



***SUPERCAP***<sup>®</sup>  
The Next Generation Slab™

## **TDS 230S - LATICRETE<sup>®</sup> SUPERCAP<sup>®</sup> Substrate Preparation and Primer Guide**

This Technical Data Sheet (TDS) is intended to assist the LATICRETE SUPERCAP Applicator in evaluating and planning for projects prior to the initiation of the work. It is a supplement to the applicable Product Data Sheets. Please read and understand all applicable product and technical data sheets.

This TDS is also intended to document the project information and serve as a checklist to be completed by the Applicator to record important information about the project, and to show that many of the common issues have been considered and “checked off”. Some projects under consideration may be deemed inappropriate for LATICRETE SUPERCAP application. The checklist therefore also allows documentation of issues that disqualify projects from consideration.

The LATICRETE SUPERCAP Applicator is responsible for ensuring that the substrate is properly prepared and primed prior to the installation of LATICRETE SUPERCAP. Any conditions discovered prior to or during preparation and installation must be brought to the attention of the project construction manager or general contractor immediately to remediate the condition and bring the affected areas into compliance. The project specifications should be consulted for any special substrate preparation or conditions that may apply.

## I. GENERAL REQUIREMENTS

- a. **Building envelope must be in place** to provide a suitable ambient temperature range and protection from weather and direct sunlight. Substrate temperature must be a minimum 40°F (4°C) during primer application and throughout drying time. Additionally, air temperature must be maintained between 50–90°F (10–32°C) during primer application and throughout drying time.
  - i. **\_\_\_ Permanent building envelope in place, OR**
  - ii. **\_\_\_ Temporary building enclosure in place for minimum of 72 hours after pour. Prevent water, snow, or ice from accumulating on the surface.**
- b. **Verify substrate deflection** under all live, dead and impact loads of concrete floors does not exceed industry standards for the type of finish flooring being installed.
  - i. **\_\_\_ Confirm from Architect or Engineer that current and anticipated floor meets building code, including the Requirements of finished flooring** (For reference - weight of SUPERCAP SC-500 is 2.6 lbs/ft<sup>3</sup> at ¼" average depth).
- c. **Expansion, Control, Movement Joints and Cracks**
  - i. **\_\_\_ Honor all types of expansion, control, or movement joints** in the substrate up through the underlayment and floor covering.
  - ii. **\_\_\_ Do not pour over active (dynamic) cracks.** Refer to ACI 224.1R-07 for guidance on evaluation and repair of cracks in concrete.
  - iii. **\_\_\_ Non-moving (static) cracks may be filled** as required for leakage prevention with LATICRETE SUPERCAP Skimcoat, or if LATICRETE SUPERCAP Moisture Vapor Control is used, by following the instructions in section, *Joints, Cracks, Surface Depressions and Other Irregularities*, in Product Data Sheet DS-061.0 - LATICRETE SUPERCAP Moisture Vapor Control.

## II. REQUIREMENTS FOR CONCRETE SUBSTRATES

- a. **\_\_\_ Verify bond breakers are not present.** Slabs must be clean, free of oil, wax, grease, sealers, non-self-dissipating curing compounds, asphalt, paint, deicing agents, dust, dirt, loose surface material and any other contaminant that will act as a bond breaker. Either:
  - i. **\_\_\_ Verify surface is free of bond breakers, OR**
  - ii. **\_\_\_ If surface contamination is suspected, perform third party laboratory testing** confirming maximum depth of contamination, **AND**

