

Processing Guidelines

BioBasedTiles

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1. Introduction

- Overview: FRONT® BioBasedTiles are suitable for interior and exterior installations, including floors, walls, and facades.
- Intended use and applications: Designed for flooring and wall coverings.
- Compliance: always adhere strictly to local building codes and applicable industry standards.

2. Transport & Storage

- BioBasedTiles are delivered securely in protective packaging.
- Handle BioBasedTiles carefully to prevent damage during transport.
- Recommended storage conditions: dry and protected from weather.
- Acclimatisation: minimum 12 hours in the final installation environment.

3. Application Conditions

- Maintain temperatures above 4.4°C (40°F) during installation and for at least 48 hours after installation.
- Protect the site from moisture, extreme temperatures, and external influences.

4. Application Methods & Choices

- Adhesion with thin-set mortar.
- Recommended grout joint width: 3-4 mm if grouted.

5. Substrate Requirements

Suitable substrates include:

- Horizontal installations: Reinforced concrete slabs.
- Vertical installations: wood studs, metal studs, concrete, and masonry units (CMU or brick).
- Cementitious backer boards (interior) and gypsum boards (dry interior areas only)
- Recommended preparations include fortified mortar beds, scratch coats over metal lath, waterproofing, and uncoupling membrane products (as per manufacturer specifications).
- Ensure substrates are clean, stable, dry, and free from contaminants like oil, dust, or debris.

6. Tools & Equipment

- Wet saw with a diamond blade.
- Carbide or diamond-tipped drills.
- Polymer-modified thin-set mortar.
- Large notched trowel (12 mm minimum).
- Dust mask (FFP2 minimum).
- Clean water, sponges, and soft, flexible spacers.

7. Application

- This guide provides general recommendations for the installation of BioBasedTiles. Always combine these guidelines with professional recommendations, relevant trade standards, and local building codes.
- Alternative methods may be necessary based on specific applications.
- FRONT® is not liable for damages caused by improper installation.

Step-by-step installation instructions:

Setting and fixing

1. Allow BioBasedTiles to acclimatise for at least 12 hours in their final installation area.
2. Prepare polymer-modified thin-set mortar according to the manufacturer's specifications. Mix in small, manageable batches to prevent premature setting, and discard any mortar that becomes unworkable.
3. Mix BioBasedTiles from different packages during installation to ensure a consistent appearance.
4. Apply mortar evenly using a large notched trowel according to the manufacturer's specifications (100% coverage). The mortar should be applied to both the substrate and the back of each tile (back buttering) to ensure full adhesion.
5. If rapid absorption of moisture from the mortar occurs, lightly dampen the back of each tile with a sponge or mist of clean water before setting.
6. Firmly press tiles into mortar, sliding perpendicular to the trowel ridges to ensure optimal adhesion.
7. Use soft spacers for consistent grout joint spacing (3-4 mm).
8. Immediately remove excess mortar from tile surfaces with a clean, damp sponge while it is still fresh. If the mortar dries, remove it using a stiff-bristle brush.
9. Allow mortar to cure for 12-24 hours before foot traffic or further processing.

Sealing

1. Applying penetrating sealer twice is recommended for optimal stain resistance and aesthetic preservation.
2. Sealing is essential for moisture-exposed areas, such as shower walls and floors.
3. Use a high-quality, water-based penetrating sealer to enhance durability while minimising health and environmental hazards.
4. Conduct a sample test on a small area before full application to ensure aesthetic compatibility.
5. Ensure all grout joints are clean, dry, and free of excess mortar before sealing.
6. Apply the first layer of sealer evenly using a clean cloth, sponge, or brush, avoiding streaking or pooling.
7. Allow the first layer to dry completely before grouting.
8. Once the grout has fully cured (24-72 hours, depending on manufacturer recommendations), apply a final coat of penetrating sealer to protect both the tile and the grout.
9. Keep the sealed surface free from foot traffic, dust, and contaminants during the curing period.

Grouting

1. Float grout application is recommended.
2. Avoid highly contrasting grout colours to prevent staining.
3. Apply grout according to the manufacturer's specifications in small sections (1-2 m²), immediately and thoroughly cleaning excess grout.
4. For wider joints, a grout bag or gun may be used to minimise tile surface discolouration.
5. Regularly change rinse water to avoid grout haze redeposition.
6. Remove grout haze after curing using clean water or a pH-neutral grout haze remover and a white nylon scrub pad.
7. After installation, clean the surface again, ensuring all excess grout and mortar residues are removed immediately.
8. Avoid leaving water or liquids to pool on the surface, as prolonged exposure can cause discolouration.
9. Once the grout has fully cured (typically 24-72 hours, depending on manufacturer recommendations), apply a final coat of penetrating sealer to protect both the tile and the grout.
10. Protect the freshly grouted surface from foot traffic, dust, and contaminants during the curing period.

8. Quality Control & Inspection

- Regularly inspect tile alignment, joint spacing, and mortar coverage.
- Ensure full mortar adhesion by tapping the BioBasedTiles to check for hollow sounds.
- Monitor grout consistency and curing time to avoid cracking or improper bonding.
- Prevent tile lippage by ensuring even installation and adjusting alignment during setting.
- Verify that sealed surfaces have absorbed the product properly to ensure full protection.
- Conduct a final post-installation inspection, checking for inconsistencies and removing excess materials.

