

Boyce & Bean Limestone

STANDARD INSTALLATION INSTRUCTIONS

Large Format Tiles 12" x 12" to 24" x 24"

STORE TILE IN A CLEAN, DRY LOCATION. DO NOT STORE IN DIRECT SUNLIGHT FOR EXTENDED PERIODS OF TIME.
Before beginning installation, inspect and approve all materials and carefully read these instructions.

1. SETTING MATERIALS: Installation materials should be specified as part of a single source installation system from a manufacturer of natural stone installation products that will provide a minimum of a 10-Year Labor & Material Warranty for the intended application. The thin-set adhesive should either be an ANSI A118.4 Latex-Portland Cement Mortar or its rapid setting version, if needed. Use an ANSI A118.3 Epoxy adhesive for moisture sensitive stones.

2. SUBSURFACES and MOVEMENT JOINTS: Locate, design, and install expansion joints per TCA EJ171-(Current Year) Industry recommendations. Existing joints in subsurface must be carried through tile work. Movement joints should be installed at all "changes of plane" in the tile work and where tile abuts restraining surfaces, at every 20' to 25' for interiors and 8' to 12' for all exteriors and interior areas exposed to direct sunlight or moisture, in each direction. It is recommended to install Limestone and Marble (tile) over a clean and sound concrete substrate, which is flat, with a steel trowel and fine broom finish, free of contaminants, including curing compounds, which may prevent a good bond. Deflection of concrete substrate should not exceed L/360 for horizontal surfaces or more than L/600 for vertical applications. For wood subfloors deflection is not to exceed L/720. Floor configurations shall be in conformance with the IRC for residential applications, and IBC for commercial applications. Mortar bed applications must comply with ANSI A108.1. Tiles installed using a wet-set mortar method, must only use dry pack mortars that are fully compacted. Substrates should be free of cracks. Use the installation material manufacturer's membrane for crack isolation and waterproofing protection.

3. WATERPROOFING AND CRACK ISOLATION MEMBRANES: A waterproof membrane should always be applied over the substrate prior to installing the stone to minimize the risk of efflorescence and spalling. Additional waterproofing protection is required in all wet and exterior areas. Where necessary, a crack isolation membrane should be used to either isolate existing cracks in the substrate or to provide protection against future substrate cracking. When using Limestone or Marble in showers get approval by installation product's manufacturer. Use only membranes as supplied by the installation manufacturer for single source responsibility that is part of the labor and material warranty.

4. INSTALLATION: Before starting, the surface to be tiled shall be cleaned/scarified to remove curing compounds, sealers, soil, mortar, or any type of contaminate that would interfere with bonding. All rough, uneven or "out-of-plumb" surfaces shall be made flat, "plumb and true" to within 1/8" in 10' (3mm in 3m) and 1/16" in 1' (1.5mm in 300mm). **Step 1:** Install stone tiles per installation product manufacturer's instructions and to meet industry standards per ANSI A108, TCA Handbook for Ceramic Tile Installation, and Marble Institute of America Dimension Stone Design Manual Standards. It is necessary to contact manufacturer of installation products to qualify which products to use for the intended application. **Step 2:** Use a modified thin-set mortar or rapid setting thin-set mortar complying with A118.4 for installing Limestone and Marble tile. For concerns with dimensional stability the rapid thin-set selected for installing this stone must achieve a "Class A rating," when tested according to the Modified British Standards (BS) EN 14617-12 Dimensional Stability Test within the first 24 hours. Use an epoxy adhesive if necessary. **Step 3:** Clean the back of the tile and the substrate during the installation process. **Step 4:** Apply thin-set adhesive to the surface to be tiled and to the back of the tile with the flat side of trowel using a firm scraping motion to key the thin-set into the surface to be covered. **Step 5:** While the thin-set applications are still tacky, back-butter the tile with more thin-set to ensure substantially 100% thin-set coverage and full contact between the tile and substrate (no thicker than 3/8" compressed). Only apply as much thin-set to substrate that can be covered with tile without the thin-set skinning over. **Step 6:** Set the tile into the setting bed of thin-set, and beat and slide it into place to ensure full contact and an in-plane surface with adjacent tiles. Tiles should be aligned to achieve uniform grout joints. **Step 7:** Allow thin-set to cure until firm before grouting. Excess thin-set must be cleaned from the tile surface and grout joints while the thin-set is still fresh. **Step 8:** If necessary, prior to grouting apply an appropriate breathable stone sealer or grout release to the tile to facilitate cleaning and for protection against staining from contrasting color grouts. **Step 9:** Prior to grouting, test an area to make sure the surface does not scratch during grouting. Follow manufacturer's recommendation for the use of sanded or unsanded grout, which is determined by the width of the grout joint.

5. GROUT: Grout joints should be packed full and free of all voids and pits. Excess grout should be cleaned from the surface as the work progresses, while grout is fresh and before it hardens. No acids should be used for cleaning. Allow the grout to cure for a minimum of 7 days before aggressive use or steam cleaning. After the stone is installed, grouted and properly cured, seal the stone with an appropriate high quality breathable stone sealer to minimize water absorption, efflorescence, and potential staining. If necessary, apply an anti-graffiti coating that is compatible with the stone. Follow sealer manufacturers' installation instructions.

6. UPKEEP: Regular dust mopping or sweeping to remove grit and dirt from the surface is recommended, or use an appropriate mechanical method. Walk-off mats should be placed at door entrances to minimize wear on tile and to provide protection against slipping during wet conditions. For cleaning, as needed, use a neutral cleaner to scrub tile and grout. For floors, it is recommended to use a wet and dry vacuum for picking up dirty water after cleaning. Proper maintenance of a stone tile installation will extend the beauty and functional life of the tile, as well as keep it a safe area for public use.

Due to the nature of stone tile, there will be variations in color, shade, texture and size. CLAIMS: Our liability is limited solely to the replacement of our product and only after we have determined that the material is unsatisfactory and our investigation supports the claim as legally obligating. The Buyer is responsible for both inspection and acceptance of our materials prior to installation. The Buyer is also responsible for determining whether the product is appropriate for a particular installation. Use of the tile constitutes full acceptance. No adjustments will be made after the tile has been installed. We strongly recommend that the Buyer use the Tile Council of America's specifications pertaining to tile installation and preparation of subsurfaces (see TCA Handbook for Ceramic Tile Installation).