- iii. **\_\_\_ Remove contamination** down to maximum depth of contamination via mechanical means (e.g., shot blasting) to ICRI CSP 3 minimum, per ICRI Guideline No. 310.2R-2013.
- b. **\_\_\_ Test concrete substrate per Water Drop Test** per instructions in **PRIMING** section, below (not applicable if LATICRETE SUPERCAP Moisture Vapor Control will be used).
- i. **\_\_\_ Verify** that substrate meets requirements of “Normal-Suction” or “High-Suction”, **OR**
  - ii. **\_\_\_ Abrade** “Non-Suction” surface via mechanical means (e.g., shot blasting) to ICRI CSP 3 minimum, per ICRI Guideline No. 310.2R-2013.
- c. **\_\_\_ Tensile pull strength of concrete substrate must be measured at 100 PSI minimum.** Test substrate in accordance with ASTM C1583, with a minimum of 3 valid tests on each representative section of floor.
- d. **Moisture in substrate:**
- i. **\_\_\_ Concrete slabs should be tested for appropriate moisture conditions in accordance with the finish flooring manufactures specifications prior to installing** LATICRETE SUPERCAP. LATICRETE SUPERCAP primers and underlayments are not moisture mitigation systems by themselves. If the finish flooring system requires a lower moisture measurement then the concrete slab exhibits at time of finish flooring installation, LATICRETE SUPERCAP Moisture Vapor Control must be applied under (never on top of) SC500, SC500-LW, or SC500-PLUS.
    - 1. Finish flooring system moisture requirement \_\_\_\_\_
    - 2. Test result of finish flooring system moisture requirement \_\_\_\_\_
  - ii. **LATICRETE SUPERCAP SC500, SC500-LW, and SC500-PLUS, as well as Moisture Vapor Control, may be installed on concrete slabs with relative humidity up to 100%, as long as there is no standing water on surface.** IMPORTANT NOTE: a concrete slab may be dry enough to successfully install LATICRETE SUPERCAP primer and underlayments; however, concrete slab may not be dry enough to meet moisture conditions required for finish flooring.
    - 1. **\_\_\_ Verify** there is no standing water or visible moisture on the slab, or hydrostatic pressure potential (e.g. from groundwater) at time of Primer Plus or Moisture Vapor Control application and pour.

iii. **Moisture Mitigation Using LATICRETE SUPERCAP Moisture Vapor Control**

1. \_\_\_ **Review** Product Data Sheet DS-061.0 - LATICRETE SUPERCAP Moisture Vapor Control.
2. \_\_\_ **Mechanically abrade substrate** to ICRI CSP 3-5, per ICRI Guideline No. 310.2R-2013.
3. \_\_\_ **Apply** LATICRETE SUPERCAP Moisture Vapor Control per DS-061.0
4. \_\_\_ **Keep surface clean** prior to installation of PRIMER and SUPERCAP. **Limit traffic** on LATICRETE SUPERCAP Moisture Vapor Control. **Close floor** to all other trade traffic prior to installation of SUPERCAP. If floor becomes contaminated by trade traffic, construction dust, debris, flooded or any other bond inhibiting substance prior to LATICRETE SUPERCAP installation, the contaminated primer and moisture mitigation system may need to be completely removed by shot blasting, scarification or other mechanical means and properly re-applied prior to LATICRETE SUPERCAP installation.

e. **New Concrete Substrates (less than 28 days old):**

- i. \_\_\_ **New concrete must be 5 days old minimum.** Date of concrete placement \_\_\_\_\_
  - ii. \_\_\_ **Verify new concrete** is dimensionally stable, is not settling or deflecting, and has developed a minimum of 75% of its design compressive strength.
- f. \_\_\_ **Review and follow applicable guidelines of ACI 302.2R-06.** “Guide for Concrete Slabs that Receive Moisture Sensitive Flooring”
- g. \_\_\_ **Review and follow applicable guidelines of ASTM F710.** “Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring”.

III. **REQUIREMENTS FOR WOOD SUBSTRATES**

- a. \_\_\_ **Verify that the wood substrate is stable** and structurally sound enough to support all total anticipated live, dead and impact loads. Replace any loose, deteriorated, or unsound sections of wood substrate.
- b. \_\_\_ **Lay 6 mil polyethylene** (“poly” or “PE”) sheeting, overlapping and taping as required to prevent leakage (optional step).
- c. \_\_\_ **Fasten 3.4 LB/YD galvanized diamond metal lath** over entire wood substrate using corrosion resistant fasteners every 6” (15 cm) overlapping lath seams by 1” (2.5 cm).

