



System Application Overview

Even with a high-performance microcement system, application outcomes depend heavily on substrate condition, thorough surface preparation, correct technique, controlled layer thickness, drying environment, and proper cure times. Before attempting any repair, identify the root cause of the failure. Simply recoating an unsound or unstable surface will not resolve underlying issues.

✦ THE MYCROCEMENT™ PREMIXED ADVANTAGE

Traditional multi-component microcement requires precise on-site powder-to-liquid mixing, careful water metering, strict pot-life management, and batch-to-batch ratio consistency. MyCROCEMENT™ comes factory-premixed and ready to apply, eliminating mixing errors and working-time panic. However, proper substrate suitability, priming, layer thickness, and drying cycles remain essential for a flawless, long-lasting finish.

PRIMARY APPLICATION DEFECTS & REPAIRS

ISSUE 01 Peeling, Delamination, or Poor Adhesion

SYMPTOMS & VISUAL INDICATORS

- Peeling, flaking, or lifting from the substrate.
- Inter-coat separation (layers unbonding from each other).
- Hollow sounds when tapped or soft, unbonded pockets.

PROBABLE CAUSES

- Substrate contaminated with dust, dirt, grease, oil, or wax.
- Substrate was crumbly, chalky, or structurally unsound.
- Primer omitted, incorrectly applied, or over-diluted.
- Primer was wet or under-cured prior to microcement application.
- Material applied in excessively thick single coats.

CORRECTIVE STEP-BY-STEP ACTION

- **1. Scrape & Scabble:** Mechanically remove all loose, peeling, or hollow material back to a sound, firmly bonded margin.
- **2. Diagnose Root Cause:** Ensure the failure was clean (dust/primer failure) before proceeding.
- **3. Deep Clean:** Vacuum thoroughly and degrease/clean substrate as necessary.
- **4. Prime Substrate:** Reapply the recommended MyCROCEMENT™ primer evenly; verify full coverage.
- **5. Respect Drying Time:** Allow primer to dry completely per technical specs (tack-free).
- **6. Rebuild in Thin Layers:** Re-apply microcement in recommended thin passes ($\leq 1\text{mm}$ each).

CRITICAL RULE: Never attempt to skim coat over peeling or unbonded microcement. The top layer will fail as the underlying bond breaks down further.

ISSUE 02 Reinforcement Mesh Ghosting or Exposure

SYMPTOMS & VISUAL INDICATORS

- Fiberglass mesh pattern visible beneath the finish coat.
- Grid-like telegraphing or waffle texture across the surface.
- Mesh threads exposed or sanded through during prep.

PROBABLE CAUSES

- Mesh was laid flat on primer without being fully embedded into fresh base coat.
- Base coat was applied too thin over the mesh weave.
- Over-aggressive sanding cut through the base layer into the mesh.

CORRECTIVE STEP-BY-STEP ACTION

- **1. Surface Preparation:** Allow current coat to dry fully. Lightly sand away high burrs or loose mesh fibers. Vacuum dust thoroughly.
- **2. Apply Additional Base Coat:** Trowel an additional thin layer of MyCROCEMENT™ Base Coat over the area to fully encapsulate the mesh grid.
- **3. Flatten & Level:** Ensure the base layer completely buries the profile of the mesh weave.
- **4. Light Sanding:** Once fully dry, sand with 80-120 grit paper to achieve a uniform, smooth base before applying finish coats.

PRO TIP: Mesh must be fully encapsulated within the base coat layer. Finish coats are ultra-thin decorative passes and cannot hide raw mesh texture.

ISSUE 03 Trowel Marks, Ridges & Uneven Texture

SYMPTOMS & VISUAL INDICATORS

- Prominent trowel lines, sharp ridges, or drag marks.
- Patchy or irregular texture variation (rough vs smooth areas).
- "Chatter marks" or uneven burnishing across the floor/wall.

PROBABLE CAUSES

- Uneven or excessive trowel blade edge pressure.
- Nick or dried buildup on the stainless steel trowel edge.
- Working over material that has already begun skinning/setting.
- Applying coats thicker than the recommended maximum limit.

CORRECTIVE STEP-BY-STEP ACTION

- **1. Complete Drying Cycle:** Allow the affected coat to dry completely before touching up. Attempting to fix wet material causes gouging.
- **2. Targeted Sanding:** Sand down ridges and chatter marks using 120-220 grit paper mounted on a rigid sanding block or random orbital sander.
- **3. Clean Trowels:** Keep trowel blades perfectly clean, burr-free, and rounded at corners.
- **4. Systematic Application:** Apply next pass keeping a wet edge; maintain a consistent 30° trowel angle with light, fluid movements.

ISSUE 04 Staining, Water Marks & Color Discoloration

SYMPTOMS & VISUAL INDICATORS

- Dark water rings, moisture halos, or patchy cloudiness.
- Uneven sheen levels (glossy spots next to matte spots).
- White efflorescence or discoloration after sealer application.

