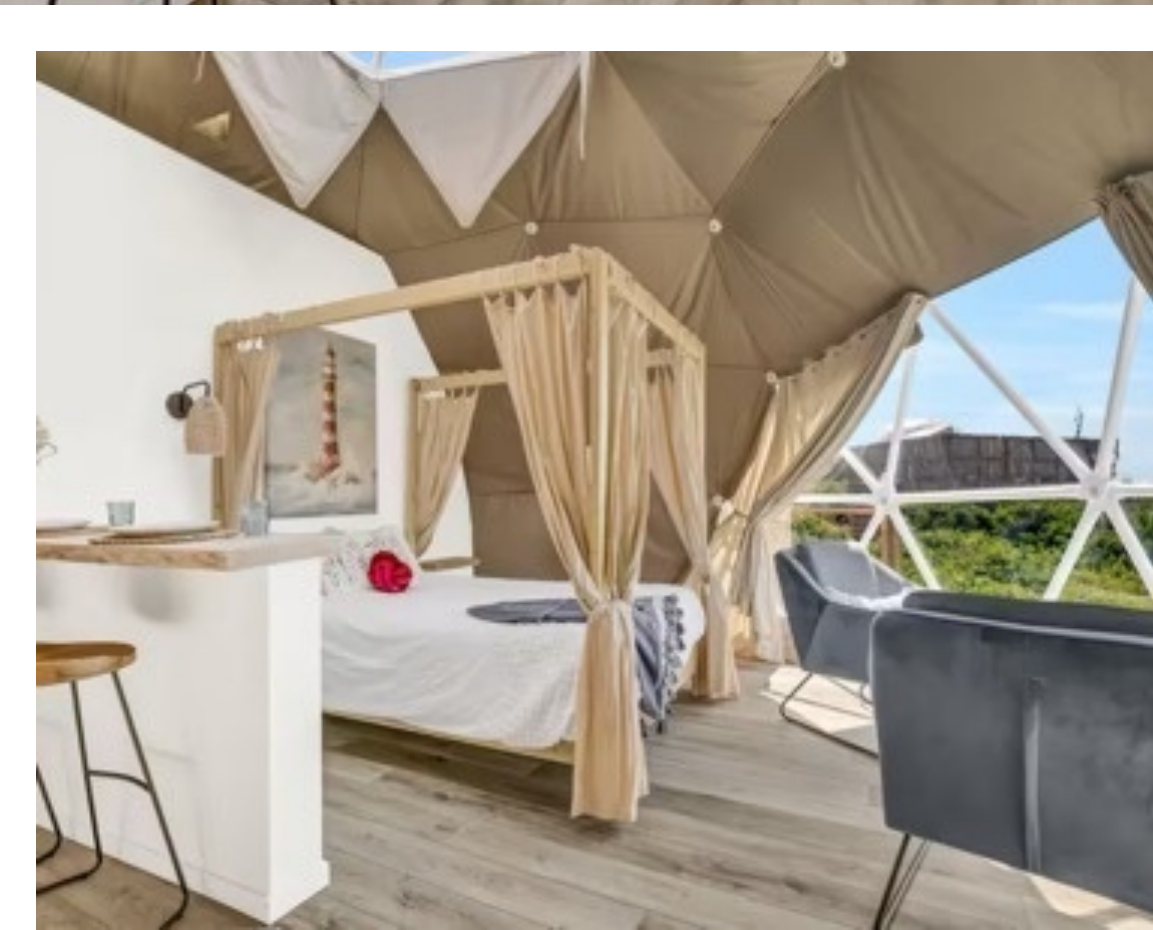
Wedge















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info@wedge-india.com



+919315242072



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