

Tile Backer

Technical Data Sheet



- For tiled shower and tub wall surrounds
- Great for pairing with traditional mudshower installations/methods
- For use as a general tile backer board underlayment in interior applications including on floors, countertops and more

Key Advantages and Functions

The Sentinel Pro™ by wedi® is a high-performance tile backer board that works on its own or within a shower system. Sentinel Pro™ by wedi® Tile Backers have a core made from extruded polystyrene, rigid foam. The foam core is formed by a closed cell matrix making the Sentinel Pro™ by wedi® Tile Backers internally waterproof, mold resistant, and insulating. Both sides of the tile backer are covered with a specialized fiberglass mesh fully embedded in a modified cement coating that transfers fully through to the foam core. The specific combination of mesh and coating adds high tile backing strength capability and controls moisture absorption, which is essential to maintain effective topical seals over assembly seams. The mesh reinforces the tile backer and also provides a waffle pattern structure that thin-set mortar can lock into. At the same time, the mesh and coating provide a flat and even surface ideal for tile.



When comparing Sentinel Pro™ by wedi® Tile Backers to traditional cement board plus liquid waterproofing, the value is clear:

- Sentinel Pro™ by wedi® offers single-product installation versus multiple products and steps
- Sentinel Pro™ by wedi® offers one comprehensive warranty versus multiple manufacturer and labor warranties
- Sentinel Pro™ by wedi® dramatically reduces installation and labor time, curing times, and overall physical effort and mess
- Sentinel Pro™ by wedi® offers a waterproof and water resistant all-in-one tile backerboard

When installing Sentinel Pro™ by wedi® in a wet area, it often costs less, but adds substantially more value to a project.

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Technical Properties / Performance	Product Standard / Test Method	Sentinel Pro™ by wedi®
American National Standard Specifications for Test Methods and Specifications for Foam Core Backer Boards	ANSI A 118.18	Compliant
Shear Bond Strength	ANSI A 118.18 Section 5 Minimum performance requirement 50 psi	7 day Shear Strength Dry: 139.7 psi 7 day Shear Strength Wet: 120.7 psi
Waterproof	ANSI A 118.18 / ANSI A118.10-1999	Passed
Waterproofness of Assembly	ANSI A 118.18 / IAPMO PS106	Passed
Fastener Pull Through	ANSI A 118.18	Passed, 147 lb
Temperature Limits		-58 / +165° F
Capillarity		Zero
Linear Expansion with Change in Moisture Content	ANSI A 118.18 / ASTM 1037-39	Passed, 0.04%
Surface Burning Characteristics	ANSI A 118.18 using ASTM E84 with 12x12 inch x 3/8 inch porcelain tile installed on exposed surface as used in construction	Flame Spread Index (FSI): 0 Smoke Developed Index (SDI): 35 Classification: Class A
Mold and Fungus Resistance	ANSI A 118.18	Passed, Zero growth.
Flexural Strength	ANSI A118.18 / ASTM C203	973 psi

Weight for Sentinel Pro™ by wedi® Tile Backers	Width	Length	Thickness	Weight
	36 in.	60 in.	1/2 in.	10 lb.
	48 in.	96 in.	1/2 in.	27 lb.

Approvals & Certificates	
Approvals and certificates applicable to Sentinel Pro™ by wedi®	ICC (International Code Council) PMG 1189

Environmental Consideration
Contains no unbonded fire retardants like HBCD (Hexabromocyclododecane) which has been banned in Canada and is a toxic substance of high concern with the US EPA.
Contains no Formaldehyde. Contains no chemicals released /offgassing during installation process or thereafter.

Technical datasheet Sentinel Pro™ by wedi® | Subject to technical changes, please contact Floor & Decor for most up to date data.