#### IV. REQUIREMENTS FOR ADHESIVE RESIDUES

- a. **Do not install LATICRETE SUPERCAP SC500, SC500-LW, SC500-PLUS, Primer Plus, or Moisture Vapor Control over residues containing asbestos.**
- b. **Non-Water Soluble Adhesives:**
  - i. **\_\_\_ Mechanically remove** non-water soluble cutback adhesives that do not contain asbestos by shot blasting, grinding or other mechanical means down to clean, structurally sound concrete. **OR,**
  - ii. **\_\_\_ Remove by razor scraping** to a thin, translucent residue, then thoroughly swept and vacuumed. **AND,**
    1. **\_\_\_ Conduct tensile pull tests** per ASTM C1583 or ICRI Guideline No. 03739. Tensile strength must be 100 psi or greater.
- c. **Water-Soluble**
  - i. **\_\_\_ Mechanically remove** water soluble cutback adhesives that do not contain asbestos by shot blasting, grinding or other mechanical means down to clean, structurally sound concrete (razor scraping is not recommended for water soluble adhesives).
  - ii. **\_\_\_ Conduct tensile pull tests** per ASTM C1583 or ICRI Guideline No. 03739. Tensile strength must be 100 psi or greater.

#### V. REQUIREMENTS FOR CERAMIC, STONE, QUARRY TILE, VCT, SHEET VINYL, AND CEMENT TERRAZZO SUBSTRATES

- a. **\_\_\_ Remove any areas** that are loose, not strongly bonded, or broken.
- b. **\_\_\_ Mechanically abrade** (moisture mitigation systems should not be abraded) and clean surface.
- c. **\_\_\_ Perform tensile bond testing** per ASTM C1583 or ICRI Guideline No. 03739. A minimum of 100 psi (0.7 MPa) bond strength is required prior to installation of LATICRETE SUPERCAP.

#### VI. PRIMING

- a. **General Priming Information:** All surfaces **MUST** be primed prior to every LATICRETE SUPERCAP self-leveling underlayment application. LATICRETE SUPERCAP Primer Plus is a concentrate and must be diluted with clean potable water prior to application. Dilution ratio and application methods vary depending on substrate. Always stir LATICRETE SUPERCAP Primer Plus concentrate prior to diluting. Mix primer with clean potable water according to the **LATICRETE SUPERCAP PRIMER DILUTION / APPROXIMATE COVERAGE** chart below.

- b. Water must always be carefully measured in order to ensure proper dilution is achieved. Use a mixing paddle to thoroughly combine primer and water. Primer can be broom, roller, mop or spray applied. Substrate temperature must be a minimum 40°F (4°C) during primer application and throughout drying time. Additionally, air temperature must be maintained between 50–90°F (10–32°C) during primer application and throughout drying time. Primer must also be protected from direct sunlight. Caution: Do not allow LATICRETE SUPERCAP Primer Plus to freeze.

LATICRETE SUPERCAP PRIMER DILUTION / APPROXIMATE COVERAGE			WATER DROP TEST
<b>SUITABLE SUBSTRATES</b>	<b>Primer to Water Ratio<sup>1</sup></b>	<b>Approximate Coverage<sup>2</sup></b>	<p>The water drop test described in this document is a subjective, qualitative test that may be conducted in order to help an experienced applicator form an opinion as to how a slab should be primed. However, this test may not be definitive.</p> <p>To help determine the primer dilution properly prepare slab in accordance with this guide then apply several dime to quarter size drops of water to properly prepared surface and observe.</p> <p>a) High-Suction = Water completely absorbs into surface within 15 seconds; surface may appear dark and wet with no visible water remaining on surface</p> <p>b) Normal-Suction = Water absorbs or partially absorbs within 30 seconds but not less than 15 seconds; bead of water may slowly shrink as it absorbs while dark, wet spot on surface slowly expands</p> <p>c) Non-Suction = Water beads up and does not absorb at all within 30 seconds; bead of water does not shrink or absorb, wet spot on surface does not expand</p>
<b>Normal Suction:</b> Concrete	1:3	400 ft <sup>2</sup> (37 m <sup>2</sup> )	
<b>High-Suction:</b> Highly Porous Dry Concrete / Cement Mortar Beds	1st coat: 1:5 2nd coat: 1:3	200 ft <sup>2</sup> (19 m <sup>2</sup> )	
<b>Wood Substrate:</b>	5:1	200 ft <sup>2</sup> (19 m <sup>2</sup> )	
<b>Non-Suction:</b> Ceramic, Stone, Quarry Tile / VCT, VAT, Sheet Vinyl / Cement Terrazzo	1:1 with slurry	285 ft <sup>2</sup> (26 m <sup>2</sup> )	
<b>LATICRETE SUPERCAP Moisture Vapor Control</b>	1:1 with slurry	285 ft <sup>2</sup> (26 m <sup>2</sup> )	
<ol style="list-style-type: none"> <li>Dilution Ratio = Primer: Water</li> <li>Approximate coverage in square feet per gallon of concentrated primer</li> </ol>			

