

# LEVELROCK® Brand Floor Underlayment

## 2500™ Green

### Premium poured gypsum flooring underlayment products

- Industry's first poured underlayment made with synthetic gypsum
- Ideal for wood-frame and multi-family construction
- UL designs available for both fire and sound
- Smooth crack-resistant surface
- Helps maximize sound isolation between floors/units
- Applied by USG-authorized applicators

### System Description

LEVELROCK® Brand 2500™ Green Floor Underlayment is a fast-applying gypsum cement formulated with synthetic gypsum and manufactured by USG for use in multi-family, light commercial, and other wood-frame construction. This high-strength underlayment is POURABLE BEFORE DRYWALL™ and helps prevent mold by not exposing wallboard to high moisture levels. 2500 Green Floor Underlayment is also economical, as it can be applied at rates up to 30,000 sq.ft. per day. It is formulated to provide typical compressive strengths of 2500 psi to 3200 psi at a 3/4-inch minimum thickness over plywood subflooring, which meets requirements for multi-family and hotel/motel construction.

### Product Description

LEVELROCK Green Floor Underlayment products are made with synthetic gypsum, also known as FGD (flue gas desulphurization) gypsum. FGD gypsum is the result of the chemical process used to clean effluent from fossil-fuel-burning power plants. This process is used to limit emissions of sulfur dioxide and help reduce acid rain. The use of this recaptured gypsum also eliminates the need to dispose of the material in landfills.

LEVELROCK Green Floor Underlayment products are mixed with sand and water at the jobsite to yield a lightweight underlayment with a smooth and monolithic surface. A 3/4-inch thick gypsum underlayment weighs approximately 7.2 pounds per square foot and has a density of 115 pounds per cubic foot.

### System Benefits

USG poured gypsum floor underlayment systems provide an economical and environmentally friendly way to achieve lightweight, fire-resistant, sound-rated, level floors in residential and light commercial construction. Typical applications are less labor-intensive than many other types of construction and provide high fire ratings characteristic of gypsum systems. Designed sound systems provide for improved STC and IIC ratings when used with LEVELROCK™ Brand SRM-25™ Sound Reduction Mat or LEVELROCK™ Brand SRB™ Sound Reduction Board.

### Physical Properties

**Typical Compressive Strength (aggregated) ASTM C472:** 2500-3200 psi  
**Density (aggregated):** 115 lb./cu.ft.

### Limitations

- USG poured gypsum floor underlayment systems should not:
1. Be used as a wearing surface.
  2. Be installed where continuous exposure to moisture is a possibility (for instance, exterior balconies or gang shower rooms). In bathrooms, kitchens and other areas subject to moisture intrusion, protective floor finish materials such as vinyl or ceramic tile must be applied over the gypsum floor underlayment system.
  3. Be installed in below-grade applications.
  4. Contact USG for on-grade application recommendations.

### Installation

During the entire installation process, the building must be enclosed and temperature maintained at 50 °F minimum until permanent heating is available. Adequate ventilation must be provided to ensure uniform drying of the installed gypsum floor underlayment, which typically occurs within five to seven days at 3/4-inch thickness. Limit design of the subfloor and framing to a minimum of L/360 to prevent undue stress from occurring in the floor fill material, as this stress may produce cracks. Over plywood subfloors, tongue-and-groove edge-supported plywood is recommended for meeting this deflection criterion. The application of LEVELROCK™ Brand Floor Primer to the subfloor is necessary to provide maximum bond between the underlayment and subfloor. Concrete slabs receiving gypsum underlayment systems must be properly cured (generally for a minimum of 28 days) prior to

