

LEVELROCK® Brand Floor Underlayment 4500

Premium poured gypsum flooring underlayment products

- Fast application, fast setting allows for return of light trade traffic within hours
- High compressive strength
- Variable thickness
- Ideal for commercial, institutional, and renovation construction
- UL designs available up to 2-hour fire rating
- Smooth crack-resistant surface
- Helps maximize sound isolation between floors/units
- Applied by USG licensed contractors

System Description

LEVELROCK® Brand Floor Underlayment 4500 is a premium gypsum cement designed by USG for use in commercial, institutional, and rehab construction. It provides a smooth, hard underlayment surface over concrete slabs, pre-stressed concrete or concrete planks at thicknesses from featheredge (with proper sand) to 3 inches. It is suitable for a variety of floor coverings. LEVELROCK Brand Floor Underlayment 4500 exceeds commercial vinyl floor covering requirements as a high-performing underlayment with compressive strengths up to 5500 psi. Quick set times and high production rates allow for traffic within hours of installation. Exceptional surface hardness of LEVELROCK Brand Floor Underlayment 4500 resists indentation.

Product Description

USG poured gypsum underlayment products are mixed with sand and water to yield a lightweight, leveling slurry. A 3/4-inch thick gypsum underlayment weighs approximately 7.8 pounds per square foot and has a density of only 125 pounds per cubic foot.

System Benefits

USG poured gypsum floor underlayment systems provide an economical way to achieve lightweight, fire-resistant, sound-rated, self-leveling 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. Higher compressive strengths minimize floor damage from trades. Designed sound systems provide for improved STC and IIC ratings when used with acoustical mat.

Physical Properties

Typical Compressive Strength (aggregated) ASTM C472	4500-5500 psi
Density (aggregated)	125 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 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.

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. 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 type plywood is recommended for meeting this deflection criterion. The application of LEVELROCK Brand Primer to the subfloor is necessary to provide maximum bond between the underlayment and the subfloor. Concrete slabs that are 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 Primer according to manufacturer’s recommendations.

UL Designs

G230, G516, J917, J919, J920, J924, J927, J931, J957, J966, J991, J994, K906, L206, L501, L505, L511, L512, L513, L514, L518, L521, L524, L525, L528, L529, L530, L534, L535, L536, L537, L541, L544.

Specifications Note to Architect

These are specifications for the installation of LEVELROCK Brand Floor Underlayment 4500 covering normal project requirements. For additional data regarding special conditions and applications, please contact your local USG representative.

Part 1: General 1.1 Scope

Specify to meet project requirements.



	1.2 Qualifications	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 licensed LEVELROCK Brand applicators.	
	1.3 Delivery and Storage of Materials	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.	
	1.4 Site Conditions	Before, during, and after installation of product, building interior shall be enclosed and maintained at a temperature above 50 °F (10 °C)	
Part 2: Mixing	2.1 Products	A. Gypsum Cement —LEVELROCK Brand Floor Underlayment 4500. B. Primer —Use LEVELROCK Brand Primer over approved subfloor as specified by manufacturer. C. Sand —Washed sand meeting specifications published in the USG LEVELROCK Brand Application Manual. D. Water —Potable, free from impurities.	
	2.2 Mixing Proportions	Add 3.0 to 3.5 gallons of water, one 80 lb. bag of LEVELROCK Brand Floor Underlayment 4500 and sand volume not to exceed 1.4 cu. ft. depending upon specified compressive strength. Do not over water. Water amount will change with wetness of sand.	
Part 3: Execution	3.1 Preparation	A. 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 and clean. Apply leak prevention material to crack and void. (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 fenestration. Install after drywall installation unless tenant finish requirements identify partitioning after the pour.	
		B. Place cementitious flooring, 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.	
		C. 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 Goods	A. After the floor has dried, use manufacturer approved sealer to seal the cementitious underlayment 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 prior to the flooring sealing.		
3.4 Field Quality Control	A. Cementitious underlayment mix shall be tested for slump as it's being pumped using a 2" (i.d.) x 4" cylinder resulting in a patty size of 9-1/2 to 10-1/2 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. (whichever is less) during the cementitious underlayment application. Cube mold material shall brass or engineered plastic. Cubes shall be tested in accordance with modified ASTM C472.		
Submittal Approvals:	Job Name		
	Contractor		Date
	Warning When mixed with water, this material hardens and then slowly 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 require cause skin, eye, nose, throat, or respiratory irritation. Avoid dust inhalation and exposure to dust. If dusty, wear an 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 trademark used herein is owned by United States Gypsum Company or a related company: FIBEROCK, LEVELROCK, 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.