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ICC-PMG 1189 Report - National Building Code Compliances

Sentinel Pro™ by wedi®	
CSI	DIVISION: 22 00 00 – PLUMBING. Section: 22 40 00 – Plumbing Fixtures (Shower System Kit)
Product certification system	The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.
Product	Sentinel Pro™ by wedi® Tile Backers
Listee	Floor & Decor - 2500 Windy Ridge Pkwy SE, Atlanta, GA 30339. https://www.flooranddecor.com/
Compliance with the following codes	<p>2024, 2021, 2018, 2015, 2012 and 2009 International Plumbing Code® (IPC) 2024, 2021, 2018, 2015, 2012 and 2009 International Residential Code® (IRC) 2024, 2021, 2018, 2015, 2012 and 2009 International Building Code® (IBC) 2024, 2021, 2018, 2015, 2012 and 2009 National Standard Plumbing Code® (NSPC) 2024, 2021, 2018, 2015, 2012 and 2009 Uniform Plumbing Code® (UPC)* 2022, 2019, 2016 and 2013 California Plumbing Code (CPC)* 2023, 2020 and 2017 City of Los Angeles Plumbing Code 2020, 2015, 2010 and 2005 National Plumbing Code of Canada**</p> <p>* Uniform Plumbing Code is a copyrighted publication of the International Association of Plumbing and Mechanical Officials ** National Plumbing Code of Canada is a copyrighted publication of National Research Council Canada</p>
Compliance with the following standards	<p>ANSI A118.10-2023, Load Bearing, Bonded, Waterproof Membranes for Thinset Ceramic Tile and Dimension Stone Installations ANSI/TCNA A118.18-2023, Test Methods and Specifications for Foam Core Backer Boards</p>
Identification	Packaging label for each system shall include the manufacturer's name or trademark as well as the ICC-ES PMG certification mark.
Installation	<p>The Sentinel Pro™ by wedi® Tile Backers shall be installed in accordance with the manufacturer's published instructions and the applicable code(s). The Sentinel Pro™ by wedi® Tile Backers can be assembled and can be customized in the field.</p>

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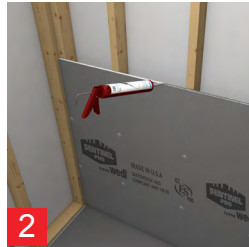
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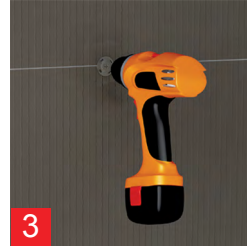
Installation on various surfaces - walls



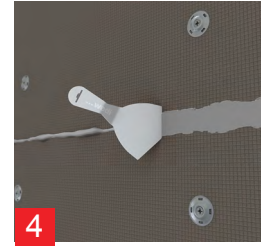
1 Using only a utility knife, Sentinel Pro™ by wedi® Tile Backers are effortlessly cut and shaped.



2 A continuous 1/2 inch bead of sealant is applied on the foam edges of a Sentinel Pro™ by wedi® Tile Backer before another backer is joined by butting tightly.



3 Apply 1 wedi fastener per every 12 inches, with an extra fastener applied directly in the seam to provide a flush transition between panels. On a ceiling, apply 1 wedi fastener per every 6 inches. The washer heads are dimpled below the surface of the Sentinel Pro™ by wedi® Tile Backer so a flat surface is maintained.



4 All excess wedi sealant is spread flat over all joints using a putty knife. Where needed, an extra bead of sealant is applied on top of the joints and spread flat. The joints should be covered a full 1 inch on both sides of the seam. The sealant provides little build-up making for square and tight corner areas, perfect for tiling. All fastener locations are waterproofed using sealant spread flat and widely over each washer.



5 Alternatively, sealing tape can be used instead of the sealant and applied in modified thinset. The sealing tape provides adequate splash water protection but should not be used in areas with constant wetness/ water exposure, because thinset mortar might allow pressing water to migrate underneath the sealing tape through the thinset mortar. The thinset holding the tape can also not provide protection against movement. Both challenges are addressed more efficiently by using wedi® Joint Sealant. In dry areas, the seams can be treated with an alkali resistant fiberglass mesh tape.

Where Sentinel Pro™ by wedi® Tile Backer transitions to drywall panels, reinforcing tape, sealing tape or sealant may be used. The drywall surface should be primed. Conversely, if mesh and gypsum plaster is used over such seams in dry areas, the Sentinel Pro™ by wedi® Tile Backer surface must be primed.



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Installation on various surfaces - tub surrounds



Sentinel Pro™ by wedi® Tile Backers are also ideal for use as a tile backer board when installed over framed or solid wall structures, where it provides a waterproof and tileable wall surround in combination with a pre-made tub or shower base unit. Sentinel Pro™ by wedi® Tile Backers can offer special benefits in these installations. The tile backers can be installed directly to the edge of the tub unit with just a bead of sealant in between.