PROBABLE CAUSES

- Sealer applied over damp microcement containing residual moisture.
- Uneven or light sealer application leaving unsealed pores.
- Dust or sanding residue trapped under sealer coating.
- Premature water exposure before sealer fully cured (typically 7 days).

MOISTURE WARNING: Microcement must be fully dry (moisture content < 3%) before applying polyurethane sealer. Premature sealing locks in moisture and turns cloudy.

CORRECTIVE STEP-BY-STEP ACTION

- **1. Allow Complete Drying:** Do not panic if dark spots appear immediately after sealing; allow 48 hours for trapped water to evaporate.
- **2. Evaluate Sealer Integrity:** If discoloration is beneath sealer, lightly sand back sealer coat using 220-grit paper.
- **3. Thorough Dust Removal:** Micro-vacuum and wipe down with a dry microfiber cloth (no wet washing).
- **4. Re-Seal Uniformly:** Reapply MyCROCEMENT™ Sealer evenly in thin, cross-hatch passes using a short-nap roller.

ISSUE 05 Cracking & Hairline Surface Fractures

SYMPTOMS & VISUAL INDICATORS

- Fine hairline fractures or spiderweb-style micro-cracking.
- Structural cracks mirroring existing subfloor joints or tile gaps.
- Cracking concentrated in corners or wall-to-floor transitions.

PROBABLE CAUSES

- Deflection or structural movement in subfloor (plywood flex, cement board movement).
- Failure to bridge expansion joints or repair underlying subfloor cracks.
- Excessive coat thickness causing shrinkage tension during dry.
- Rapid drying forced by high heat, direct sunlight, or heavy draft.

CORRECTIVE STEP-BY-STEP ACTION

- **1. Substrate Movement Check:** Determine if crack is moving. Microcement is a decorative finish and cannot stop structural deflection.
- **2. Stabilize Substrate:** Screw down flexed subfloors or fill dynamic joints with elastomeric/epoxy fillers.
- **3. V-Groove Crack Prep:** Rake or grind hairline cracks slightly into a small V-shape, clear out dust.
- **4. Patch & Reinforce:** Fill crack with MyCROCEMENT™ Base Coat embedded with fiberglass mesh strip across the joint.
- **5. Blend & Re-Finish:** Sand flush and re-apply finish coat across the repaired field.

DIAGNOSTIC TIMELINE: WHEN DID THE ISSUE OCCUR?

Application Stage	Common Observable Defects	Immediate Primary Suspect
Substrate Prep	Dusty surface, crumbly concrete, flexing subfloor	Inadequate cleaning, unstable subfloor structure
Primer Phase	Puddling, pinholes, peeling primer skin	Over-application, dirty substrate, high porosity
Base Coat & Mesh	Telegraphed mesh, thick ridges, shrink cracks	Coats too thick, poor mesh embedding, rapid drying
Sanding Phase	Exposed mesh, gouges, uneven texture	Aggressive grit, sanding wet coat, worn sander pad
Finish Coat	Trowel marks, drag lines, color shading differences	Trowel edge burrs, overworking setting material
Sealer Phase	Cloudiness, white spots, sheen banding	Trapped moisture, uneven sealer roller pressure
Post-Cure (In Use)	Water staining, structural cracks, delamination	Premature water exposure, structural subfloor flex

PROACTIVE PREVENTION CHECKLIST FOR INSTALLERS

☐ Substrate Inspection: Clean, dry, structurally rigid, free of oil/wax. ☐ Joint Treatment: All dynamic joints taped/filled before microcementing. ☐ Primer Application: 100% coverage, fully dried to tack-free state. ☐ Mesh Integration: Mesh laid completely flat into fresh base coat. ☐ Layer Control: Max 1mm per pass. Do not force thick build-ups.	☐ Tool Maintenance: Clean stainless trowels regularly; smooth edges. ☐ No Additives: Never mix extra water into premixed MyCROCEMENT™. ☐ Dust Management: Vacuum 100% of sanding dust prior to sealing. ☐ Moisture Test: Ensure surface is bone dry prior to sealing. ☐ Cure Protection: Keep off water for 7 days post-sealing.
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FREQUENTLY ASKED QUESTIONS

Q: Can I apply a fresh coat directly over peeling microcement? A: No. Applying new material over an unbonded layer traps the failure underneath. Always remove loose/peeling areas back to a solid substrate, re-prime, and rebuild in thin coats.
Q: Why does my premixed microcement not require water additions? A: MyCROCEMENT™ is chemically engineered and pre-proportioned in factory conditions. Adding water destabilizes the binder matrix, leads to cracking, color mottling, and lower strength.
Q: How long should I wait before subjecting my microcement floor to water? A: Light foot traffic is usually permitted after 24-48 hours, but full water-resistance and chemical curing of the polyurethane sealer require a full 7 days. Avoid mop washing or standing water during week one.