



wedi Building Panel Technical Data Sheet

- Internally waterproof and mold proof wedi building panel made of Rigid Extruded Polystyrene
- High Durability wedi building panel due to dual-sided mesh reinforcement in embedded cement base resin coating
- Ready for tiling upon installation
- For floor and wall tile and stone installations

Product advantages and use

wedi Building Panels have a blue core made from extruded polystyrene rigid foam. The foam core is formed by a closed cell matrix, making the wedi Building Panel strong and internally waterproof. The foam core also retards water vapor but cannot form a vapor barrier suitable in tiled steam rooms. The foam core provides insulation value. The Building Panel core is reinforced on both sides with a strong mesh, fully embedded in a polymer modified cementitious resin coating. The mesh provides uniform and directional strength to the wedi Building Panel to ensure safe tile backing. The cementitious resin not only firmly controls and bonds the mesh, but it also transfers fully through to the foam core for safe and lasting adhesion. The resin coating provides exceptional bond capability to common tile adhesives, while it limits water spread, which is important for functioning waterproofing of seams in the installation assembly.

The wedi Building Panel is a high performance tile backer board that works on its own, and within a shower system. It provides waterproofing and mold proofing, and exceptionally strong tile backing. It is lightweight, clean and fast to install. Its premium raw materials as well as its perfected design and consistent, fully automated manufacturing process are a result of more than 37 years' experience as the world's market leading producer in waterproof foam tile backer boards.

Technical Properties ■ wedi Systems

Properties & Test Methods Value (wedi Building Panel and Fundo Shower System Components)		
ASTM C 578 *	Standard Specification for Rigid, Cellular Polystyrene	Compliant
Thermal Conductivity *	75°F (25°C) - ASTM C518	0.23 Bbtu in/hr F
R-Value *	75°F (25°) - ASTM C518	4.3hr ft. 2 F/Btu/in (R Value for 1" wedi = 4.3)
Shear Strength *	Under conditions required in ANSI A118.10-1999	28 day Shear Strength: 95 psi 84 day Shear Strength: 100 psi 100 day Shear Strength: 98 psi
Flexural Strength *	ASTM C947	627 psi
Robinson Floor Test *	ASTM C627	Heavy duty commercial use, passed *
Fastener Pull Through *	ASTM C473	Wet 131.8 lb./Dry 196.2 lb.
Temperature Limits *		-58 / +175° F
Freeze & Thaw *	ASTM C666 - 25 Cycles	No disintegration/change
Accelerated Aging *	AC 71 - 25 Cycles	No disintegration
Surface Burning Characteristics *	ASTM E84-16 (NFPA 255, ANSI / UL 723, UBC 8-1) Tested as required without tile on Building Panel surface	Flame Spread Index (FSI): 20 Smoke Developed Index (SDI) : 70 Classification: Class A

* wedi Building Panel tested

* Consult wedi for proper subfloor, tile, setting materials choice to design heavy duty commercial use floor surfaces.

Weight for wedi Building Panels	Width	Length	Thickness	Weight
	48 in.	60 in.	1/4 in.	13.9 lb.
	36 in.	60 in.	1/2 in.	10.7 lb.

Approvals & Certificates				
Approvals and certificates applicable to entire Fundo Shower System incl. wedi Building Panel	City of New York, MEA 912-52-SM	Fundo Shower Systems & Building Panels: ICC PMG 1189 (for USA and Canada)	Meets all applicable ANSI/ISO Standards incl. ANSI 118.10 and IAPMO PS106	TCNA handbook recognized for wall, floor, countertop, & more applications
	City of Los Angeles Approval	BBA (British Board of Agrément)	DIN EN ISO 9001	CE marked
	Diverse State Approvals			
	SAI Global Watermark Certified (Australia & New Zealand)			
	Codemark Certified (Australia & New Zealand)			

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.