|                              |  |  |
|------------------------------|--|--|
|                              |  | the underlayment installation. Concrete slabs should be properly treated with LEVELROCK™ Brand Concrete Primer according to USG recommendations. For carpet, vinyl and resilient floor coverings, apply LEVELROCK™ Brand SE-100™ Surface Enhancer prior to installation of floor goods.  |
| <b>Sound Testing</b>         |  | Independently tested or verified by Riverbank Acoustical Laboratory (RAL) in accordance with ASTM E90 and E492. Riverbank Acoustical Laboratory is certified by NAVLAP (National Voluntary Laboratory Accreditation Program).  |
| <b>UL Designs</b>            |  | G230, G516, J917, J919, J920, J924, J927, J931, J957, J966, J991, J994, K906, L206, L501, L502, L505, L511, L512, L513, L514, L518, L521, L524, L525, L528, L529, L530, L534, L535, L536, L537, L541, L544, L550, L555, L556 and L563. Additional UL designs may be available. Contact your USG representative for more information.   |
| <b>Code Compliance</b>       |  | New York City Department of Buildings MEA (Material and Equipment Acceptance) MEA 236-01-M; HUD – 1314; ICC – Evaluation Service Report ER-5885  |
| <b>Specifications</b>        | <b>Note to Architect</b>                         | These are specifications for the installation of LEVELROCK Brand 2500 Green Floor Underlayment covering normal project requirements. For additional data regarding special conditions and applications, contact your local USG representative.   |
| <b>Part 1:<br/>General</b>   | <b>1.1<br/>Scope</b>                             | Specify to meet project requirements.  |
|                              | <b>1.2<br/>Qualifications</b>                    | All materials, unless otherwise indicated, shall be manufactured by the United States Gypsum Company and shall be installed in accordance with its current printed directions by USG-authorized LEVELROCK Brand applicators.   |
|                              | <b>1.3<br/>Delivery and Storage of Materials</b> | All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure from the elements. Damaged or deteriorated materials shall be removed from the premises.  |
|                              | <b>1.4<br/>Site Conditions</b>                   | Before, during, and after installation of product, building interior shall be enclosed and maintained at a temperature above 50 °F (10 °C) with proper ventilation.  |
| <b>Part 2:<br/>Mixing</b>    | <b>2.1<br/>Products</b>                          | <p><b>A. Gypsum Cement</b>—LEVELROCK Brand 2500 Green Floor Underlayment.</p> <p><b>B. Primer</b>—Use LEVELROCK Brand Concrete Primer over existing concrete floors; use LEVELROCK Brand Floor Primer (Regular, Concentrate, or Powder) over wood subfloors.</p> <p><b>C. Sand</b>—Washed sand meeting specifications published in the USG LEVELROCK Application Manual.</p> <p><b>D. Water</b>—Potable, free from impurities.</p> <p><b>E. Sealer</b>—Use LEVELROCK Brand SE-100 Surface Enhancer with black-light identifier over newly poured gypsum flooring underlayment.</p> |
|                              | <b>2.2<br/>Mixing Proportions</b>                | Add 4.5 to 5.0 gallons of water, one 80 lb. bag of 2500 Green Floor Underlayment and sand volume not to exceed 1.9 cu. ft. depending upon specified compressive strength. Do not over-water. Water amount will change with wetness of sand.  |
| <b>Part 3:<br/>Execution</b> | <b>3.1<br/>Preparation</b>                       | <b>A.</b> Subfloor shall be structurally sound. Contractor shall clean subfloor to remove mud, oil, grease and other contaminating factors before arrival of the underlayment crew. Check that substrates are dry, smooth and clean. Apply leak-prevention material to cracks and voids. Set temporary dams as required.   |

**3.2  
Application of  
Cementitious Flooring**

- A.** Application shall not begin until the building is enclosed, including roof, windows, doors, and other apertures. 2500 Green Floor Underlayment is POURABLE BEFORE DRYWALL; underlayment may also be installed after drywall installation.
- B.** Before installing underlayment, prime an existing concrete floor with LEVELROCK Concrete Primer; use LEVELROCK Floor Primer (Regular, Concentrate, or Powder) over a wood subfloor.
- C.** Place cementitious flooring 3/4-inch minimum thickness over wood frame, 1/2-inch minimum thickness over plank or poured-in-place concrete. Immediately spread and screed product to a smooth surface. Except at authorized joints, place product as continuously as possible until application is complete so that no slurry is placed against product that has obtained its initial set.
- D.** General contractor shall provide continuous ventilation and adequate heat to rapidly remove moisture from the area until the cementitious underlayment is dry.

**3.3  
Preparation for  
Installation of Glue-  
Down Floor Boards**

- A.** After the floor has dried, apply SE-100 Surface Enhancer prior to installation of glue-down floor goods. Where floor goods manufacturers require special adhesive or installation systems, their requirements supersede these recommendations. Damaged floor areas need to be repaired before applying SE-100 Surface Enhancer.

**3.4  
Field Quality Control**

- A.** Cementitious underlayment mix shall be tested for slump as it is being pumped, using a 2" (i.d.) x 4" cylinder resulting in a patty size of 8-1/2 inches to 9-1/2 inches diameter.
- B.** At least one set of three (3) molded cube samples shall be taken from each day's pour or every 10,000 sq. ft.

**Submittal  
Approvals:**

|                   |  |             |
|-------------------|--|-------------|
| <b>Job Name</b>   |  |             |
| <b>Contractor</b> |  | <b>Date</b> |

**Warning**

When mixed with water, this material hardens and then becomes hot—sometimes quickly. DO NOT attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb. Dust may cause skin, eye, nose, throat, or respiratory irritation. Avoid dust inhalation and exposure to dust. If dusty, wear a NIOSH/MSHA-approved dust respirator. Use proper ventilation to reduce dust

exposure. Portland cement is strongly alkaline and can be corrosive to eyes, skin, and respiratory tract. Wear eye and skin protection. If eye contact occurs, immediately flush thoroughly with water for 15 minutes and get medical attention. Do not ingest. If ingested and any discomfort occurs, call physician. Product safety information: (800) 507-8899.

**KEEP OUT OF REACH OF CHILDREN.**

**Trademarks**

The following trademarks used herein are owned by United States Gypsum Company or a related company: 2500, LEVELROCK, POURABLE BEFORE DRYWALL, SE-100, SRB, SRM-25, SHEETROCK, USG.

**Notice**

We shall not be liable for incidental or consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or for other than the intended use. Our liability is expressly limited to

replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

**Safety First!**

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.



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