

Requirements/Limitations for wedi products used in Shower and Wet Room applications

- wedi products are only used for interior installations in buildings.
- wedi product can be used in both residential and many heavy-duty commercial use/building applications. Please contact wedi for specific use ratings, testing, and certifications.
- Ensure you choose the right wedi product designed for the intended application, including walls, floors, shower floors, seats, benches, curbs, ramps, countertops, and many more.
- Store wedi products in their original packaging and flat in a dry interior building, and you must avoid exposure to direct sunlight/UV and humidity.
- wedi foam-based products 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 wedi foam-based products with solvent-based adhesives, rubberized solvents, or ketones.
- Please read wedi Safety Data Sheets before working with wedi product.
- wedi foam products 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 moisture.
- wedi® Building Panels are waterproof but not sufficiently vaporproof for use in steam rooms. Use wedi's Building Panel Vapor 85 and its system accessories in steam room applications. wedi Fundo® Shower bases, when applied over cold or uninsulated substrates, should be vapor-proofed using wedi® Subliner Dry sheet membrane system. When used in steam rooms, curbs, seats, or benches must be vapor-proofed using the wedi® Subliner Dry sheet membrane system.
- Do not integrate or install other products through wedi Fundo shower floors. For example, when installing objects to wedi® Building Panels, such as towel holders or handlebars, these cannot be anchored in the wedi product but require anchoring in the structural construction behind wedi® Building Panels. Alternatively, solid mounting boards can be installed into the surface of some wedi® Building Panels so that fasteners can be applied. Contact wedi for specific project recommendations.
- Do not use wedi products 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. These items may interfere with wedi's performance. For example, they may not be waterproof (e.g., uncoupling membranes are not waterproof due to open seams and contain much thinset mortar and should not be used over wedi shower floors).
- When installing electric floor heating systems over wedi foam-based products, these should be installed over wedi'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.
- wedi foam-based products 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.
- wedi® Joint Sealant and wedi® Sealant 620 are moisture curing products. In colder temperatures and lower humidity in the air present, the curing process may be heavily delayed. It may take up to 48 hours longer than in ideal conditions (72°F and 50% RH). Do not expose the sealants to water before a firm skin has formed and the sealant is no longer pliable and will not leave a sticky

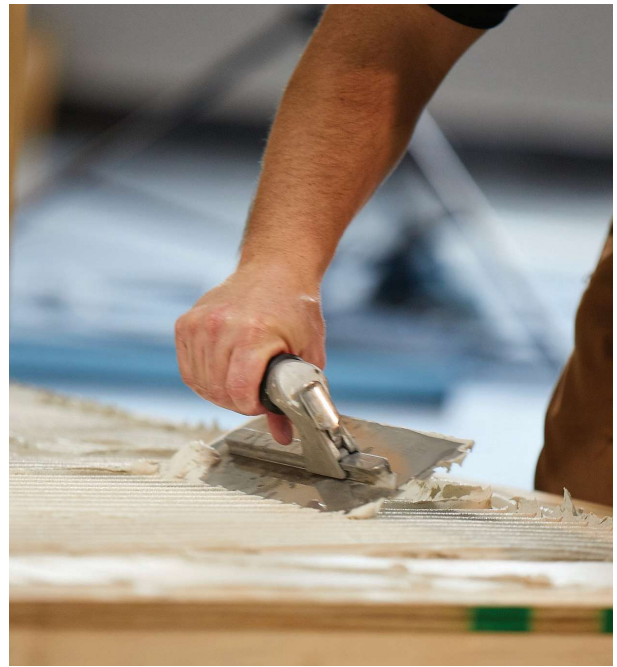


residue when touched. In a low humidity environment, it can be helpful to treat assembly seam areas with a moist sponge before applying sealant (puddles must be avoided).

- Concrete and wooden subfloors, metal and wooden wall framing, and other suitable substrates over which 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 wedi® Building Panels directly over framing studs. Deflection of all subfloor and wall framing installations must not exceed L/360 for ceramic tile installations over wedi product 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 in. o.c. use with a minimum thickness of $\frac{23}{32}$ in. T&G exterior grade or Exposure 1 rated plywood or OSB of $\frac{23}{32}$ in. with $\frac{1}{8}$ in. of a gap between sheets.
- Wood subfloor joist spacing greater than 16 in. o.c. and up to 24 in. use with a structure comprised of one $\frac{23}{32}$ in.



T&G exterior grade or Exposure 1 rated plywood with $\frac{1}{8}$ in. of a gap between sheets and one additional layer of minimum $\frac{3}{8}$ in. thick exterior rated or Exposure 1 rated plywood with $\frac{1}{8}$ in. 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 wedi® Building Panels in all corners of the framework. Framing spaced greater than 16 in. o.c. and up to 19.2 in. o.c. can be covered with wedi® Building Panels in 1 in. thickness. Framing spaced greater than 19.2 in. o.c. and up to 24 in. o.c. can be covered with wedi® Building Panels in 2 in. thickness. Contact us for specific solutions that work with framing studs spaced or designed differently than listed here.
- Shower seats and benches must be designed and constructed to meet the same deflection criteria as used for subfloors. In addition, they must provide a solid substrate over framed studs for the horizontal seat area, such as plywood sheeting.
- Semi-freestanding wall framing or half/pony walls must be designed and constructed to meet the same deflection criteria for regular integrated wall framing. In addition, they must be reinforced to avoid the excess potential for movement, especially as their outer framing posts are not fully attached to other construction.
- All wedi® Building Panels can be used over suitable subfloors.
- wedi® Building Panels from $\frac{1}{2}$ in. thick or more may be used directly over framing studs on walls or underside of

ceilings.