ICC-PMG 1189 Report ■ National Building Code Compliances

WEDI FUNDO SHOWER SYSTEM AND TILE BACKER BOARD UNDERLAYMENTS	
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	wedi Fundo Shower System and Tile Backer Board Underlayments
Listee	wedi Corporation ■ 1160 Pierson Drive, Batavia, IL 60510 www.wedicorp.com
Compliance with the following codes	2021, 2018, 2015, 2012 and 2009 International Plumbing Code® (IPC) 2021, 2018, 2015, 2012 and 2009 International Residential Code® (IRC) 2021, 2018, 2015, 2012 and 2009 International Building Code® (IBC) 2018, 2015, 2012 and 2009 National Standard Plumbing Code® (NSPC) 2018, 2015, 2012 and 2009 Uniform Plumbing Code® (UPC)* 2015, 2010 and 2005 National Plumbing Code of Canada** * Uniform Plumbing Code is a copyrighted publication if the International Association of Plumbing and Mechanical Officials ** National Plumbing Code of Canada is a copyrighted publication of National Research Council Canada
Compliance with the following standards	ANSI A 118.10-2014, Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations ASME A 112.6.3-2016, Floor and Trench Drains ICC-ES EG 159, Evaluation Guideline for Composite Backer Board (Approved Dec 2004) ASTM E 96-2016, Standard Test Methods for Water Vapor Transmission of Materials ASTM E 331-00(R16), ASTM E331-00(2016) Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference ICC-ES AC 71, Acceptance Criteria for Foam Plastic Sheathing Panels Used as Water Resistive Barriers (Approved Feb 2003, Ed Revised Nov 2018) IAPMO PS 46-2012, Field-Fabricated Tiling Kits IAPMO PS 106-2015e1, Tileable Shower Receptors and Shower Kits
Identification	Packaging label for each system shall include the manufacturer's name or trademark as well as the ICC-ES PMG certification mark.
Installation	The wedi Fundo Shower Systems shall be installed in accordance with the manufacturer's published instructions and the applicable code(s). The wedi Fundo Shower system components shall be assembled and can be customized in the field. When provided drains must comply with ASME A112.18.2/CSA B125.2 as applicable. The wedi pre-sloped, ready-to-tile shower bases may be used in lieu of a CSA B45.5/IAPMO Z124 plastic shower receptors or any liner based shower installations. The wedi drain units do not require weep holes.
Listed Models and Characteristics	The wedi Fundo Shower Systems consist of the following: a) The wedi waterproof Fundo show bases are waterproof, pre-sloped, ready-to-tile floor units. The shower bases with linear and point drainage include factory sealed parts integrated into the floor bases and can be installed with or without curbs in recess, barrier free installations. b) The wedi waterproof building panels which are engineered as a general purpose backer board and underlayment for tile as well as an integral part of the Fundo shower system and consist of a rigid extruded polystyrene foam covered on both sides with a cement-based resin surface and reinforcing mesh for durability and bond performance with tile adhesives. c) the wedi Vapor 85 Building Panel which may be used with or without wedi shower systems. It is a specialized building panel featuring the original wedi Building Panel but with its vapor exposed side protected by wedi Subliner Dry. The wedi Vapor 85 was tested to ASTM E96 Procedure E as a complete assembly with the wedi 620 joint sealing membrane and wedi Subliner Dry sealing tape over seams and fastener points and was found to have a perm rating of 0.03 perms which meets the permeance rating requirement of 0.5 perm or less and can be used in continuous use steam shower/room applications without additional vapor retarders in accordance with Tile Council of North America (TCNA) 2014 Handbook for Ceramic Glass and Stone Tile Installation (SR613-14 and SR614-14). d) The wedi waterproof Fundo Shower system accessories which may include the following waterproof components: wedi pre-sloped curbs, wedi niches, wedi seats, wedi fasteners, wedi drain cover plates, wedi sealants, wedi Fundo drains, wedi Subliner sheet waterproofing membrane system and tapes, with wedi Subliner Dry Bonding Flange drain, wedi Subliner Dry Tub Sealing Tape. The wedi Fundo family line includes the following: Primo, Riolito Neo, Riolito Neo Modular, Riofino, Discreto, Ligno and OneStep. The wedi Fundo Shower system components and assembly for shower installations were proven to be waterproof, water-resistant, and mold resistant when tested in accordance with A118.10-2014 and ASTM E331. The wedi drains have found to comply with with ASME A112.18.2/CSA B125.2 and do not require weep holes.
Conditions of Listing	1. The wedi Fundo Shower Systems shall be installed in accordance with the manufacturer's published instructions and the applicable code(s). 2. The wedi Fundo Shower Systems are manufactured by wedi GmbH, in Emsdetten, Germany and in Batavia, Illinois, USA under a quality control program with annual surveillance inspections by ICC-ES.

Find Current Report on www.icc-es.org or www.wedicorp.com

wedi Building Panel Technical Drawings

To view/download the technical drawings for all wedi Building Panels, [click here](#).

