COLOSSAL 117-CSL

Cementitious Self Leveler

COMPONENT OF MOISTURE DEFENSE SYSTEM™

PRODUCT DATA SHEET

623 Chatsworth HWY 225 Calhoun, GA 30701 888.871.8877 lamininindustries.com

PRODUCT DESCRIPTION

Colossal 117-CSL Cementitious Self Leveler is an advanced hydraulic cement-based, self-leveling compound designed for fast track underlayment applications. It is specially formulated for leveling interior horizontal concrete surfaces where environmental controls are not operational, or the building is not enclosed. When combined with an epoxy moisture barrier and an epoxy primer with sand broadcast, Colossal 117-CSL creates a leveling system that improves construction efficiency and eliminates wait times before floor covering can be installed. Colossal 117-CSL is extremely durable and may be used in conjunction with other Laminin Industries products.

KEY FEATURES and BENEFITS

* Does not require functioning HVAC system in place before installation
* Offers high compressive strength for limited exposure to heavy traffic during normal construction practices
* Has no moisture vapor emission limits and can be installed without testing on properly prepared concrete substrates
* Offers fast track leveling, smoothing and repairing of interior floors before installation of HVAC or interior finishes
* Can be used under moisture-controlling adhesive systems and epoxy moisture control barriers
* Interior residential (rental apartments, condominiums and homes)
* Interior commercial (office buildings, hotel rooms/hallways, restaurants and cafeterias)
* Interior heavy commercial (hotel lobbies, convention centers, airports, shopping malls, grocery stores and department stores)
* Interior institutional (hospitals, schools, universities, libraries and government buildings)
* Works under any Laminin Industries adhesive

APPROVED SUBSTRATE TYPES

* Properly prepared concrete at least 7 days old
* Properly installed and sound Laminin surface preparation products
* Properly installed, primed and intact epoxy moisture barriers over concrete substrates
* Consult Laminin's Technical Services Department for installation recommendations regarding substrate conditions not listed

APPROVED SURFACE PREPARATION PRODUCTS

* Colossal 117-EPS Epoxy Prime and Seal
* Colossal 117-MRS Moisture Resistant Smooth Skim
* Colossal 117-USL Urethane Self-Leveler
* Colossal 117-EMB Epoxy Moisture Barrier

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PRODUCT LIMITATIONS & SURFACE PREPARATION

COLOSSAL 117-CSL:

* Do not install over substrates containing asbestos
* Use when the substrate temperature is between 40 degrees F and 90 degrees F. For temperatures above 85 degrees, follow American Concrete Institute (ACI) hot weather application guidelines to ensure a successful installation.
* Do not apply over self-stick tile, strip wood, particleboard, flakeboard, plank or other dimensionally unstable substrates
* Do not use in areas prone to hydrostatic pressure
* For concrete surfaces that are smooth or cannot be mechanically profiled, as well as for intact epoxy moisture barriers, prime the surface with a Colossal 117-EPS Epoxy Prime and Seal
* Do not mix with any other self-leveling underlayment
* All substrates must be structurally sound, dry, solid and stable
* Substrate should be clean and free of dust, dirt, oil, grease, paint, curing agents, concrete sealers, loosely bonded toppings, loose particles, old adhesive residues, and any other substance or condition that may prevent or reduce adhesion
* Concrete surfaces must either have a broom finish or be mechanically profiled and prepared by shotblasting, sandblasting, water-jetting, scarifying, diamond grinding or other engineer-approved methods to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3. Prime the properly profiled surface with any Laminin primer used according to its respective Technical Data Sheet

A successful installation requires proper preparation of the sub floor. Read and understand all applicable guidelines and technical data sheets before installation. Follow industry standards and flooring manufacturer's recommendations for the sub floor moisture content, design, layout and application of the flooring materials. All slab constructions must meet the specific requirements of the floor covering to be installed.

Prior to installation, the sub floor must be checked according to national standards. It must be solid and sound, level, free of indentations as well as resistant to pressure and tension. Depending on type and condition of sub floor, a mechanical treatment (e.g. mechanical brushing, grinding or sanding) may be required. Intensity of such work must be determined at the site by the installer. Dust, paint, residual adhesives or other surface contaminates must be removed by suitable means. Cleaning the surface with an industrial vacuum is recommended. Cracks and gaps must be filled with concrete crack filler unless they are expansion joints. Level when necessary to 3/16" within ten feet. Heated sub floors must be primed.

When using other than Laminin Industries products in conjunction with Laminin Industries primers, sealers, leveling compounds or adhesives, Laminin Industries denies any and all responsibility for any ensuing problems and/or damages without prior written authorization from Laminin Industries. This adhesive will maintain its integrity and performance even when high levels of moisture or water are present. While this adhesive can withstand any amount of moisture, it does not qualify as a moisture inhibitor. Please see above for recommended sealers if a moisture barrier is required. In case of accident, injury, spill or exposure, see SDS information sheet for appropriate action. Consult technical data sheet at lamininindustries.com for updated information. The foregoing representations are based on the results of our most current product and material testing within a controlled environment and are of a non-obligatory advisory nature only. As such, they do not constitute an express or implied warranty of any kind including the Warranty of Merchantability and/or Fitness for a Particular Purpose. Because we have no control over the actual quality of workmanship, materials used and worksite conditions, Laminin Industries, LLC will in no event be liable for any incidental and/or consequential damages. Therefore, we strongly recommend that prior on-site testing be conducted to refer to and study the suitability of the product for the intended purpose. With the release of this technical information sheet, all its prior versions become invalid. For warranty and warranty disclaimer information, please contact your Laminin Industries sales associate.