- c. **Normal Suction Concrete:** Dilute primer 1:3 (1 part primer to 3 parts water). Apply a single coat of diluted primer/water mix to the point of refusal so that the substrate is completely covered and small puddles form in low spots. While primer is still wet use a push broom to work primer well into the substrate so that puddles are spread evenly over the surface, absorbed and a uniform film has been applied. Then follow **All Suitable Substrates** and **Protect Primer Application** below.

- d. **High-Suction Concrete:** Apply two coats of primer allowing primer to dry between coats.

- For the first coat, dilute primer 1:5 (1 part primer to 5 parts water). Apply first coat of diluted primer/water mix to the point of refusal so that the substrate is completely covered and small puddles form in low spots. While primer is still wet use a push broom to work primer into the substrate so that puddles are spread evenly over the surface, absorbed and a uniform film has been applied. Remove any remaining puddles by brooming and spreading over the surface. Allow the primer to dry to the touch. The first coat is considered dry when a minimum of 3 hours dry time has elapsed, primer turns from milky white to clear, is dry to the touch and there is no release of primer from the substrate. First coat of primer must not be opened to trade traffic prior to installation of second coat. If primed floor becomes contaminated by trade traffic, construction dust, debris, flooded or any other bond inhibiting substance prior to second coat application, the contaminated first coat of primer must be completely removed by shot blasting, scarification or other mechanical means, properly re-primed and allowed to dry.
- For the second coat, dilute primer 1:3 (1 part primer to 3 parts water). Apply second coat of diluted primer/water mix to the point of refusal so that the

substrate is completely covered and small puddles form in low spots. While second coat of primer is still wet use a push broom to work primer into the substrate so that puddles are spread evenly over the surface and a uniform film has been applied. Then follow **All Suitable Substrates** and **Protect Primer Application** below.

- e. **Non-Suction Substrates:** Non-Suction primer dilution and application instructions are intended for ceramic tile, stone, quarry tile, VCT, sheet vinyl, cement mortar beds and LATICRETE SUPERCAP Moisture Vapor Control moisture mitigation system that have been properly prepared in accordance with this guide. Concrete slabs that are considered Non-Suction will require additional preparation prior to primer application. See **REQUIREMENTS FOR CONCRETE SUBSTRATES** section, above, for more information.
  - i. Dilute primer 1:1 (1 part primer to 1 part water). Apply a single coat of diluted primer/water mix to the point of refusal so that the substrate is completely and evenly covered and wet. While primer is still wet and milky white, immediately lightly scatter Pre-Sanded LATICRETE SUPERCAP SC500 self-leveling underlayment dry powder into the wet primer. Pre-Sanded LATICRETE SUPERCAP SC500 is available in 50 lb. bags. Using a push broom, work the dry powder into the wet primer/water mix forming a slurry. Continue to broom so that puddles are spread evenly over the surface and a uniform film has been applied. Then follow **All Suitable Substrates** and **Protect Primer Application** below. For more information on this method contact the LATICRETE SUPERCAP Technical Service department.
- f. **Wood Substrates:** Dilute primer 5:1 (5 parts primer to 1 part water). Using a sprayer, apply a single coat of diluted primer/water mix to the affixed diamond lath (see **REQUIREMENTS FOR WOOD SUBSTRATES** section, above) so that the substrate is completely covered without puddling and a uniform film has been applied. Fasten galvanized diamond metal lath over entire exterior glue plywood substrate using corrosion resistant fasteners every 6" (15 cm) overlapping lath seams by 1" (2.5 cm). Then follow All Suitable Substrates and Protect Primer Application.
- g. **All Suitable Substrates:** Remove any remaining puddles by brooming and spreading evenly over the surface. Allow the primer to completely dry for a minimum of 3 – 5 hours at 70° F (21°C) 50% Relative Humidity. Primer is considered dry when it turns from milky white to clear, is dry to the touch, there is no release of primer from the substrate and a minimum of 3 hours has elapsed. Surface may feel slightly tacky. Drying time will vary depending on surface and ambient air conditions. Substrate temperature must be a minimum 40°F (4°C) during primer application and throughout drying time. Additionally, air temperature must be maintained between 50–90°F (10–32°C) during primer application and throughout drying time. Primer must also be protected from direct sunlight. Temperatures below 70° F (21°C) and/or relative humidity above 50% will increase drying time. Insufficient drying or poor film formation will result in pinholes and poor bond strength and may cause LATICRETE SUPERCAP underlayment to debond. If a 24 hour period is exceeded after primer application and the LATICRETE SUPERCAP underlayment has not been applied, the surface must be primed again.