What's more, Sentinel Pro™ by wedi® Tile Backers can be notched out at the bottom back side to install over a nailing flange on one or more sides of the tub unit. With these tile backers, you can create plumb and square transitions from a wall backer board to a tub, especially in corners. The Sentinel Pro™ by wedi® Tile Backer does not wick up water traversing the tub edge, and it backs your wall tile right down to the edge of the tub. Besides these special options, the installation follows the same process as in shower system wall assemblies.

When installing Sentinel Pro™ by wedi® Tile Backers to tubs without the nailing flange, please use wedi® Tub Sealing Tape to waterproof and secure the transition seam at its backside.



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Installation on various surfaces - mortar bed showers



Pre-Installation Requirements

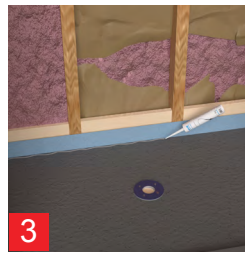
1. Ensure the shower base has been properly constructed with appropriate pre-slope (1/4" per foot), liner installation, and final sloped mortar bed according to TCNA standards and details.
2. Allow the mortar shower base to cure fully before proceeding with wall panel installation.
3. Verify that wall framing is plumb, square, and spaced at maximum 16" on center.



1
Measure and mark the waterproof building panels to fit the shower walls ensuring panels will sit approximately 1/8" above the finished mud base.



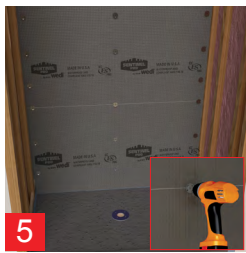
2
Cut Sentinel Pro™ by wedi® Tile Backers using a utility knife.



3
Apply a 1/2" continuous bead of sealant along the top edge of the shower pan where the panels will make contact.



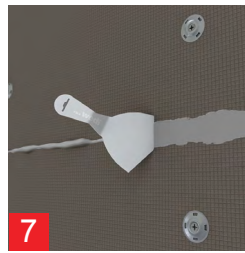
4
Position the first panel, ensuring it is level and plumb, with the bottom edge sitting 1/8" above the shower base.



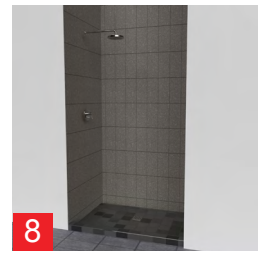
5
Apply 1 wedi fastener per every 12 inches, with an extra fastener applied directly in the seam to provide a flush transition between panels. On a ceiling, apply 1 wedi fastener per every 6 inches. The washer heads are dimpled below the surface of the Sentinel Pro™ by wedi® panel so a flat surface is maintained.



6
Continue installing all wall panels following the same procedure ensuring a 1/2 inch continuous bead of sealant is compressed between all panel seams.



7
All excess wedi sealant is spread flat over all joints using a putty knife. Where needed, an extra bead of sealant is applied on top of the joints and spread flat. The joints should be covered a full 1 inch on both sides of the seam. The sealant provides little build-up making for square and tight corner areas, perfect for tiling. All fastener locations are waterproofed using sealant spread flat and widely over each washer



8
When installing tile, use appropriate thinset mortar (ANSI A118.4 or exceeding)

*With a liner being the mortar bed waterproofing, it goes up against the framing and will end somewhere stapled against the wall framing behind the wedi panel and wrap over the curb. There is no need to apply a wedi® Sealing Tape or wedi® Subliner Dry waterproofing membrane. Topical waterproofing on shower floors is only needed where no pan liner and pre-slope is used.