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MIXING INSTRUCTIONS

*** Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details**

General Mixing:

1. Pour 4.4 to 4.66 U.S. quarts of clean, potable water into a clean pail. The water-to-powder mixing ratio must remain consistent. For best results, the water temperature should be about 73 degrees F. Do not over water.
2. Begin mixing while adding 50 lbs. of Colossal 117-CSL powder into the pre-measured water. Use a high speed drill (at about 600 to 900 rpm) and an oval paddle mixer to mix for 1 to 2 minutes, until achieving a homogeneous, lump-free consistency.
3. Do not over mix. Over mixing or moving the mixer up and down during the mixing process could trap air, shorten the pot life or cause pin-holing during the application and curing process.

Pump Mixing:

1. Colossal 117-CSL can be mechanically mixed at a ratio of 4.4 to 4.6 quarts of water per 50 lbs. of powder. Use a cementitious mixer and pump (with at least 140 ft. hose) or a batch mixer and pump (with at least 110 ft. of hose). Adhere to the pump manufacturer's specifications. Mixer and pump must be in good working condition, and periodic cleaning of pumping equipment is required per the manufacturer's instructions. Be sure to pressure test the rotor and stator pump before mixing.
2. To ensure a suitable mix and flow, test the mixed material from the pump hose's end in a small test area before general application.

NOTE: Cool weather conditions may require a longer mixing time or additional hose length to ensure the best product performance.

INSTALLATION INSTRUCTIONS

Read all instructions thoroughly before installation:

1. Use plastic sheeting to temporarily cover window and door openings, thereby helping to prevent drafts and protecting areas from direct sunlight.
2. Make sure that concrete substrate and ambient room temperatures are between 40 degrees F and 90 degrees F before application. In large applications, allow for indirect air circulation to dissipate humidity created by leveler application. Temperatures must be maintained within this range for at least 72 hours after the installation of Colossal 117-CSL. In cooler conditions, use indirect auxiliary heaters that are properly ventilated to maintain ambient and substrate temperatures within the required range for at least 24 hours before installation.
3. Set the width of the pour at a distance that is ideal for maintaining a wet edge throughout placement and in consideration of expansion joints. Quickly pour or pump Colossal 117-CSL onto the properly prepared and primed surface in a ribbon pattern. If a wet edge cannot be maintained, reduce the width of the pour.
4. Spread the material with a gauge rake to assist in gauging out Colossal 117-CSL to the desired depth. Then smooth the surface with a smoother to obtain an even surface.

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POST APPLICATION

* Colossal 117-CSL is self-curing; do not use a damp-curing method, or curing and sealing compounds

* Avoid walking on the installed surface for at least 3 hours after installation, depending on temperature and humidity conditions

* Do not expose Colossal 117-CSL to rolling dynamic loads, such as forklifts or scissor lifts, for at least 72 hours after installation

* Protect Colossal 117-CSL from direct rain for 6 hours after installation, and from freezing temperatures for at least 3 days after installation

CLEAN UP PROCEDURES

* Do not allow to harden on tools

* Cured material will need to be mechanically removed

ADDITIONAL TECHNICAL INFORMATION

Compressive strength – ASTM C109 (CAN/CSA-A5)	
4 Hours	**> 1,740 psi**
28 Days	**> 5,600 psi**
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
28 Days	**≥ 1,160 psi**
Pullout strength (rupture of concrete) – EN1348	
28 Days	**> 550 psi**
VOCs (Section 01350 of California's CDPH)	**0 g per L**
Cured Density	**128 lbs. per cu. ft**
pH	**11 to 13**

Shelf Life	**1 year when stored in original, unopened packaging at 73°F in a controlled area**
Physical state	**Powder**
Color	**Light gray**
Application Temperature	**40°F to 90°F**
Application Thickness	**1/8" to 1"**
Packing Size_	**Bag: 50 lbs.**

Protect packaging from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins

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Mixing ratio	4.4 to 4.6 U.S. quarts of water per 50 lbs. of powder
Working time*	< 15 minutes
Final set	60 to 75 minutes
Drying time before installation of tile or stone at 70°F and 1/2"thickness	3 hours
Drying time before installation of moisture-sensitive floor coverings at 70°F and 1/2" thickness	24 to 36 hours
Time required before exposure to freezing temperatures	3 days

*** Working time varies based on environmental conditions.**

Approximate Coverage- 50 lb. Bag	
1/8" Thickness	48 sq. ft.
1/4" Thickness	24 sq. ft.
1/2" Thickness	12 sq. ft.
1" Thickness	6 sq. ft.