



BioBasedTile®

# APPLICATION GUIDE

## VERTICAL





## **GENERAL CONSIDERATIONS**

BioBasedTile® is suitable for interior and exterior applications where thinset bonding mortar is acceptable.

**NOTE:** This is a general guide for the installation of BioBasedTile® utilizing thinset mortar adhered methods. This guide should be referenced in conjunction with trade standards and local code. Alternative methods may be considered to accommodate specific applications, site conditions, and building system requirements. This guide shall not supersede professional recommendations from contractors or consultants in determining alternative installation methods.

It is recommended to order at least 5% overage due to waste in the installation process.

Recommended support systems include:

- Wood stud
- Metal stud
- Concrete
- Unit Masonry (CMU or brick)

Recommended substrate preparations include:

- Clean, prepared concrete/masonry
- Fortified mortar bed
- Scratch coat over self-furring corrosion resistant expanded metal lath
- Cementitious backer board (recommended only for interior installations)
- Gypsum wall board (for dry, interior areas only)

A single layer of WRB is required as a minimum for interior dry areas. Applied membrane products may be used and should be applied according to manufacturer instructions.

Maximum in-plane deviation of 6.35mm over 3m is required for adhering BioBasedTile® in the 228\*54 size. For BioBasedTile® sizes having any dimension greater than 381mm, maximum in-plane deviation of 3.152mm over 3m is required.

For further details on backup systems and substrate preparation requirements, please refer to:

- TCNA installation guide for stone tile
- NCMA installation guide for adhered manufactured stone veneer



### **INSTALLATION PREPARATION**

Store goods in a dry area protected from the elements until time of installation. Maintain a minimum of 4.4°C prior to, during, and 48 hours after installation. Substrate and tiles must be free of debris, sealers, oil, curing compounds, soil, mortar, dust, etc. Dry or dusty concrete and masonry surfaces must be washed and dried prior to application of any membrane or mortar.

Use BioBasedTile® simultaneously from multiple skids to insure acceptable variations in product are distributed across the installation. Once installed, any claims regarding color and size variation will not be accepted.

### **WORKABILITY**

**CAUTION:** Product contains Crystalline Silica. Dust from cutting or sawing may create a possible cancer hazard. Dust may cause irritation of the nose, throat and respiratory tract. Avoid prolonged or repeated inhalation of dust. A properly fitted, particulate-filtering disposable NIOSH approved N-95 series face-piece respirator (“dust mask”) should be used when mechanically altering this product (cutting, drilling or similar dust generating processes). Use of wet tools and methods for mechanical alteration minimises health risks and is strongly recommended.

### **CUTTING**

A wet saw fitted with a continuous rimmed diamond blade will yield clean cuts. Capacity to tilt the blade or cutting table will allow miter cuts to be made for site-assembled corners, etc. An angle grinder fitted with an appropriate cutting blade may also be used

### **DRILLING**

Carbide or diamond tipped bits designed for tile should be used to minimise chipping of the finished surface. Wetting the tile while drilling is recommended. For boring larger holes, a diamond tipped hole saw designed for wet use on tile should be used.

Do not use a hammer drill on BioBasedTile®. If the use of such is required to drill into the underlying structure, make a slightly larger pilot hole first in BioBasedTile® using one of the above recommended methods.

### **INSTALLING BIOBASEDTILE®**

Beginning at the bottom of the installation, use a permanent or temporarily affixed level ledge as a base for the first course. If the installation is to meet the floor, plan the placement of the temporary support ledge accordingly to accommodate the installation of units below once the main installation has cured or the temporary support ledge has been removed.

Select a notched trowel sized in accordance with mortar manufacturer recommendation for the size of BioBasedTile® being installed. When installing over porous concrete, masonry or bedding mortar, the substrate surface area should be lightly dampened prior to applying mortar.



Apply prepared thinset mortar to the substrate in a workable area of 0.5 to 1.0 square meters. Work the mortar into good contact with the substrate to a thickness or 1.27cm using the flat side of the trowel. Using the notched side of the trowel, screed mortar in one direction against the face of the substrate to form ridges. The mortar should not be allowed to skin prior to bedding of the stone. If the mortar begins to set up prior to setting the tile, either re-screed with the notched side of the trowel, or remove mortar completely and re-apply.

The back of each BioBasedTile® tile should be dampened with clean water using a brush, sponge, or mist in order to prevent rapid absorption of moisture from the mortar. The surface should be thoroughly dampened but free of surface water. Dampened BioBasedTile® should be fully back-buttered with a thin layer of mortar. Firmly press the BioBasedTile® tile into the mortar, moving it perpendicularly across the ridges to flatten and evenly compress the mortar. This helps ensure maximum mortar coverage between brick and substrate. 100% coverage is required. Periodically remove and check pieces to verify full coverage is being achieved.

Once tile is in place, remove excess mortar prior to laying the next course. Work carefully and meticulously to avoid mortar dropping onto the tiles during installation. Wipe excess mortar from the surface of the tiles with a clean, damp cloth or sponge while it is still fresh, or with a stiff bristled brush as it dries. Continue setting tile, ensuring faces are aligned and in-plane. Use tile spacers to ensure consistent spacing. Allow the installation to cure for the recommended time prior to resuming foot traffic, grouting, or removing support fixtures and spacers; typically 12-24 hours at 21°C. Protect exterior installations from rain for a minimum of 7 days at 21°C.