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Requirements/Limitations

- Store Sentinel Pro™ by wedi® Tile Backers upright but tightly stockpiled or flat in their original packaging in a dry interior building. Avoid exposure to direct sunlight/UV and humidity.
- Sentinel Pro™ by wedi® Tile Backers can deform at temperatures over 165°F. Therefore, when using wedi products over kitchen countertops or near fire places, ensure limited heat exposure.
- Do not use Sentinel Pro™ by wedi® Tile Backers with solvent-based adhesives, rubberized solvents, or ketones.
- Please read Sentinel Pro™ by wedi® Safety Data Sheets before working with wedi products.
- Sentinel Pro™ by wedi® Tile Backers are not used for sound reduction applications, but they offer waterproofing and thermal insulation properties. wedi products should not be installed over heated floor systems or where they may trap heat.
- Sentinel Pro™ by wedi® Tile Backers are waterproof but not sufficiently vaporproof for use in steam rooms. For use in steam rooms add a vapor barrier like wedi Subliner Dry over all interior Sentinel Pro™ by wedi® surfaces.
- When installing objects to Sentinel Pro™ by wedi® Tile Backers, such as towel holders or handlebars, these cannot be anchored in the wedi product but require anchoring in the structural construction behind Sentinel Pro™ by wedi® Tile Backers. Alternatively, solid mounting boards can be installed into the surface of some Sentinel Pro™ by wedi® Tile Backers so that fasteners can be applied. Contact wedi for specific project recommendations.
- Do not use Sentinel Pro™ by wedi® Tile Backers in assemblies for submerged installations before contacting wedi to ensure proper material choice and installation processes and techniques.
- Do not install additional products except intended and approved surface finish materials to include ceramic and porcelain tile, glass tile and natural stone. Contact wedi to learn more about ideal surface finish options or limitations with some natural stone products requiring specific treatment. These items may interfere with Sentinel Pro™ by wedi®'s performance.
- When installing electric floor heating systems over wedi foam-based products, these should be installed over Sentinel Pro™ by wedi® Tile Backer's cement coating surface. Integration of cables into wedi foam-based product creates the risk of heat build-up and malfunction due to heat being trapped in wedi's insulating material. Hydronic floor heating systems may be integrated into wedi foam-based products if they do not penetrate or threaten the stability of the product.
- Sentinel Pro™ by wedi® Tile Backers have a Class A rating for fire behavior and safety and are equipped with modern and fully bonded fire retardants. wedi products can be used in residential and commercial use buildings on the interior. In applications that require interior walls, floors, or ceilings to provide a fire-resistant barrier, wedi products must be installed over fire-resistance-rated substrates, such as rated drywall or gypsum assemblies.
- Concrete and wooden subfloors, metal and wooden wall framing, and other suitable substrates over which Sentinel Pro™ by wedi® product systems can be installed must be made of adequate material quality and be built in compliance with the applicable Building Code.
- Suitable substrates and their surfaces must be clean and even. Remove any residues, oil, waxes, grease, or other contaminants acting as possible bond breakers. Also, remove any unintended obstructions and protrusions, such as nails sticking out from surfaces.
- Suitable substrates must be sufficiently loadbearing and minimize the potential for a movement that may cause stress on the product and cause damage. Over horizontal surfaces such as floors or benches, but not over framed ceilings, wedi product must be fully supported by a solid subfloor. Over vertical surfaces such as wall

framing and including the underside of ceilings, you must install appropriate Sentinel Pro™ by wedi® Tile Backers directly over framing studs. Deflection of all subfloor and wall framing installations must not exceed L/360 for ceramic tile installations over Sentinel Pro™ by wedi® Tile Backers and L/720 for dimensional stone installations over wedi product under consideration of live and dead loads. Measurements are taken on the wooden subfloor in the center between floor joists. On concrete floors, measurements are taken in the center between beams or calculated based on formulation and design. On walls, measurements are taken mid-framing stud and mid-track or plate on framed walls. You can find design requirements and recommendations in the following: the International Residential Code (IRC), International Building Code (IBC), the Engineered Wood Association (APA) manuals, The Steel Framing Alliance guides, American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), and Test Methods and the Tile Council of North America's Handbook for Ceramic, Glass and Stone Tile Installation (see Details for "Cementitious Coated Extruded Foam Backer Board").

