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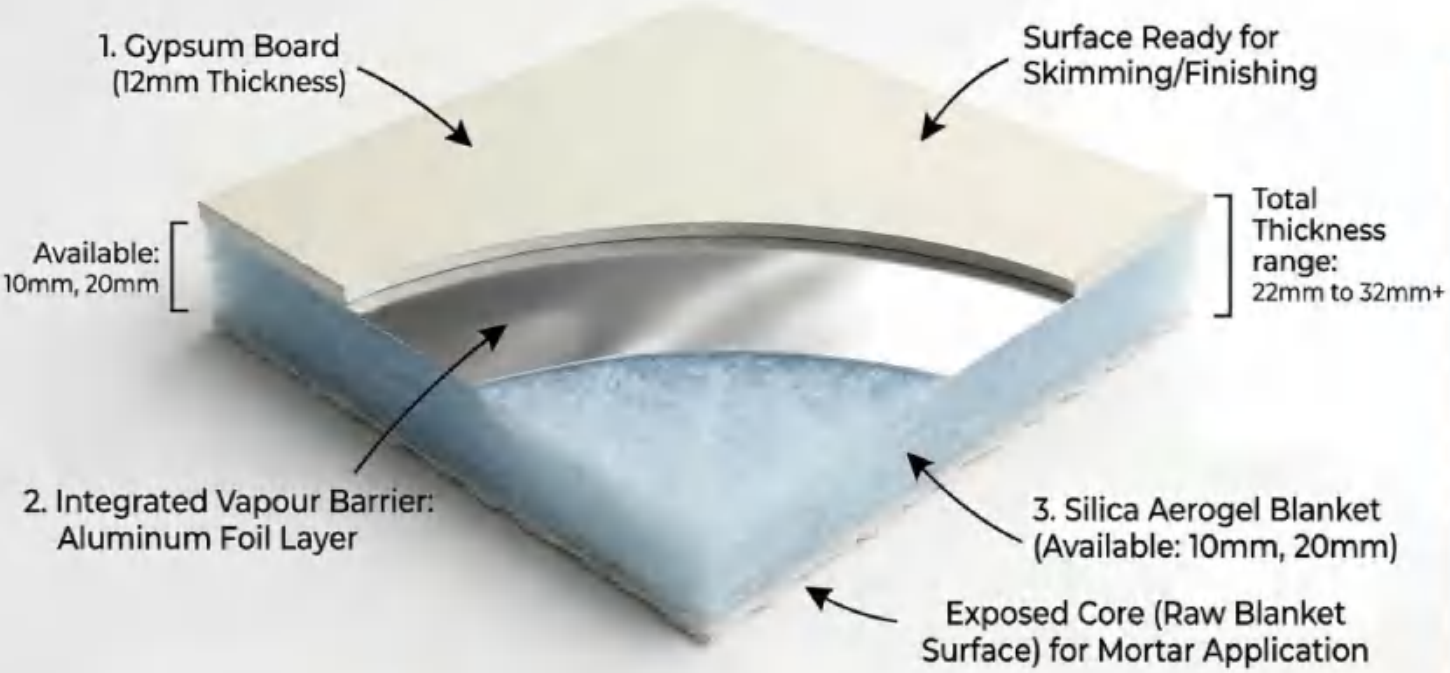
Innovating the Future of Ultra-Thin Thermal Envelopes.

Plasterboard-Aerogel Panel

The Ultimate Space-Saving IWI Solution

GYPSUM-ALUMINUM-AEROGEL COMPOSITE PANEL (HIGH-PERFORMANCE IWI)



01

Applications & Problems Solved

Designed specifically for Internal Wall Insulation (IWI) in heritage buildings and tight residential spaces.
Solves the "Space vs. U-Value" Dilemma: Delivers extreme thermal resistance without eating up valuable interior "carpet area".

02

Eliminates Condensation & Mold

The integrated Aluminum Foil acts as a Vapour Control Layer (VCL), preventing interstitial condensation in old masonry walls.
Labor Saving: Ready for direct wall application and standard plaster skimming in one go.

03

Structure & Dimensions

Plasterboard Facing: 12mm standard thickness.
Aerogel Core Thickness: 3mm, 5mm, 10mm, 15mm, 20mm (10mm & 15mm are standard stock).
Vapor Barrier: Integrated Aluminum Foil VCL.
Technical Specs:
Core Thermal Conductivity: 0.016 W/(m·K) @ 0°C.
Standard Size: 2400mm × 1200mm.

