

TechPanel® at a glance

- > Prefabricated panels manufactured to spec for individual project requirements
- > Exterior solution as part of a high-performance building envelope
- > Flat packed and shipped from factory to site for efficient installation

TechPanel® serves as a 3-in-1 building envelope solution by combining structural framing, insulation, and MgO cement sheathing into a single panel. This integrated design improves thermal performance, reduces air leakage and thermal bridging, and enhances climate resilience. By manufacturing wall, floor, and roof panels offsite, TechPanel® streamlines construction, cut down on labor and material waste, and boost overall project efficiency.



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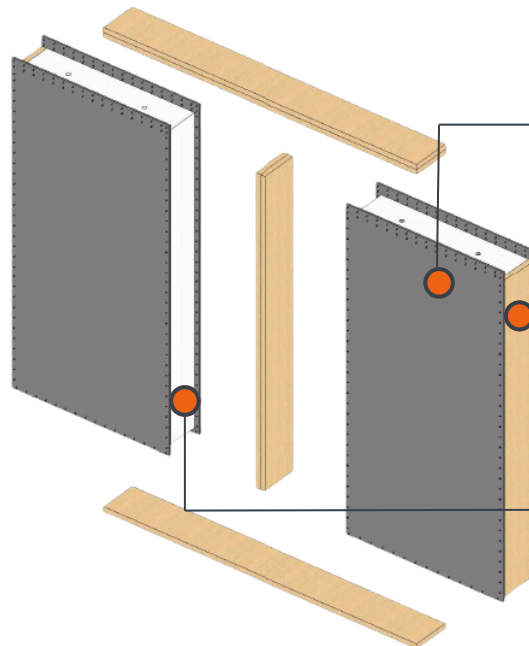
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HVHZ Florida
Product
#FL44609



ESR 5346



- Protective Sheathing**
Magnesium oxide cement (MgO) board (ZS2 TechBoard®)
- Structural Framing**
Steel or Wood splines based on design specifications
- Thermal Insulation**
Three types of EPS (Expanded Polystyrene) available based on design specifications

Material Properties

¹² ^{24.305}
Mg
Magnesium
[Ne] 3s²
Alkaline Earth Metal

The performance advantages of advanced MgO cement technology

- Fire resistant
- Water resistant
- Mold resistant
- Pest resistant
- Humidity control
- Non-Toxic

Onsite Benefits



Where the benefits of offsite construction meet onsite efficiency

- Less waste
- Quality control
- Cost Certainty
- Reduced labor
- Reduced project schedule

Sustained Value



Reduce risk, while delivering lasting value from construction through operation.

- Sustainable Material
- Climate Resilient
- Structural Integrity
- Lower Operational Cost

Frequently Asked Questions

What are the key benefits of using TechPanel® in construction projects?

TechPanel® offers a high-performance, energy-efficient building envelope by integrating structural framing, insulation, and MgO sheathing into one prefabricated panel. This system reduces build time by ~30-65%, significantly cuts transportation costs, and delivers superior fire resistance, durability, and climate resilience—making it ideal for walls, roofs, floors, and foundations.

What does TechPanel® replace in a conventional building?

TechPanel® replaces multiple conventional building components by combining structural framing, insulation, and exterior sheathing into a single prefabricated panel. This eliminates risk with multiple layers and materials typically used for framing, insulating, and sheathing, streamlining construction and improving energy efficiency.

What makes TechPanel® different from other Structurally Insulated Panels (SIPs)?

TechPanel® incorporates TechBoard®, a magnesium-based (MgO) cement board that offers superior performance compared to traditional materials like OSB. Unlike traditional SIPs, TechPanel® is highly resistant to fire, water, mold, and pests, and are engineered to withstand hurricane and seismic conditions, making them a more durable and resilient choice for modern construction.

What certifications or standards does TechPanel® meet?

TechPanel® holds a valid ICC-ES Evaluation Service Report (ESR), confirming that it meets International Building Code (IBC) requirements through independent testing and verification. It has been tested to rigorous ASTM and CAN/ULC fire-rated standards, proven for hurricane resistance, and its environmental performance is verified under ISO 21930:2017. These certifications demonstrate TechPanel®'s compliance, safety, and reliability for a wide range of building applications.

Can electrical be ran through a TechPanel® on site?

TechPanel® can be manufactured with electrical chases installed ready to accept wiring and electrical fixtures. These chases (pre-cut channels) are typically spaced at regular intervals for easy access and installation but can also be customized both vertically and horizontally to meet any client's requirements. Electricians can feed wires without the need to drill through conventional framing saving additional time and effort.

Where can I buy TechPanel®?

With a trusted network of partners and regional specialists across North America, we'll make sure you have the right support for your location and project needs. To get started, we just need a few details to provide an accurate quote. Our team uses your architectural, electrical, and mechanical drawings to manufacture panels with precision, guide you through the design optimization process, and coordinate delivery to keep your project on track. Whether you have napkin sketches or first draft drawings, we can help panelize your build.

Do you have fire rated assemblies?

Yes. You can find detailed assembly information and fire testing results in our technical documents. For project-specific requirements, our team can help point you to the right data and assemblies.

Where can I find technical documentation or support for TechPanel®?

To take a deeper dive into TechPanel® application and data, view or download the product sheet, datasheet, and installation guide found under the Technical Documents section of the [TechPanel® webpage](#). For project-specific support, ZS2's technical team is available via email or phone.

Have a project in mind? Get in touch.

ZS2 is a leader in magnesium cement (MgO) construction solutions. By combining climate-resilient innovation with the advantages of prefab construction, our (MgO) cement technology delivers unmatched durability, fire resistance, and low carbon solutions setting a new standard for sustainable and resilient construction practices.