Minimum design requirements for substrates:

- Wood subfloor joist spacing up to 16 inches o.c. — use with a minimum thickness of 23/32 inch T&G exterior grade or Exposure 1 rated plywood or OSB of 23/32 inch with 1/8 inch of a gap between sheets.
- Wood subfloor joist spacing greater than 16 inch o.c. and up to 24 inch — use with a structure comprised of one 23/32 inch T&G exterior grade or Exposure 1 rated plywood with 1/8 inch of a gap between sheets and one additional layer of minimum 3/8 inch thick exterior rated or Exposure 1 rated plywood with 1/8 inch gap between sheets.
- Wall framing is made of 2 x 4 wood framing studs or metal studs 20 ga. or heavier. Wall framing studs are generally spaced no greater than 16 inches o.c. and fully support all Sentinel Pro™ by wedi® Tile Backers in all corners of the framework.
- Do not use Sentinel Pro™ by wedi® Tile Backers over substrates including, but not limited to: general particleboard (specific exceptions apply), luan, asbestos, plank, bamboo, hardwood, chipboard, sponge-backed vinyl tile/flooring, laminates, fiberglass-based surfaces, metal or steel surfaces. In addition, do not install over any dimensionally unstable surfaces. Consult wedi for questions regarding specific approved installations not listed here.
- Existing cracks in subfloor must be filled and secured.
- Do not use wedi product over control and expansion joints subject to out-of-plane movement or in-plane movement.
- Suitable floor substrates must be level within the permissible range. Any leveling of the subfloor must be done prior to installing Sentinel Pro™ by wedi® Tile Backers and tile. Subfloor maximum variation from plane must not exceed 1/4 inch in 10 ft. and 1/16 inch in 12 inches when tile over Sentinel Pro™ by wedi® Tile Backers is used and all edges of the tile are shorter than 15 inch For installations over wedi product using tile with at least one edge 15 inches or longer in length, maximum allowable variation is 1/8 inch in 10 ft. and no more than 1/16 inch in 12 inches Make sure to use leveling materials adequate to the challenges of the application. When leveling or building up larger areas, including outside the shower, do not use a material that can be affected by even low water exposure.
- Suitable substrates, where planes change, must be squared to allow for a safe fit and connection between wedi products joined in an assembly.