MgO-Aerogel Panel

Heavy-Duty:
MgO-Aerogel Composite Panel

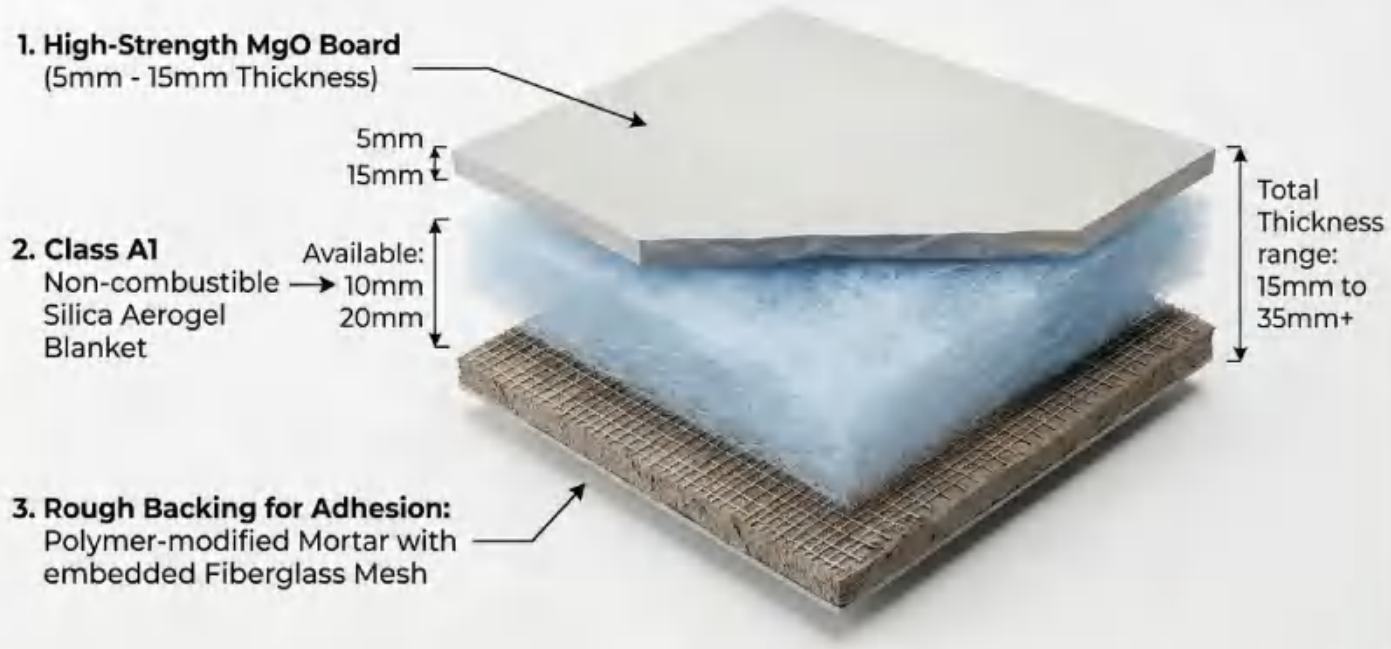
Applications & Problems Solved:
Engineered for high-traffic environments (corridors,
schools, public housing) and mois
ture-prone areas (basements, kitchens).

Solves Fragility Issues:
Traditional gypsum boards dent and break easily. Our MgO facing provides exceptional impact and flexural strength.

Solves Dampness & Rot:
Unlike paper-faced gypsum, MgO is100% rot-proof and highly resistant to moisture degradation.

Ultimate Fire Safety:
Upgrades the entire wall system to a Class A1 Non-Combustible rating.

MGO-AEROGEL COMPOSITE INSULATION PANEL (ULTRATHIN HIGH-PERFORMANCE IWI)



STRUCTURE & DIMENSIONS

MgO Board Facing: 5mm to 15mm thickness options. Aerogel Core Thickness: 5mm to 20mm (Customizable).
Vapor Barrier: Integrated Aluminum Foil VCL.
Technical Specs:Core Thermal Conductivity: 0.016 W/(m·K) @ 0°C.
Standard Size: 2400mm × 1200mm.

