



TechBoard® Installation Guide

MgO Sheathing, Backing Board & Underlayment



MANUFACTURED IN
NORTH AMERICA

zs2technologies.com
info@zs2technologies.com
587.208.4972
9128 52nd Street SE
Calgary, AB T2C 5A9

Table of Contents

Getting Started

Before Your Start	3
Important Safety Note	3
Basic Composition	3
Best Uses	3
Storage and Handling	4

Installation Guidelines

Exterior Installation: Walls and Roof	4
Interior Installation	5

TechBoard TG™ Tongue and Groove Subfloor Installation

General	5
Installation	6

Manufacturer's Recommendations

TechBoard Repair

Patching & Repairing	7
Replacing	7
Cutting	7

Warranty

Getting Started

The following pages are a guideline for best practices to maximize the effectiveness of TechBoard® applications. Because this product has many uses, no installation will be the same.

Important Safety Note:

Practicing SAFE work procedures are vital to preventing injury. SAFE work procedures should always be accompanied by proper training. If you have questions about the safe work procedures or practices used in your workplace, don't be afraid to speak up and ask questions. Remember, workplace injuries are preventable.

Training and Safety Procedures are the responsibility of the builder/installer of the TechBoard®.

Basic Composition

88% magnesium cement, water, and composites; <10% perlite, <5% cellulose, <10% fiberglass mesh

ZS2's Techboard™ **does not contain asbestos**, gypsum, crystalline silica or added formaldehyde.

12	24.305
Mg	
Magnesium	
[Ne] 3s ²	
Alkaline Earth Metal	

Best Uses

Perfected in the lab, tried and tested in the Canadian climate, TechBoard® is one of the most advanced sheathing products on the market today.

TechBoard® is an alternative cement board offering architects, builders, and contractors a unique magnesium cement-based board that can be used as interior and exterior sheathing for walls, floors, ceilings, and even countertops.

TechBoard® is highly fire resistant, mold resistant, bacteria/pest resistant, high strength, and lightweight with a significantly reduced carbon footprint vs. other traditional "Portland" cement products. TechBoard® resists damage from moisture while providing the ideal combination of strength, uniform composition, and performance.

Storage & Handling

All materials should be delivered and stored in their original unopened package and stored in an enclosed shelter providing protection from damage and exposure to the elements.

Follow the guidelines below to ensure easy installation:

- ✓ Avoid water exposure during shipping, handling, storage, installation, and after installation of TechBoard®.
- ✓ If exposed to water, **allow TechBoard® to dry** and climatize to site conditions.
- ✓ Store TechBoard® flat as well as off the ground and undercover. Use sufficient supports extending under the entire length of TechBoard® to prevent sagging.
- ✓ Adequate ventilation shall be provided to carry off excess moisture.
- ✓ Do not apply TechBoard® with visible signs of moisture. Do not apply TechBoard® over other building materials where conditions exist that are favorable for mold growth as TechBoard® can absorb moisture from the material.

Installation Guidelines

Exterior Installation: Walls & Roof

- Recommended stud spacing is 406 mm (16") o.c.; Maximum stud spacing is 610 mm (24") O.C.
- Optimal gap between pieces of TechBoard® is 1/8"(3mm) gap, with a tolerance of \pm 1/8".
- Cement board screws, stainless steel staples, stainless-steel wood screws, or coated wood screws with a minimum salt spray coating of 800 should be used with a maximum spacing of 6"(152.5mm) O.C.
- Fasteners should be no closer than 11mm or 7/16" to the edge of the board. This reduces the chance of material blow out and provides the best finish. If using screws its good practice to predrill holes.
- Staples and screws should be installed flush with the TechBoard® surface to ensure firm contact with the substrate. Do not overdrive fasteners or drive fasteners the cause breakage of edge.

Interior Installation

- Maximum stud spacing is 610 mm (24") o.c.
- Allow wood framing and TechBoard® to acclimate to the approximate humidity and temperature it will reach in its service life prior to the application of the TechBoard®. Do not install when the TechBoard® or framing is wet.
- Conditioned spaces should maintain a constant average temperature and not be allowed to fluctuate more than 10°C
- TechBoard® should be installed $\frac{1}{2}$ " (12.5mm) off the floor
- Optimal gap between pieces of TechBoard® is $\frac{1}{8}$ "(3mm) gap, with a tolerance of $\pm \frac{1}{8}$ ".
- Cement board screws, stainless steel staples, stainless-steel wood screws, or coated wood screws with a minimum salt spray coating of 800 should be used with a maximum spacing of 8"(203mm) o.c. on walls and 6" (152.5mm) o.c. on ceilings
- Fasteners should be no closer than 11mm or 7/16" to the edge of the board. This reduces the chance of material blowout and provides the best finish. If using screws its good practice to predrill holes.
- Staples and screws should be installed flush with the board surface to ensure firm contact with the substrate. Do not overdrive fasteners.
- For subfloor applications over a 16" (406.5mm) o.c. wood-based substrate, install $\frac{3}{4}$ " (19mm) TechBoard® Tongue & Groove to the substrate using elastomeric adhesive. Fasten with 1 1/2" (38mm) stainless steel wood screws, or coated wood screws with a minimum salt spray coating of 1000