Installation on walls and ceilings

- 1/2 in. (12.7 mm), 5/8 in. (15.9 mm) or 1 in. (25.4 mm) Building Panels are the recommended minimum thicknesses for installation to framing
- Wood Framing: 2 × 4's (framing depth 3 1/2 in. [89 mm]), Maximum stud spacing 16 in. (406.4 mm) o.c.
- Metal framing requirement 20 gauge or heavier studs with maximum 16 in. (406.4 mm) o.c. spacing
- Maximum allowed deflection L/360 based on gauge, stud material, design and connection points of framing, and consideration of total load.
- wedi 1 in. (25.4 mm) Building Panel or thicker can be used over 19.1 in. (485 mm) o.c. spaced wall framing
- 2 in. (50.8 mm) wedi alkali resistant fiberglass mesh tape to be applied over all seams in dry areas. wedi waterproof Joint Sealant or wedi Sealing Tape to be applied over all seams and fastener locations/heads if a waterproof installation is required
- Attach wedi Building Panels with one fastener per every 12" (304.8 mm) and in between adjacent panels (seams) over wall framing
- On ceilings, use one fastener per every 6 in. (152.4 mm) and in between adjacent panels (seams)
- wedi Waterproof Joint Sealant or wedi Sealing Tape to be applied overall seams and fastener heads if a waterproof installation is required
- wedi Joint Sealant or wedi Subliner Sealing Collars are used where plumbing or other equipment protrusions through walls must be sealed
- The Building Panel should be notched out at the bottom to install safely and plumb against the flange of the tub. A bead of wedi Joint Sealant is applied against the flange of a tub. Use wedi Tub sealing tape with its butyl sealing strip to create such connections with non-nailing flange tubs or trays.
- wedi Product Systems are only used for interior installations.
- wedi Building Panel is not a sound deadening product. While it may reduce airborne sound, it is not IIC or STC rated and should not be used to actively reduce or remove sound transmission.
- Do not use as a wear surface or without tile / stone or other suitable coverings.
- wedi products are tested and classified with an A rating for fire behavior safety but are not a fire resisting barrier. An alternative backing providing actual fire resistance must be installed (e.g. 90 minute fire rated drywall)
- Do not use organic mastic adhesives for setting tile on wedi Systems in wet areas.
- Adhesive coverage under tile or other suitable surface finishes in wet area installations must be a minimum of 95%.
- In 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). Test the adhesion over vapor barriers.
- Use only thinset mortar setting materials suitable for installation and adhesion to the specific substrate types.
- Ensure tile and setting materials incl. grout are suitable for the application(e.g. submerged applications or steam rooms)
- Certain substrates must be primed prior to thinset mortar attachment.
- Do not use where substrate is subject to excessive moisture and moisture content changes.
- A wedi installation does not replace the need for Expansion and/or Movement joint placement within a tile installation. Please follow recommendations found in the TCNA guidelines (Detail EJ171).
- All installations shall be in conformance with IRC for residential installations and IBC for commercial installations or applicable building codes in a region including the consideration of properly designed substrates. All installations including the consideration of properly designed substrates should be in compliance with current TCNA Handbook for Ceramic, Glass and Stone Tile Installation, use details specific to "Cementitious Coated Extruded Foam Backer Board". wedi's technical recommendations supersede all requirements of IRC, IBC, IPC or TCNA where in conflict and exceeding minimum requirements established by the above mentioned institutions.

Installation on walls and ceilings

- Contact wedi for installation of tile or stone smaller than 2 in. × 2 in. (50.8 × 50.8 mm) and larger than 12 in. × 12 in. (304.8 × 304.8 mm) over wedi product, and where wedi Building Panel is used in commercial use areas, to learn more about the best practices and requirements applied in such applications. Follow tile manufacturers' recommendations for appropriate tile choice, setting materials and installation techniques.
- When building free standing, non framework attached walls using wedi 2 in. (50.8 mm) building panel, the maximum wall length may extend to 4 ft. (1,220 mm) without the need to firmly attach the wall to the ceiling (attachment to floor and wall only). It is helpful to double up walls for larger adhesion and support surfaces to floor and wall, and to Z-notch connect these walls to channels of wedi Shower Bases. Such structures will produce blue foam edges which should be covered with wedi 1/8 in. (3.2 mm) or thicker panels to provide best adhesion surfaces for tiling. Such panel strips can be installed with wedi Joint Sealant.
- Maximum weight of surface coverings and setting materials applied to wedi Building Panel on walls are 23 lbs/sqft. (112 kg/ m2) and 18 lbs/ sft (88 kg/ m2) on ceilings.
- All wall substrates are to be prepared prior to installation to guarantee plumb, even, level and squared (corner) areas to install wedi product. On ceilings, the substrates must be even, level and squared with the wall.

