

Installation of PermaBASE WP®

General: All framing should comply with local building code requirements and be designed to provide support with a maximum allowable deflection of L/360 (L/720 for stone) under all intended loads. Wall framing members shall be spaced a maximum of 16" o.c. and shall be a minimum of 2"x 4" nominal (wood) or 20 gauge (metal).

For flooring applications with 16" o.c. floor joists, 5/8" tongue-and-groove exterior-grade plywood or 3/4" tongue-and-groove exterior-grade OSB may be used. For 19.2" o.c. and 24" o.c. floor joists, 3/4" tongue-and-groove exterior-grade plywood or OSB must be used. Tile size for floors with 24" o.c. floor joists must be 12" x 12" or larger. The joist and subfloor assembly must meet L/360 (L/720 for stone) as well as the appropriate code tables for live and dead loads. Install tile and tile setting materials in accordance with current ANSI specifications and Tile Council of North America (TCNA) guidelines.

Control Joints: Consult TCNA Handbook Installation Method EJ171. Architect, builder or design professional must specify location of all control joints. For interior installations, allow a maximum of 30 lineal feet between control joints. A control joint must be installed but not limited to the following locations: where expansion joints occur in the framing or building (discontinue all cross-furring members located behind joint); when boards abut dissimilar materials; where framing material changes; at changes of building shape or structural system; at each story separation. Place control joints at corners of window and door openings, or follow specifications of architect. Control joint cavity shall not be filled with coating or other materials.

WALLS

Wall Framing: Edges of PermaBASE WP parallel to framing should be continuously supported. Provide additional blocking when necessary to permit proper attachment. Do not install PermaBASE WP directly over protrusions from stud plane, such as heavy brackets and fastener heads. Studs above a shower floor should either be notched or furred to accommodate the thickness of the waterproof membrane or pan. The surround opening for a tub or precast shower receptor should not be more than 1/4" longer than unit to be installed. In mortar bed (mud bed) applications, PermaBASE Cement Boards can be embedded into the mud bed per TCNA Handbook method B415-19.

PermaBASE WP: Apply PermaBASE WP with ends and edges closely butted but not forced together. Stagger end joints in successive courses. Drive fasteners into field of board first, working toward ends and edges. Space fasteners maximum 8" o.c. for walls, with perimeter fasteners at least 1/2" and less than 3/4" from ends and edges. Ensure PermaBASE WP is tight to framing. Install screws flush with surface, do not overdrive screws.

Joint Reinforcement: Trowel bonding material to completely fill the board joints and gaps between each panel. Apply a 6" wide, approx. 1/16" thick coat of bonding material over entire joint. For all joints, immediately embed 2" alkali-resistant fiberglass mesh tape fully into applied bonding material and allow it to cure. For outside corners, 4" wide alkali-resistant mesh tape is recommended. Same bonding material should be applied to corners, control joints, trims and other accessories. Feather bonding material over fasteners to fully conceal. Bonding material to be modified dry set mortar compliant with ANSI A118.4 standards. To create a waterproof system in wet-



area applications, just coat finished joints and fastener heads with liquid waterproofing per manufacturer's recommendations.

Sealant/Waterproofing Application: In areas where waterproof performance is required, apply approved liquid waterproofing/sealant over cement board joints and fastener heads/penetrations, as well as any exposed edges. Waterproofing must extend past treated joint onto PermaBASE WP surface a minimum of 2" on either side of the joint. This includes inside and outside corners. Follow waterproofing manufacturer's instructions on application requirements. Once all board joints have been treated following this procedure, seal all fasteners with approximately a 2" diameter coating of liquid waterproofing or approved sealant.

FLOORS AND COUNTERS

Subfloor or Base: For flooring applications with 16" o.c. floor joists, 5/8" tongue-and-groove exterior-grade plywood or 3/4" tongue-and-groove exterior-grade OSB may be used. For 19.2" o.c. and 24" o.c. floor joists, 3/4" tongue-and-groove exterior-grade plywood or OSB must be used. Tile size for floors with 24" o.c. floor joists must be 12" x 12" or larger. The joist and subfloor assembly must meet L/360 as well as the appropriate code tables for live and dead loads.

Underlayment: Using a 1/4" square-notched trowel, apply a setting bed of polymer-modified mortar (or thin-set mortar) to the subfloor or counter base. Immediately laminate PermaBASE WP to subfloor or base with ends and edges closely butted but not forced together. Leave a 1/4" gap along walls. Stagger all joints so that they do not line up with underlying substrate joints. Fasten PermaBASE WP every 8" o.c. throughout board field and around all edges while setting bed mortar is still workable. Around perimeter of each board, locate fasteners 2" from corners and not less than 3/8" from the edges. Fill all joints solid with bonding material. On non-tapered joints such as butt ends, apply a 6" wide, 1/16" thick coat over the entire joint. For all joints, immediately embed 2" alkali-resistant fiberglass mesh tape fully into applied bonding material; ensure that tape is centered over joint. Apply bonding material over fasteners to fully conceal. Remove all excess bonding material and allow to cure.