

# USG LEVELROCK® BRAND FLOOR UNDERLAYMENT

2500 FR

2500 GREEN FR

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## Premium fiber-reinforced (FR) engineered cementitious underlayments

- Fast application, fast-setting allows for return of light trade traffic within hours
  - Industry's most economical, highest compressive strength in class
  - Ideal for wood-frame and multi-family construction
  - Provides smooth surface with improved impact resistance
  - Enhances crack reduction and reduces further propagation
  - Cost-effective reinforcement solution with improved load distribution
  - Can be applied to concrete surfaces without requiring mechanical profiling
  - UL designs available up to 2-hour fire rating
  - Helps maximize sound isolation between floors/units
  - May assist in obtaining LEED® credits
  - Applied by USG Levelrock authorized applicators
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## DESCRIPTION

USG Levelrock® Brand 2500 FR and USG Levelrock® 2500 Green FR floor underlayment are fast-applying engineered cementitious underlayments formulated and manufactured by USG for indoor use in multi-family, light-commercial and other wood-frame construction. Reinforced with fibers that improve impact strength, these underlayments can be poured before drywall is installed,\* so they dry faster and help prevent mold by not exposing wallboard to high moisture levels. USG Levelrock 2500 FR and 2500 Green FR engineered cementitious underlayments are also economical, as they can be applied at rates of up to 30,000 sq. ft. per day. They are formulated to provide typical compressive strengths from 2000 psi to 3200 psi at a ¾ in. minimum thickness over plywood subflooring, which meets requirements for multi-family and hotel/motel construction.

USG Levelrock 2500 Green FR floor underlayment is made with recaptured gypsum, from the flue gas desulfurization of the process used to clean combustion gases from fossil-fuel-burning power plants. This process is used to greatly reduce emissions of sulfur dioxide which helps the environment by reduction of harmful acid rain. The use of this recaptured gypsum also eliminates the need to dispose of the material in landfills as a solid waste. In addition, USG Levelrock 2500 Green FR floor underlayment may assist in obtaining LEED credits 4.1 and 4.2, while both USG Levelrock 2500 FR and 2500 Green FR floor underlayment may assist in obtaining LEED credits 5.1 and 5.2.

USG Levelrock 2500 FR and 2500 Green FR fiber-reinforced engineered cementitious underlayments are mixed with sand and water at the job site to yield a lightweight underlayment with a smooth and monolithic surface. A ¾-in. thick underlayment weighs approximately 7.5 lbs./sq. ft. and has an approximate dry density range of 114-124 lbs./cu. ft.

USG fiber-reinforced engineered cementitious underlayments systems provide an economical way to achieve lightweight, fire-resistant, smooth and monolithic floors in residential and light-commercial construction. When used with USG Levelrock™ Perimeter Isolation Strip, USG Levelrock 2500 FR and 2500 Green FR floor underlayment provide an enhanced system to reduce potential cracking and further crack propagation. Typical applications are less labor intensive than many other types of construction and provide high fire ratings. Designed sound systems provide for improved STC and IIC ratings when used with USG Levelrock™ sound attenuation products.

**Note** \*Consult USG regarding specific performance requirements.

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## WARRANTY

A 10-year limited system warranty applies when using USG Levelrock 2500 FR and 2500 Green FR engineered cementitious underlayments sealed with USG Durock™ X2 primer-sealer and a XL Brands® manufactured adhesive. Please contact USG for further details.

## LIMITATIONS

1. Do not use in exterior applications.
2. Do not use as a wear surface.
3. Do not install where continuous exposure to moisture is a possibility.
4. Do not install in below-grade applications. Contact USG for on-grade application recommendations.
5. For wood subfloors, install only on tongue-and-groove edge plywood or OSB, or square-edge wood subfloor with back-bracing.
6. Do not use over expansion or isolation joints. Continue all movement joints in the concrete slab up through the layer of underlayment. In areas where the expansion or isolation joints are not present in the floor or where the concrete slab has developed systematic cracks in response to slab movement, consult with an engineer on the project or request the services of a professional structural engineer to provide such joints as part of the system in accordance with engineering requirements and industry standards.
7. Structure shall be designed so that deflection does not exceed L/240 from combined dead and live loads and L/360 from live loads. Certain floor coverings such as marble, limestone, travertine and wood may have more restrictive deflection limits. Consult the appropriate floor-covering manufacturer.

## INSTALLATION

During the entire installation process, the building must be enclosed and temperature maintained at a 50 °F minimum until permanent heating is available. Adequate ventilation must be provided to ensure uniform drying of the installed floor underlayment, which typically occurs within 5 to 7 days at a ¾ in. thickness. Protect floors from heavy trade traffic loads (i.e. loaded drywall carts, heavy tool cabinets, etc.) with plywood. This may cause the protected areas to take longer to dry. Check for dryness in these areas before installing floor covering. For applications over plywood or oriented strand board (OSB), the application of USG Levelrock™ Wood Primer to the subfloor is necessary to provide maximum bond between the underlayment and subfloor.