- h. **Protect Primer Application:** When walking over new primer application prior to installation of LATICRETE SUPERCAP underlayment, limit traffic and use clean footwear. Primed floor must not be opened to general trade traffic prior to installation of LATICRETE SUPERCAP underlayment. If primed floor becomes contaminated by trade traffic, construction dust, debris, flooded or any other bond inhibiting substance prior to LATICRETE SUPERCAP underlayment installation, the contaminated primer must be completely removed by shot blasting, scarification or other mechanical means, properly re-primed and allowed to dry prior to LATICRETE SUPERCAP underlayment installation.

## VII. MISCELLANEOUS

- a. **\_\_\_Protect primed surfaces during level survey and setting Level Pegs.** When required, survey surface using a digital or electronic leveling device and place level pegs after primer has been allowed to dry to the touch. Limit foot traffic to minimize dusty footprints.
- b. **\_\_\_Perform Mock-Up:** It is always recommended that the applicator and the flooring contractor test performance, suitability and compatibility of LATICRETE SUPERCAP and finished floor system. On site mock-ups should be installed and tested for intended use. Always refer to finished floor manufacturer's recommendations regarding surface preparation, moisture requirements, installation instructions, restrictions and compatibility with underlayment. Mock-ups should be installed using all surface preparation and system components intended for use on the project including moisture mitigation (when applicable), primer, underlayment poured at the intended depth, finish flooring and any other applicable system components. When the finish flooring is unknown, the mock-ups should be conducted using just the LATICRETE SUPERCAP to ensure compatibility with the substrate. When flooring is specified after the LATICRETE SUPERCAP has already been installed, the flooring contractor should install finish flooring over a section of properly prepared LATICRETE SUPERCAP underlayment and test in accordance with flooring manufacturer instructions. It is important to note that since many jobsites will exhibit several conditions that require different types of surface preparation, finish flooring and other unknown conditions, it will be necessary to conduct several mock-ups to test each condition separately.

**Technical Data:** Specifications are subject to change without notification. Technical data shown in LATICRETE SUPERCAP product data sheets and technical data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary greatly due to variability of critical job site factors.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at [www.laticretesupercap.com](http://www.laticretesupercap.com)



**TO BE COMPLETED by LATICRETE SUPERCAP APPLICATOR**

**GENERAL PROJECT INFORMATION:**

Project Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
Owner's name: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_

**CONTRACTOR INFORMATION:**

1) Applicator of LATICRETE SUPERCAP, LLC materials: \_\_\_\_\_

Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
Project Manager Name: \_\_\_\_\_

2) Installation Contractor (finish flooring): \_\_\_\_\_

Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
Project Manager Name: \_\_\_\_\_

3) General Contractor: \_\_\_\_\_

Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
Project Manager Name: \_\_\_\_\_

**GENERAL FLOOR DESCRIPTION (attach floor plans)**

1) Describe structure: \_\_\_\_\_

Area of floor: \_\_\_\_\_ sq. ft.

Multiple floors (describe): \_\_\_\_\_

2) Concrete slab thickness: \_\_\_\_\_ inches

Location of concrete floor slab: \_\_\_below grade \_\_\_on grade \_\_\_above grade

On or below grade: moisture vapor barrier below concrete slab: \_\_\_yes \_\_\_no

(If yes) Type of vapor barrier: \_\_\_\_\_

\_\_\_ Directly under concrete

\_\_\_ Under sand cushion

Above grade: (type of above grade concrete slab construction):

\_\_\_ Elevated on steel deck

\_\_\_ Cast-in-place slab, no deck

\_\_\_ Pre-cast plank

\_\_\_ Other (describe)

3) Concrete mix formulation specification (attach)



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**Name of Person Completing This Checklist:**

**Signature:**

**Date:**



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