

# MICRO TOPPING



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<http://www.surecretedesign.com/micro-topping/>

# MICRO TOPPING

## DESCRIPTION

**Micro Topping** is a single component, self-bonding, cement-based, extremely thin overlay for interior concrete surfaces. **Micro Topping** was designed to yield an exceptionally smooth tight-troweled finish that can provide a new "blank canvas" for decorative concrete floors. It may also be placed vertically on interior walls, creating the look of Venetian plaster. Application is accomplished by trowel or "magic trowel." **Micro Topping** is prepared with gray cement or white cement that may accept **Color Packs**.

## SURFACE PREPARATION

The principles for surface preparation for **Micro Topping** are aligned with other cement-based overlays; the substrate must be:

**1. Clean:** The surface must be free of dust, dirt, oil, grease, paints, glues, sealers, curing agents, efflorescence, chemical contaminants, rust, algae, mildew and other foreign matter that may serve as a bond breaker.

**2. Cured:** Any concrete must be sufficiently cured to have sufficient hydration, approximately 7 - 14 days depending on temperatures and humidity.

**3. Sound:** No system should be placed upon a substrate that is flaking, spalling, or has hibernating spalling.

**4. Profiled:**

**Floors**

Proper profile should follow the standard established by the International Concrete Repair Institute (ICRI) Technical Guideline no. 03732 for Concrete Surface Profile (CSP). The established profile is categorized as CSP-1 through CSP-3. The most common means to properly profile many concrete slabs is through the use of SCR (see SCR TDS). Some concrete slabs that are hard troweled or that are not sound may require more aggressive profiling achieved through diamond grinding or shot blasting. Customarily profiling is not required for application over another cement-based overlay.

**Walls**

Customarily profiling is not required for vertical application on a substrate.

On concrete the use of SCR is recommended. A painted surface may require deglossing or sanding. Drywall surfaces require finishing and priming prior to application.

## TEMPERATURE/CURE

1. Air and substrate surface temperatures shall remain between 50°F (10°C) and 90°F (32°C) during and within 48 hours of placement.
2. Cooler conditions will take significantly longer to cure.
3. This product (depending on weather conditions) should achieve initial set within 6 - 8 hours. Like concrete, full cure is



## PACKAGING

40 pound (18.1 kg) bag

## MIXING RATIO

5 - 6 qt. (4.7 - 5.7 liter) water to 1 - 40 pound (18.1 kg) bag of **Micro Topping**  
(optional) .5 pound (227 g) Color Pack - 30 standard colors (see **Color Pack** TDS)

## COVERAGE

Depends upon application and substrate  
1 - 40 lb. (22.7 kg) bag of **Micro Topping** 200 - 300 ft<sup>2</sup>

## DENSITY

126.1 pounds/ft<sup>2</sup> (2018kg/m<sup>2</sup>)

## COMPRESSIVE STRENGTH ASTM C-109

28 day 4278 PSI (29495 kPa)

## FLEXURAL STRENGTH ASTM C-348

28 day 995 PSI (6860 kPa)

## TENSILE STRENGTH ASTM C-190

28 day 440 PSI (3033 kPa)

## ABRASION RESISTANCE ASTM D-4060

28 days <.50%

## MOSAIC SHEAR ANSI A-118.4

28 day 280 PSI (1930 kPa)

## SHELF LIFE

Under normal conditions: when kept dry and moisture free, out of direct sunlight, the shelf life of an unopened bag is (12) months from the date of purchase. Storage must be under roof and off the floor. Rotate inventory to maintain product that is within limits.

reached at 28 days.

**4. Sealer selection** for a finished **Micro Topping** project will require different cure times:

- a. **SureSeal** products may apply as soon as overnight. See specific sealer TDS.
- b. **Dura-Kote** products may require longer cure times, perhaps 24 hours or more. See specific sealer TDS.

## APPLICATION

### Patching

Upon surface preparation, some areas may require patching prior to application of **Micro Topping**. **Flash Patch** or **Deep Level** is an excellent choice as a patching product to restore concrete to a sound state. Refer to **Flash Patch** or **Deep Level** TDS.

### Crack Treatment / Construction Joints

Cracks may require treatment: Refer to **SCT-22 Crack and Spall Treatment** and **SCT-EP Epoxy Crack Treatment** TDS to evaluate crack as static or structural to set expectation of treatment.

Never bridge **Micro Topping** across any joint in concrete. Construction Joints in concrete have sufficient movement to "tele-

graph" through **Micro Topping** applications. Large expansive slabs should have planned appropriate flexible caulks to allow for this movement.

### Mixing and handling

1. Add water, approximately 5 qt. (4.7 liter) to a 5 gal. (18.9 liter)
2. Add 1 - **Color Pack** if desired. Caution: **Color Packs** may streak, as color particulate is larger than aggregate of mix. See **Color Pack** TDS.
3. Mix with a handheld concrete mixer, such as an Eibenstock model #EHR 20R or a ½" (12.7 mm) 450 – 600 rpm drill equipped with a cage mixing blade. **Color Packs** require comprehensive mixing in water prior to introduction of **Micro Topping**.
4. Slowly introduce **Micro Topping** into the pail with mixer running.
5. Scrape side of pail with a margin trowel to ensure all dry product is incorporated into the wet mix.
6. Continue to mix for a minimum of 1 minute after all ingredients are combined to achieve a lump-free consistency.
7. Additional water may be added up to 6 quarts (5.7 liters) total for 40 pound (18.1 kg) bag.