9. Maintenance & Cleaning

- Regularly sweep, vacuum, or mop with a pH-neutral cleaner.
- Avoid acidic or abrasive cleaners, including vinegar, citrus-based products, and ammonia.
- Use soft cloths, microfibre mops, or neutral stone cleaners to maintain surface integrity.
- For stubborn stains, apply a pH-neutral stone poultice and allow it to sit before rinsing.
- Rinse thoroughly with clean water after cleaning to prevent detergent residue buildup.
- Do not let water or cleaning solutions sit on the surface for prolonged periods.
- Periodically reapply penetrating sealer per manufacturer guidelines.
- When using a pressure washer, maintain a minimum distance of 90 cm and use a fan nozzle to avoid damage.

10. Disposal & Recycling

- Dispose of tile remnants and packaging per local waste disposal regulations.
- Separate recyclable materials, such as clean tile pieces, from contaminated construction debris.
- Consider repurposing or reusing tile scraps for small projects.
- Dispose of excess grout, mortar, and cleaning agents following environmental regulations.

11. Legal Information & Warranty

- The warranty covers defects in materials and workmanship but does not extend to damages resulting from improper installation or failure to follow recommended guidelines, chemical damage caused by unapproved cleaning agents, incorrect maintenance or use of non-recommended adhesives, grouts, or sealants.
- Once products are installed and fixed in place, the warranty is void—no claims will be accepted for post-installation appearance or performance issues.
- FRONT® assumes no responsibility for improper installation or use of unapproved materials; failure to maintain or clean tiles correctly, leading to damage or deterioration; or unauthorised alterations or modifications to installation guidelines.

12. Health & Safety

- To ensure safe handling and installation of BioBasedTiles, the following PPE is required:
 - Respiratory Protection: Wear a dust mask (FFP2/N95 or higher) or a NIOSH-approved respirator when cutting or handling tiles, especially in dry conditions.
 - Eye Protection: Use safety goggles to shield against flying debris when cutting, drilling, or sanding tiles.
 - Hand Protection: Wear protective gloves to prevent skin irritation from adhesives, grouts, and tile dust.
- Always use wet cutting methods to minimise dust, or operate within a dust extraction system.
- Ventilation Requirements: Work in well-ventilated areas or use dust collectors and extraction systems when cutting or processing panels indoors.
- Avoid inhaling fumes from adhesives and sealants by maintaining airflow.
- Always opt for wet cutting methods to suppress airborne particles.
- If dry cutting is necessary, wear a properly fitted respirator and limit exposure duration.
- Regularly clean workspaces with vacuum systems or dust collectors to reduce airborne dust.
- Avoid prolonged exposure to tile dust by washing hands thoroughly after handling materials.
- Do not allow dust to accumulate in workspaces—clean surfaces regularly.
- Avoid direct skin contact with adhesives and grout to prevent irritation.
- Inhalation of dust: Move to fresh air immediately. Seek medical attention if breathing issues occur.
- Skin contact with adhesives or grout: Wash thoroughly with soap and water. If irritation persists, seek medical advice.
- Eye contact: Rinse with plenty of water for at least 15 minutes. If irritation continues, seek medical assistance.

13. Product suggestions

DISCLAIMER: Product performance and suitability can vary based on individual circumstances, regional standards, and specific project requirements. Therefore, we strongly encourage you to consult with local suppliers, licensed professionals, or relevant experts to obtain advice tailored to your particular needs. Relying solely on the information provided here is at your own risk. We disclaim any liability for damages or issues arising from the use or purchase of any products mentioned. Always ensure compliance with local regulations and standards when selecting and using products.

Interior wall	Material
1. Install Substrate	Wood stud, metal stud, gypsum board
2. Apply Adhesive	Polymer-modified <u>thinset</u> adhesive, such as: Mapei Keraflex Maxi S1 Eurocol 705 speciaalijm MegaMix Tegellijm flex (MTL-C2 TE S1)
3. Apply Tiles	BioBasedTiles
4. Apply Sealant	Water-based sealant, such as: Fila Mp90 Eco Xtreme Ac 300 Faber 1:3 diluted with water
5. Apply Grout	Polymer-modified cementitious grout, such as: Mapei Keracolor GG113 Eurocol 717 Eurofine WD
6. Apply Sealant	Water-based sealant, such as: Fila Mp90 Eco Xtreme Ac 300 Faber 1:3 diluted with water
7. Apply Expansion joints	Flexible caulk, such as: Mapei Mapesil AC

Interior Flooring	Material
1. Install Substrate	Reinforced concrete slab
2. Apply Adhesive	Polymer-modified <u>thinset</u> adhesive, such as: Mapei Keraflex Maxi S1 Eurocol 705 speciaallijm MegaMix Tegellijm flex (MTL-C2 TE S1)
3. Apply Finish	BioBasedTiles
4. Apply Sealant	Water-based sealant, such as: Fila Mp90 Eco Xtreme Ac 300 Faber 1:3 diluted with water
5. Apply Grout	Polymer-modified cementitious grout, such as: Mapei Keracolor GG113 Eurocol 717 Eurofine WD
6. Apply Sealant	Water-based sealant, such as: Fila Mp90 Eco Xtreme Ac 300 Faber 1:3 diluted with water
7. Apply Expansion joints	Flexible caulk, such as: Mapei Mapesil AC Sopro Ceramic Silicone