Installation of PermaBASE™ Foam Tile Backer

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). 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 linear 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 Foam Tile Backer parallel to framing should be continuously supported. Provide additional blocking when necessary to permit proper Foam Tile Backer attachment. Do not install PermaBASE Foam Tile Backer 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.

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 Foam Tile Backer 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 tile backer 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.

Ceiling Installation: The deflection of the complete ceiling assembly due to dead load (including insulation, Foam Tile Backer, bonding material and facing material) should not exceed L/360. The dead load applied to the ceiling frame should not exceed 7.5 pounds per square foot. Ceiling joist or furring channel should not exceed 16" o.c. (Edges of foam tile backer parallel to framing should be continuously supported.) Provide additional blocking when necessary to permit proper Foam Tile Backer attachment.

PermaBASE Foam Tile Backer: Cut PermaBASE Foam Tile Backer using a utility knife to score/cut through the entire board. Apply Foam Tile Backer with ends and edges closely butted but not forced together. Stagger ends joints in successive courses. For ceiling applications, an approved metal foam board washer is required to be used with the screws to attach Foam Tile Backer. 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 Foam Tile Backer 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. In wet-area installations, apply approved fluid applied waterproofing per manufacturer's recommendations over joints and fastener heads.

Mortar and Tile Installation: For best performance, apply thin layer of modified thin-set mortar to Foam Tile Backer with a flat-edged trowel. Press the trowel firmly into and across the surface to ensure mortar is working into the surface and bonding to the substrate. Follow up with an additional coat of modified thin-set mortar applied with a notched trowel per mortar manufacturer's recommendations. Set tile in accordance with tile and mortar manufacturer's recommendations.