### First Coat

**Micro Topping** may be applied as a single coat system.

#### Floor

1. The surface should be saturated, surface dry (SSD or damp, no puddles).
2. Pour a generous ribbon of **Micro Topping** and tightly trowel or squeegee product over entire area.

**Wall** – Utilize a hawk and trowel and tightly coat surface with trowel

### (Optional) Stencils and grout tape patterns

1. Stencils and tape patterns may be placed after scraping and sweeping of first coat, and prior to application of finish coat.
2. Stencils and tape patterns may be removed as soon as product dries sufficiently to bear the foot traffic of the applicator, prior to sealing.

### Finish Coat

#### Floor

1. Depending upon substrate's condition and desired level of flatness or smoothness, a second or finish coat may be required.
2. The first coat must set sufficiently to bear the foot traffic of the applicator, usually overnight (depending upon weather).
3. The first coat may be scraped or sanded smooth and the surface swept or vacuumed.
4. The finish coat applies as the first coat described above. Alterations of trowel techniques will yield numerous pleasing finish coats.

#### Wall

1. Depending upon substrate's condition and desired level of flatness or smoothness, a second or finish coat may be required.
2. The first coat must set sufficiently to support finish coat, approximately 2-6 hours.
3. The finish coat applies as the first coat described above. Alterations of trowel techniques will yield numerous pleasing finish coats.

### Secondary coloring

Depending upon the application selected, secondary coloring will provide aesthetic appeal to a project. There are several products available:

- **Eco-Stain** - 30 water base stain colors. Refer to **Eco-Stain** TDS.
- **SureStain** - 8 acid stain colors. Refer to **SureStain** TDS.

(Note: Before secondary coloring, the finish coat must dry sufficiently to bear the foot traffic of the applicator [if on floor], usually overnight [depending upon weather].)

Scrape the surface of finish coat with a floor scraper and remove any loose material.)

### Sealing

To complete a **Micro Topping** project sealing is required. Excellent sealer choices for economical floor projects include:

- **SureSeal HS-360** - 30% solids, 600 g/L solvent
- **SureSeal HS-340** - 30% solids, 400 g/L solvent
- **SureSeal Super 30** - 30% solids, 600 g/L solvent
- **SureSeal Super WB** - 30% solids water based

Refer to the appropriate TDS for details.

Other sealer choices for floors with enhanced durability properties include:

- **Dura-Kote Polyurethane Solvent Base Clear Gloss**
- **Dura-Kote Epoxy 100**
- **Dura-Kote Polyurethane Water Base Clear**
- **Dura-Kote PFC 120 Hybrid Solvent Based Polyaspartic**
- **Dura-Kote PFC 180 Hybrid Solvent Based Polyaspartic**
- **XS-327**

Refer to the appropriate TDS for details.

For sealing walls, products to consider:

- **SureSeal Super 20**
- **SureSeal Super WB**
- **SureSeal Super WB LL**

Refer to the appropriate TDS for details.

(Note: if secondary coloring is not utilized before sealing, scrape the surface of finish coat with a scraper and remove any loose material.)

## SLIP RESISTANCE

Two recognized US agencies have issued directives on minimum coefficient of friction, OSHA (Occupational Safety and Health Administration) and Department of Justice through the ADA (Americans with Disabilities Act). ADA is the more stringent of the two. ADA directs that accessible walkways have a minimum coefficient of friction of 0.6. Ramps have been directed to be 0.8. The applicator assumes the responsibility to meet these standards. Especially exterior surfaces or surfaces that may become wet, oily, or greasy require attention. Refer **SureGrip (Additive)** TDS and its accompanying coefficient of friction table.

## CLEAN-UP

Before **Micro Topping** dries; spills and tools can be cleaned up with water.

## DISPOSAL

Contact your local government house-hold hazardous waste coordinator for information on disposal of unused product.

## LIMITATIONS

For use by trained professionals that have read the complete SDS. A completed **Micro Topping** project requires a sealer. The sealer selected may have limitations that affect the finished system. Refer to the appropriate sealer TDS for details.

## WARRANTY

Warranty of this product, when used according to the directions, is limited to refund of purchase price, or replacement of product (if defective), at manufacturers/seller's option. Sure-Crete Design Products shall not be liable for cost of labor or direct and/or incidental consequential damages.

## CAUTIONS

**KEEP OUT OF REACH OF CHILDREN. Inhalation:** Avoid prolonged breathing of airborne dust, particularly present during mixing. Use NIOSH approved respirator for nuisance if threshold limit values are unsafe. **Skin Contact:** Skin contact may cause irritation. Remove contaminated clothing and wash affected skin with soap and water. Launder clothing before reuse. If symptoms persist, seek medical attention. **Eyes:** Wear safety eye protection when applying. Contact with eyes may cause irritation. Flush eyes with water for 15 minutes. If symptoms persist, seek medical attention.

## SAFETY DATA SHEETS

The following are links to all available safety data sheets related to this product:

- [bag-mix-micro-topping-sds.pdf](#)