Concrete subfloors receiving USG Levelrock 2500 FR/2500 Green FR underlayment systems must be cured properly (generally for a minimum of 28 days) prior to the underlayment installation. For on- or above-grade applications on concrete subfloors or concrete planks, measure the Moisture Vapor Emission Rate (MVER) using ASTM F1869. MVER should be below 5 lbs./1000 sq. ft./24 hrs. Contact USG for further information. The minimum thickness of USG Levelrock 2500 FR and 2500 Green FR floor underlayment over concrete subfloors is ½ in. Concrete subfloors should be treated properly with USG Levelrock™ Acrylic Concrete Primer according to USG recommendations. Refer to *USG Levelrock Floor Underlayment Finished Floor Installation Guidelines* (IG1457) for floor-covering installation.

Cracks in the existing concrete subfloor must be inspected to determine if the crack is due to typical concrete “shrink” or if it is a result of a structural movement. In the case of the latter, remediation of the crack must be addressed or eventually the crack will telegraph through USG Levelrock 2500 FR and 2500 Green FR floor underlayments. Repair all existing cracks in old and new concrete to minimize and control their ability to telegraph through the layer of USG Levelrock 2500 FR and 2500 Green FR floor underlayments. Remove the weak concrete along the length of the cracks by chiseling or other suitable means. Remove accumulated dust and debris from the crack cavities using a vacuum or other suitable means. Various cracks present in the concrete subfloor including shrinkage cracks must be filled with a suitable commercially available crackfill epoxy adhesive designed for concrete flooring applications. To ensure superior resistance to crack growth, use injection epoxy crack-repair techniques per industry guidelines to repair cracks that are active or deep. Note that repair of existing cracks in the concrete subfloor only subdues, but does not completely prevent their ability to telegraph through USG Levelrock 2500 FR and 2500 Green FR floor underlayments. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing through USG Levelrock 2500 FR and 2500 Green FR floor underlayments. Respect existing expansion and control joints (see Limitations #6, pg. 2).

To minimize the effect of expansion and cracking on outside corners, use USG Levelrock perimeter isolation strip. See *USG Levelrock Brand Perimeter Isolation Strip Submittal* (IG1874) for further details.

For further details on installation requirements, specifications and the most up-to-date product information, please see [usg.com](http://usg.com) or [pourlevelrock.com](http://pourlevelrock.com).

**PRODUCT DATA**

**Approximate Compressive Strength (aggregated) ASTM C472 (modified):** 2000-3200 psi\*

**Approximate Dry Density (aggregated):** 114-124 lbs./cu. ft.

**NOTE:** \*Compressive strengths published herein were achieved under controlled laboratory conditions. Actual field results may differ due to environmental conditions, regional sand variations, inconsistent proportioning of field applied water, sand and USG Levelrock floor underlayment, as well as differences in mixing/pumping equipment.

**TEST DATA**

SOUND

USG has conducted a variety of sound tests on underlayment systems at NVLAP-accredited laboratories. These tests have been in conformance with ASTM E90 and E492. Consult USG publication IG1685 *USG Levelrock Fire and Sound Rating Guide* for STC and IIC results on a variety of floor coverings meeting current code requirements.

**UL DESIGNATION TYPE LRK**

G524, G230, G516, G535, G551\*, G553\*, G556, G561, G562, G564\*, G566, G587, G588, G591, J917, J919, J920, J924, J927, J931, J957, J958, J991, J994, L006, L201, L206, L208, L209, L210, L211, L212, L501, L502, L503, L504, L505, L506, L507, L508, L509, L510, L511, L512, L513, L514, L515, L516, L517, L518, L519, L520, L521, L522, L523, L524, L525, L526, L527, L528, L529, L530, L532, L533, L534, L535, L536, L537, L538, L539, L540, L541, L542, L543, L545, L546, L547, L549, L550, L551, L552, L556, L557, L558, L559, L562, L563, L564, L565, L568, L569, L570, L571, L573, L574, L577, L579, L581, L583, L585, L587, L588, L589, L590, L592, L593, M500, M501, M502, M503, M504, M505, M506, M508, M510, M511, M513, M515, M517\*, M521\*, M522\*.

For the most up-to-date UL Designation Type LRK, contact your USG representative.

**NOTE** \*UL Design requires greater minimum pour depths and compressive strengths and/or additional requirements. See individual UL Designs for specifics.

**SUBMITTAL APPROVALS**

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

**PRODUCT INFORMATION**

See [usg.com](http://usg.com) or [pourlevelrock.com](http://pourlevelrock.com) for the most up-to-date product information.

**LEED INFORMATION**

For the most up-to-date information on LEED rating systems, project certification and the U.S. Green Building Council, please visit [usgbc.org](http://usgbc.org).

**DANGER**

Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation. May cause cancer by inhalation of respirable crystalline silica. Do not handle until all safety precautions have been read and understood. Avoid breathing dust. Use only in a well-ventilated area, wear a NIOSH/MSHA-approved respirator. Wear protective gloves/protective clothing/eye protection. If swallowed, inhaled, or skin irritation occurs get medical attention. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Dispose of in accordance with local, state, and federal regulations. For more information call Product Safety: 800-507-8899 or see the SDS at [usg.com](http://usg.com).

**KEEP OUT OF REACH OF CHILDREN.**

**TRADEMARKS**

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LEED is a registered trademark of U.S. Green Building Council.

**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/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.

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[usg.com](http://usg.com)  
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