



Substrate Preparation Guide

TOPCRET Microcement Systems

1. Scope

This document defines the technical requirements and procedures for the evaluation and preparation of substrates prior to the installation of any TOPCRET® Microcement system. It applies to floors, walls, ceilings and stairs, across residential and commercial environments, both interior and exterior.

2. General Assessment Criteria

All surfaces must undergo a detailed inspection to determine the appropriate preparation protocol based on substrate condition. Before evaluation:

- Surfaces must be clean, exposed and unobstructed
- Any existing finishes or contaminants must be identifiable

The performance of the microcement system is directly dependent on substrate condition and preparation quality.

3. Moisture & Vapor Pressure Control

3.1 Critical Consideration

The presence of rising moisture or vapor pressure is one of the primary risk factors affecting system performance. Potential consequences:

- Loss of adhesion
- Surface bubbling
- Cracking over time

These conditions may appear weeks or months after installation, depending on seasonal variations.

3.2 Mandatory Requirements

- Substrate must be completely dry at time of installation
- Maximum allowable moisture content: 15% or lower
- Moisture readings must be taken at multiple points across the surface

3.3 Vapor Barrier — Technical Recommendation

A vapor barrier is not part of the Topcret system. On ground-floor applications (interior and exterior, any substrate), balconies, terraces, rooftops, and walls or ceilings in contact with soil, installing one is the decision of the client or installer. Where rising moisture or vapor pressure is present and no barrier is installed, the system may suffer loss of adhesion, bubbling or cracking — outcomes outside Topcret USA's warranty.

This section reflects a technical recommendation to the installer. Topcret USA advises that ground-source moisture may compromise the microcement at any time; the decision to install a vapor barrier, and any consequences of omitting it, rest with the client or installer.

4. Surface Cleanliness

All substrates must be:

- Free of dust, grease, oils and solvents
- Free of chemical residues, adhesives, plaster, soap or shampoo deposits
- Free of any foreign material affecting adhesion

During installation, avoid airborne dust contamination and direct wind exposure carrying particles. Contamination during installation may affect surface finish quality and system cohesion.

5. Leveling & Planimetry

5.1 System Behavior

TOPCRET® Microcement systems are not self-leveling and not designed for filling or slope creation. Installation consists of 7–9 thin layers, total thickness approximately 1/8 inch.

5.2 Implications

- The system replicates existing substrate geometry
- Any irregularities will be visually transferred to the final finish

5.3 Requirements

- All leveling and slope corrections must be completed prior to installation
- Drainage slopes must be functional and verified for proper water evacuation

Failure to ensure proper drainage may lead to water accumulation, mineral deposits (exterior) or residue marks (interior wet areas).

6. Substrate-Specific Preparation

6.1 Concrete / Self-Leveling / Microtopping

Concrete substrate must be structurally sound, fully cured (ideally at least 28 days old), flat, smooth, clean and dry, with an adequate damp-proof membrane installed. Mechanically clean and vacuum the surface; remove sealers, paints, varnishes and chemical residues (mechanical grinding or sanding recommended). Verify integrity of previous repairs, remove poorly bonded areas, and treat all cracks at the source so they do not reflect through the finish.

6.2 Tile Surfaces

Ensure all tiles are clean, degreased and fully bonded. Remove loose tiles and fill voids with leveling mortar. For deep joints or uneven transitions, apply a thinset leveling layer prior to microcement installation to improve planimetry and prevent joint telegraphing.

6.3 Plywood (Floor Applications)

All panels must be securely fastened and structurally stable. Seal and fill all panel joints, and apply a self-leveling floor underlayment to create a rigid surface, eliminate deflection and achieve a smooth

substrate condition.

6.4 Walls & Ceilings

Applicable substrates: drywall, Durock, cement board, DensShield and equivalent systems. Panels must be fully secured with screws flush and concealed. All joints must be taped, filled and finished with plaster. Treat all transitions (wall-to-wall, wall-to-ceiling, wall-to-floor). Final leveling must be completed before microcement installation.

6.5 Wet Areas & Waterproofing

Microcement is not a waterproofing system. In areas such as showers and exterior walls, approved waterproofing membranes are **mandatory**. If applying over a membrane, it must be rigid and non-flexible; cement-based waterproofing systems are recommended for optimal cohesion.

6.6 Stairs

Applicable to all structural materials. For wooden stairs, each tread must be a single solid piece, properly fixed (screwed and bonded), with no movement between tread and riser. All joints must be filled with rigid fillers (e.g., Bondo-type materials). Flexible materials such as caulking or silicone are not permitted.

7. Limitations

- Microcement must never be installed over flexible substrates or materials
- System performance is entirely dependent on substrate stability and preparation
- Improper preparation may result in cracking, delamination or aesthetic defects

8. Final Consideration

The final quality and durability of a TOPCRET® Microcement installation are directly determined by the technical adequacy of substrate preparation. No system performance can compensate for structural deficiencies, moisture issues or improper leveling.

9. Technical Responsibility

- Substrate evaluation and preparation are the sole responsibility of the installer and/or contractor
- All conditions must be verified prior to system installation