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Requirements/Limitations

- Suitable substrates must be dry and cured within permissible range before installing Sentinel Pro™ by wedi® Tile Backers and must be kept dry after installation.
 - Wood subfloors, structures attached to wooden subfloors, and all wall and bench framing must be kept dry, and wood moisture content must be maintained at consistent service and use levels not exceeding 15%. Where constant moisture or vapor is present, ventilation must be installed to eliminate exposure of the wood structure from below the wedi product layer.
 - Concrete and cement-based subfloors and structures must be fully cured (at least 28 days but up to 3 months for new Portland cement-based concrete or lightweight concrete under normal conditions, depending on thickness, mix ratio, and ambient climate). Field verification of full cure (see moisture level indicators below) is necessary to determine a full cure. In addition, residual humidity must not exceed the following value per each floor type when setting wedi product and/or tile coverings:
 - Calcium Sulphate Screeds: 0.5%
 - Calcium Sulphate Screeds, heated: 0.3%
 - Cement Screeds: 3.5%
 - Gypsum based underlayment: 1% (or per manufacturer recommendation)
 - Anhydrite Screeds: 0.5%
 - Conduct measures with CM device.
- Sentinel Pro™ by wedi® Tile Backers must be used with suitable tile adhesive, grout, and tile.
 - Do not use wedi products as a wear surface or without tile or other suitable coverings.
 - When adhering wedi product to subfloors or other horizontal areas such as benches, choose a cement-based thinset or epoxy-based thinset adhesive designed to work with the substrate and Sentinel Pro™ by wedi® Tile Backer's cement-based surface coating. We generally recommend cement-based thinsets meeting or exceeding ANSI 118.4 (Modified Dry Set Cement Mortar). Ensure that a thinset mortar coverage of 95% or more is achieved to fully bond and support the wedi product or the tile. This is especially important in wet area applications in order to avoid water moving and accumulating between wedi and tile. Ensure that the thinset mortar application thickness is within the permissible range for these products and does not exceed a thickness in excess of 1/4 inch (when compressed).
 - Alternatively, different notch trowel types can be used if the result is compressed thinset layer thickness within the recommended range. This may require applying a notched thinset layer on both the substrate and wedi product.
 - All thinset mortar applications over substrate and wedi product should be flat troweled on surfaces before combing through the mortar using the notched side of the trowel.
 - Some substrates may require priming to allow for thinset mortar adhesion (such as gypsum underlayment). Sentinel Pro™ by wedi® Tile Backers are installed to wall framing using wedi fasteners, including washers for safe load distribution. wedi's coated coarse-thread screws are suitable for use with wood framing and framing 20 ga. or lighter. In heavier metal framing, use wedi self-tapping screws. The fasteners are applied through Sentinel Pro™ by wedi® Tile Backers into the framing stud at a rate of one fastener per every 1 ft. on a wall, and at a rate of one fastener per every 6 inches on a ceiling. Where possible, wedi fasteners should be installed into seams between adjacent panels to create smooth transitions. Wall framing must be square and plumb. wedi does not recommend wet shimming between framing studs and
- Sentinel Pro™ by wedi® Tile Backers. This application is outside the intended design and performance of most general use thinset mortars.
- Sentinel Pro™ by wedi® Tile Backers are installed to solid walls, such as drywall, plywood, or concrete/brick surfaces, using thinset mortar (substrates may require priming). Where possible, fasteners should be used additionally to help with compressing the thinset mortar while it cures.
- Sentinel Pro™ by wedi® Tile Backers are installed to a horizontal substrate such as a subfloor using thinset mortar adhesive and wedi fasteners set at a rate of one fastener per square foot of wedi panel on the floor. Where possible, fasteners should be installed into seams between adjacent panels to create smooth transitions. No fasteners are used on small horizontal substrates, such as sloped benchtops or half wall tops.
- Sentinel Pro™ by wedi® Tile Backers are suitable for coverings made of ceramic and porcelain tile, glass tile, natural stone tile and slabs, and select composite material claddings. These are installed with suitable and specific thinset mortars recommended by the tile manufacturers, but these have to be suitable for wedi products.
- wedi recommends using thinset and grout mortar setting materials suitable for installation and adhesion to the specific substrate/subfloor type and the tile to be installed. We recommend thinset and grout mortar materials that meet the classifications of ANSI 118.3, ANSI 118.4, ANSI 118.11, or ANSI 118.15.
- Do not use premixed and organic mastic mortars when installing Sentinel Pro™ by wedi® Tile Backers to substrates or when installing tile in wet area environments as these may cause mold growth and may not perform well in a wet area environment or when applied between surfaces with low or no water absorption capability.
- Follow setting material manufacturers' recommendations for cure time of thinset and grout mortar materials and do not subject the materials and the application to traffic, load, or moisture (e.g., shower use). Premature exposure may lead to failure of these materials to develop inherent strength, and it may lead to continual setting processes that wear and tear on other products in the assembly.
- A Sentinel Pro™ by wedi® installation does not replace the need for Expansion and/ or Movement joint placement within a tile installation. Follow recommendations found in the TCNA guidelines (Detail EJ171).
- Sentinel Pro™ by wedi® Tile Backers can carry a tile covering weight and loads of up to 16 pounds per square foot on walls and up to 12 pounds per square foot on ceilings.

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Packaging and Sales

Product name	Width	Length	Thickness	Unit	Item Number
Sentinel Pro™ by wedi® Tile Backer	36 in.	60 in.	1/2 in.	75 backers/pallet	101356657
Sentinel Pro™ by wedi® Tile Backer	48 in.	96 in.	1/2 in.	50 backers/pallet	101374338

Storage & Handling

Store Sentinel Pro™ by wedi® Tile Backer either upright in a tight stack or flat on a pallet. Ensure product is protected against traffic and exposure to moving objects to avoid damage to the product. Protect product during storage in warehouse or on project sites and when in transit against weather and keep at all times in a dry and cool environment (between 41°F to 95°F (5°C to 35°C)) and where product is protected against direct exposure to UV/sunlight.

Warranty

Sentinel Pro™ by wedi® Tile Backers come with its own 10 year Limited Warranty. For more information about product warranties, please contact:



Email: info@wediacorp.com

Phone: 1-847-357-9815

Questions?

To get in touch with your local wedi technical sales support manager, click or scan the code below and select your state to be provided with contact information. Or, scroll down and fill out the contact form to send a message directly to your local technical sales support manager!