TechBoard® Tongue & Groove **Subfloor Installation**

General

- TechBoard® Tongue & Groove feature tongue and groove profile at all edges, and are self supporting and do not require additional blocking.
- Do not install TechBoard® Tongue & Groove with damaged tongue and groove.
- Blocking should be installed with the top surface flush with the top of floor framing members to provide uniform support for all subfloor TechBoard® Tongue & Groove edges where required.
- For non-load bearing walls that run parallel to framing, use screws and install blocking at 16" O.C. below the TechBoard® Tongue & Groove and fasten into blocking.
- Any non-load bearing wall that is parallel to framing should be supported by continuous structural framing or blocking.
- Bottom plate on non-load bearing wall should attach through the TechBoard® Tongue & Groove and into the framing or blocking below. (Blocking requirements by others)

- Framing surface must be clean and free from oil, dirt and contamination.
- Allow TechBoard® Tongue & Groove to acclimate to the approximate humidity and temperature it will reach in its service life prior to application. Do not install when the TechBoard® Tongue & Groove is wet.
- Conditioned spaces should maintain a constant average temperature and not be allowed to fluctuate more than 10°C
- TechBoard® Tongue & Groove should not be installed less than 8" from exposed earth.

Installation

TechBoard® Tongue & Groove is to be installed the same way traditional subfloor is installed. The TechBoard® Tongue & Groove is to be placed over supporting joists as per construction drawings. The following are quick tips for an efficient TechBoard® Tongue & Groove install:

1. TechBoard® Tongue & Groove is installed similar to traditional subfloor - on top of floor joists.
2. TechBoard® Tongue & Groove to be installed smooth side up. The rough side should face down and be in contact with the framing member. NOTE: Framing width should not be less than 1 1/2" wide.
3. For subfloor applications over a 16" (406.5mm) o.c. wood-based substrate, install $\frac{3}{4}$ " (19mm) TechBoard® Tongue & Groove to the substrate using elastomeric adhesive. Fasten with 1 1/2" (38mm) stainless steel wood screws, or coated wood screws with a minimum salt spray coating of 1000.
4. TechBoard® Tongue & Groove should be butted tight to one another.
5. Gypsum screws are not recommended for TechBoard® Tongue & Groove application.
6. Fasteners must be spaced 7/16" from all edges and no closer than 2" from a corner.
7. Countersink screws just below the surface of the TechBoard® Tongue & Groove. **DO NOT** overdrive screws. Start at one corner and work your way to the remaining edges.

Manufacturer's Recommendations

ZS2 products can be used for multiple purposes but it is the responsibility of the Architect, Engineer of Record, Specialty Engineers, Contractor and Authorities Having Jurisdiction to ensure that building codes are met.

The following is a list of ZS2 recommendations:

- ✓ For optimal results, TechBoard® should not be left uncovered outside for any length of time. Possible discoloration, staining, or efflorescence may occur due to exposure to the elements and may affect the performance or finishing of the board.
- ✓ Brittle coatings, such as epoxy coatings, are not recommended for use with TechBoard®
- ✓ It is not recommended to mud and tape TechBoard®. Significant cracking may occur in the drywall mud.

- ✓ Steel framing must be 20-gauge equivalent or heavier.
- ✓ Maximum installed weight of the finish system should not exceed 15 psf.
- ✓ In locations close to saltwater or other challenging environments, design professionals should consider the use of high-grade stainless-steel fasteners.
- ✓ TechBoard® is not a weather barrier. Proper weather barriers and cladding systems need to be installed over TechBoard® and should comply with architectural practices and local building code standards.

TechBoard® Repair & Modification

Patching & Repair

Small divots and imperfections can be patched with an elastomeric patching compound that is intended to be used over concrete/masonry substrates. Follow manufacturer's patching compound recommendations for gap filling limitations and applications.

Replacing

For damage that is too large to repair, including holes through the TechBoard®, contact your ZS2 Project Manager for a replacement. Replacement boards must be no less than 24" wide. Add blocking at the TechBoard® seams to support edges.

Cutting

Any carbide-toothed wood blade is acceptable for cutting TechBoard®. The sharper the blade the cleaner the cut.

Warranty

10 Year Limited – Prorated – Non Transferable Warranty.

Visit www.zs2technologies.com/warranty or contact a ZS2 representative for details.



CERUS-1009
Meets
Requirements