General Limitations/Requirements (concrete and wood subfloors)

- wedi Product Systems are only used for interior installations.
- Do not use as a wear surface or without tile / stone or other suitable coverings.
- Do not use organic mastic adhesives for setting tile on wedi Systems in wet areas.
- Use only thinset mortar setting materials suitable for installation and adhesion to the specific substrate / subfloor type.
- In 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). Test the adhesion over vapor barriers.
- Adhesive coverage under tile or other suitable surface finishes in wet area installations must be a minimum of 95%.
- Certain substrates must be primed prior to thinset mortar attachment.
- Ensure tile and setting materials, including grout, are suitable for the application (e.g. submerged applications or steam rooms)
- Do not use where substrate is subject to excessive moisture and moisture content changes.
- Do not use over substrates including, but not limited to: general particle board (specific exceptions apply), luan, asbestos, plank, bamboo, hardwood, chipboard, sponge backed vinyl tile/flooring, laminates, fiberglass based surfaces, metal or steel surfaces. Do not install over any dimensionally unstable surfaces. Consult wedi for questions regarding specific approved installations not listed here.
- Subfloors must be clean, even, sufficiently load-bearing and dry(cured). Residues, oil, waxes, grease or other contaminants acting as possible bond breakers must be removed.
- Deflection of all subfloor installations must not exceed L/360 for ceramic tile installations and L/720 for dimensional stone installations over wedi product under consideration of live and dead loads measured between joists.
- Any leveling of the subfloor must be done prior to installing wedi product and tile. Subfloor maximum variation from plane must not exceed ¼ in. (6.4 mm) in 10 ft. (3050 mm) and 1/16 in. (1.6 mm) in 12 in. (304.8mm) when tile over wedi product is used and all edges of the tile shorter than 15 in. (381 mm). For installations over wedi product using tile with at least one edge 15 in. (381 mm) or longer in length, maximum allowable variation is 1/8 in. (3.2 mm) in 10 ft. (3050 mm) and no more than 1/16 in. (1.6 mm) in 12 in. (304.8 mm). Make sure to use leveling materials adequate to the challenges of the application. When leveling or building up larger areas including outside the shower please do not use material that can be affected by even low water exposure.
- wedi products should not be installed over bowl shaped, uneven structures unless suitability is specifically determined for a wedi product.

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Installation over structural wooden surfaces – flooring

- Plywood subfloor joist spacing must not exceed 16 in. (406.4 mm) o.c. with minimum thickness of T&G exterior grade plywood of 23/32 in. (19 mm). Joist spacing in excess of 16 in. (406.4 mm) o.c. and up to 24: a structure comprised of one 23/32 in. (19 mm) exterior grade plywood with 1/8 in. (3.2 mm) of a gap between sheets and one additional layer of minimum 3/8 in. (10 mm) thick exterior plywood with 1/8 in. (3.2 mm) gap between sheets.
- Plywood subfloor sheets must be properly glued and fastened.
- Wood subfloors and structures attached to wooden subfloors 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.

Installation over structural concrete/cement base surfaces – flooring

- Concrete slabs or other structural cement based substrates 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, mix ratio and ambient climate). Field verification of full cure (see moisture level indicators below) is necessary to determine a full cure.
- 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. Please note that wedi product systems might trap rising moisture during cure time or in general from unisolated concrete ground floors not equipped with a vapor barrier.
- Concrete Subfloors must not be subject to hydrostatic water pressure.
- Existing cracks in subfloor must be filled and secured.
- Do not use over control and / or expansion joints subject to out-of plane movement or in- plane- movement.

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- Do not use where substrate is subject to excessive moisture and moisture content changes.
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General Limitations Continued

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- In 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). Test the adhesion over vapor barriers.

Packaging and sales

To view product sizes, [click here](#). Scroll down to 'Technical Data' and then click 'Product Sizes'.

Do not expose to heat/UV rays and store flat.

Warranty

To view our 10, 15 & 20-year system warranties, [click here](#).

Training, Installation Resources and Technical Support

To view our training and workshop schedule, [click here](#).

To download our digital technical handbook, [click here](#).

To get in touch with your local technical sales support manager, [click here](#) and select your state. You'll be provided with contact information!

Architectural Support

- Virtual and in-person AIA Presentations for CEU's
- Specification assistance, technical drawings and more
- For more information, contact Austin Rott the Sales Manager Hospitality Division US & Canada at austin.rott@wedcorp.com or 310-279-9132.