Flexible MCM-Aerogel Panel

Step Finish:
Eco-Friendly Flexible MCM-Aerogel Panel

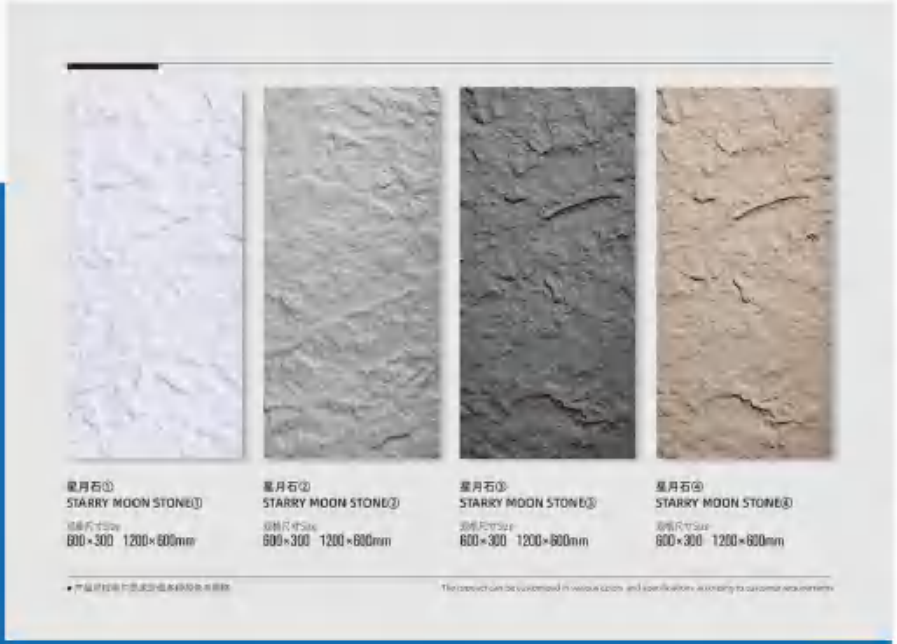
Applications & Problems Solved
The ultimate rapid-retrofit solution. Combines extreme thermal insulation and a high-end decorative finish in a single step. Zero wet trades required.

Heritage Matching
We offer 90%+ texture similarity customization to match existing historical brick, stone, or wood finishes seamlessly.

Curved Surface Application
Highly flexible facing allows for easy installation on curved walls and complex architectural columns.

Banana-leaf Pattern

100% Eco-Friendly & Safe
The MCM (Modified Clay Material) finish is crafted from natural stone powder. Zero formaldehyde, zero VOCs, and completely non-toxic.



Structure & Dimensions
MCM Facing: Natural stone/clay powder composite (Available in Slate, Rammed Earth, Wood Grain, etc.).
Aerogel Core Thickness: 5mm to 20mm.
Technical Specs :
Core Thermal Conductivity: 0.016 W/(m·K) @ 0°C.
Fire Rating: Class A.
Standard Size: 1200mm × 600mm / 600mm × 600mm.
Weight: Ultra-lightweight at approx. 6kg/m².

Aerogel Thermal Break Tapes Double-Sided Aluminum Foil Encapsulated

KEY VALUE PROPOSITION

The Ultimate Moisture-Proof & Thermal Break Solution. Specifically engineered for high-performance building envelopes. By encapsulating the aerogel core within double-sided high-purity aluminum foil, we deliver a 100% vapor-tight, high-strength insulation strip that eliminates thermal bridges in the most demanding environments.

Structure & Components

High-Tack Acrylic Adhesive: Long-lasting bonding to metal and glass surfaces.

Double Aluminum Foil Layer: 100% vapor barrier and enhanced structural durability.

High-Purity Aerogel Core: Ultra-low thermal conductivity core.

Standard Thicknesses: Available in 3mm, 5mm, 10mm, 15mm, 20mm.

Technical Specifications

Core Material: Silica Aerogel

Encapsulation: Double-Sided Aluminum Foil

Thermal Conductivity: 0.018 - 0.022 W/(m·K)

Standard Thickness: 3mm / 5mm / 10mm / 15mm / 20mm

Standard Width: 25mm / 50mm / 100mm (Customizable)

PROBLEMS SOLVED

1. **100% Vapor Control**: The double aluminum foil creates a perfect seal, preventing moisture from penetrating the insulation layer.
2. **Eliminate Thermal Bridging**: Breaks the heat path between exterior cladding and interior structures without adding bulk.
3. **Anti-Corrosion (CUI Defense)**: Protects metal studs and frames from condensation-induced corrosion.