### **SEALING AND GROUTING**

BioBasedTiles® do not come factory sealed. For increased resistance to staining and discolouration, and to aid in maintaining its unique aesthetic and natural patina, it is recommended BioBasedTile® be treated with a quality impregnating sealant. The use of sealant is strongly recommended for BioBasedTile® installed in interior areas which are regularly exposed to moisture, such as shower walls and floors. Water-based, penetrating products have shown to be effective while minimising health and environmental hazards.

Contact your local sales executive or email us at [sales@stonecycling.com](mailto:sales@stonecycling.com) for recommended sealant options.

**NOTE:** Grout and sealant products can have major aesthetic influence in the outcome of an installation. Sample testing of sealant and grouting methods and materials is highly encouraged to assess aesthetic acceptability. Many sealants claim to maintain the natural colour and sheen of the material it is applied to, however, some may fall short of expectations. Ensure all joints and the finished tile surface are free of excess mortar. Two applications of a quality sealant prior to grouting is recommended.

Applying sealant prior to grouting will facilitate removal of excess grout from the BioBasedTile® surface. Consider sealing the tile edges as well, particularly if a contrasting grout is to be used. Avoid over-application and pooling of sealant within the joints.



A floated grout application is acceptable, however, pigments in contrasting grout can stain the finished face of BioBasedTile®, even with sealant or grout release in place. Work in small sections, removing excess grout from the surface using clean water and an absorptive grout sponge as soon as possible following grout manufacturer recommendations. Change the rinse water frequently to minimise redeposition of grout onto the surface of the tile and the potential for grout haze.

A grout bag or gun may also be used along with tooling techniques for application into larger joints, minimising the potential for discolouration of the BioBasedTile® surface. While grout/mortar remains damp, use a stiff bristled brush with water to scrub away any embedded grout from the surface of the tiles, taking care not to disturb the freshly applied grout. Any residual 'crumbs' from the tooling of joints should be allowed to dry and be whisked off the surface with a stiff bristled brush.

#### **POST-INSTALLATION CLEANING**

Once the grout has cured, clean any remaining grout haze with clean water or a commercially available pH neutral grout haze remover using a white nylon scrub pad.

- For periodic deep cleaning, a stiff bristled brush or floor cleaning machine fitted with such may be used to scrub stubborn, embedded grime. Remove grime and excess solution with vacuum equipment or an absorbent mop.
- Rinse thoroughly with clean water. Refresh rinse water often to prevent grime and detergent residue from being redistributed. Dry the surface with vacuum equipment or an absorbent mop.

#### **CAUTION:**

Acidic cleaning agents must not be used under any circumstances as this will cause damage to BioBasedTile® and void warranty.

BioBasedTile® is composed of naturally engineered biocement® with characteristics similar to natural limestone. BioBasedTiles® do not come factory sealed. It is recommended BioBasedTile® be sealed with a quality impregnating sealant for increased resistance to staining and discolouration, and to aid in maintaining its unique aesthetic and natural patina.

Sample testing of the chosen sealant is highly encouraged to assess aesthetic acceptability. It is recommended for sealant to be applied prior to grout and again once grout has cured.



### **ONGOING MAINTENANCE**

Routine maintenance will be required from time to time. When cleaning BioBasedTile®, please adhere to the following recommendations:

- Regular dusting and vacuuming for interior applications and hose washing for exterior applications is recommended. Dry sweep or vacuum prior to any wet cleaning.
- When cleaning agents are needed, select a pH-neutral detergent. Stone cleaning products intended for use on natural limestone are generally acceptable for use on BioBasedTile®. Test detergent in an inconspicuous area to verify compatibility and results. Avoid over-saturating with cleaning solutions; damp mopping should be sufficient for daily cleaning.
- For stubborn, isolated stains, a pH neutral stone poultice compound may be used. Commercially available poultices are formulated to be multi-purpose or stain-specific. Choose a product that is designed for the nature of the stain at hand. Always test in an inconspicuous area to verify compatibility and results.
- In some cases, a pressure washer fitted with a fan nozzle may be used. However, BioBasedTile® should never be exposed to a direct attack from the nozzle. Note that an up-close jet spray from a pressure washer nozzle may erode the biocement material and natural aggregate structure of BioBasedTile®, as well as loosen surrounding grout. A minimum distance of three feet must be maintained between the fan nozzle and BioBasedTile® surface when pressure washing.
- Re-apply sealant products as needed following product manufacturer recommendations.

### **CAUTION DO NOT USE:**

- Acid or acid based cleaners such as vinegar, citrus- based products, or muriatic acid.
- Abrasive cleaners, steel wool, or wire brushes.
- Any sharp object, such as a steel scraper, knife, or screwdriver, to remove stubborn deposits from the face of the stone.
- 0- degree pressure washer nozzle at any distance.
- Any high pressure nozzle within three feet of the BioBasedTile® surface.

Proper care and maintenance of your BioBasedTile® will extend its life and protect its characteristic aesthetic. If you have any questions, please contact [sales@stonecycling.com](mailto:sales@stonecycling.com).