- All wedi Fundo shower bases and curbs must be installed over a subfloor and cannot be installed directly over floor joists.
- Do not use wedi products 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 wedi products and tile. Subfloor maximum variation from plane must not exceed 1/4 in. in 10 ft. and 1/16 in. in 12 in. when tile over wedi product is used and all edges of the tile shorter than 15 in. For installations over wedi product using tile with at least one edge 15 in. or longer in length, maximum allowable variation is 1/8 in. in 10 ft. and no more than 1/16 in. in 12 in. 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.
- Suitable substrates must be dry and cured within permissible range before installing wedi products and must be kept dry after installation.
 - Wood subfloors and 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 and must not exceed 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.
- wedi products 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



Please note that wedi product systems might trap rising moisture during cure time or in general from uninsulated concrete ground floors not equipped with a vapor barrier. Concrete subfloors must not be subject to hydrostatic water pressure. Do not use wedi product where substrate is subject to excessive moisture and moisture content changes.

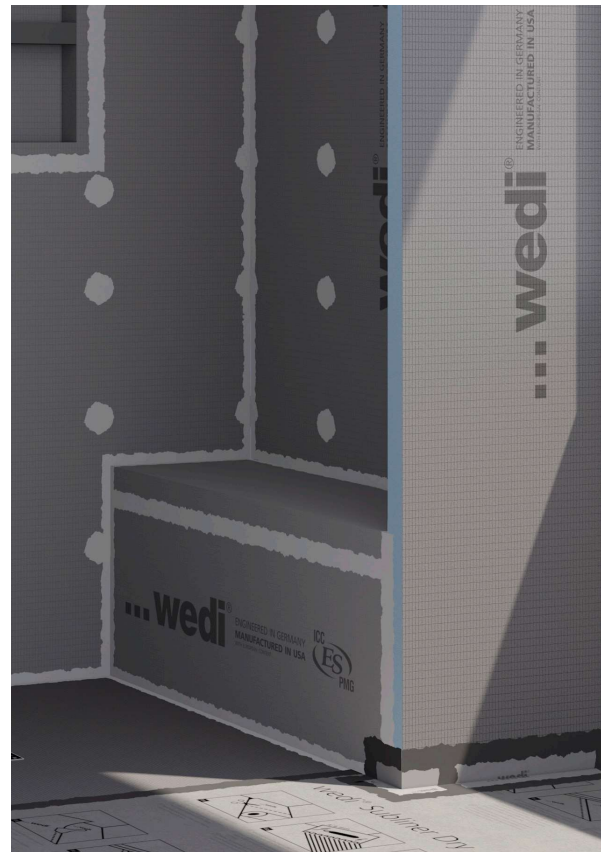
adhesive designed to work with the substrate and wedi's cement-based surface coating. We generally recommend cement-based thinsets meeting or exceeding ANSI 118.4 (Modified Dry Set Cement Mortar). Ensure that a thinset mortar coverage of 95% or more is achieved to fully bond and support the wedi product 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 ¼ in. (when compressed). Use a range of notch trowels to adhere these wedi products:

- wedi® Building Panel on floors or solid walls: min. ¼ in. x ¼ in. up to max. 5/16 in. x 5/16 in. square notch trowel and applied to floor substrate (compressed thinset thickness 1/8 in.– 5/32 in.). A skim coat of thinset mortar may be applied to the wedi® Building Panel to improve the bond.
- wedi Fundo® Shower Bases on floors: min. 3/8 in. x 3/8 in. up to max. 1/2 in. x 1/2 in. square notch trowel and applied to floor substrate (compressed thinset thickness 3/16 in.– 1/4 in.). A skim coat of thinset mortar must be applied to the wedi shower base using the flat side of the trowel to ensure an improved bond.
- wedi® Subliner Dry Sheet membranes and sealing tapes on floors or walls: min. 3/16 in. x 3/16 in. up to max. 1/4 in. x 1/4 in. square notch trowel and applied to the substrate (compressed thinset thickness 3/16 in.– 5/32 in.)
- 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). wedi® Building Panels 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 wedi® Building Panel 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 wedi® Building Panels. This application is outside the intended design and performance of most general use thinset mortars.

- wedi® Building Panels 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.

- wedi® Building Panels 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, wedi fasteners should be installed into seams between adjacent panels to create smooth transitions. Tabless wedi washers are available for wedi® Building Panels 1/8 in. or 1/4 in. when used on a floor. The flat washers will not interfere with the wood subfloor, unlike wedi's tab washers when used with thinner Building Panels. No fasteners are used on small horizontal substrates, such as sloped benchtops or half wall tops.
- wedi products 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.
- Steam showers or steam rooms use only setting materials specifically recommended by the manufacturer for this application and submerged and hot temperature areas. Setting materials recommended by wedi are commonly solid epoxies (meet or exceed ANSI 118.3) or high-performance modified mortars (meet or exceed ANSI 118.15).
- Do not use premixed and organic mastic mortars when installing wedi products 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 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).

- wedi® Building Panel can carry a tile covering weight and loads of up to 23 pounds per square foot on walls and up to 15 pounds per square foot on ceilings.
- When setting tile over wedi® Vapor 85, please choose appropriate setting material and tile for use in steam rooms and steam showers. We recommend not to use natural stone tile or slab. We recommend to use porcelain tile with low water absorption potential (as classified in ANSI 137.1). We recommend the use of solid epoxy setting mortar and grout (as per ANSI 118.3). Please note that tile application over wedi Vapor 85 panels is limited to a combined load and weight of tile and setting materials of up to 14 lb per square foot, and on ceilings up to 10 lb per square foot.
- The untiled shower bases offer a compressive strength of over 100 psi and, once tiled, they can absorb several times this amount and heavier point loads such as from wheel chairs.

