

Levelrock® Floor Underlayment

Commercial RH Commercial RH Green



Commercial poured underlayment for radiant heat systems

- Fast application, fast-setting allows for return of light trade traffic within hours
- Meets vinyl industry commercial specifications
- Smooth, crack-resistant surface
- Helps maximize sound isolation between floors/units
- LEVELROCK commercial RH Green floor underlayment may assist in obtaining LEED® credits
- Applied by USG LEVELROCK applicators

Description

LEVELROCK® commercial RH and LEVELROCK® commercial RH Green floor underlayment are fast-applying cementitious underlayments formulated specifically by USG® for electrical and hot water radiant heat floor installations in both residential and commercial interior construction. They are designed to provide compressive strengths from 3500-4500 psi at a 3/4-in. minimum thickness up to a 3 in. maximum thickness. The tough compressive and surface strengths of Levelrock commercial RH and commercial RH Green floor underlayments offer long-term resistance to trade activity typical of commercial construction. These underlayments accept virtually all types of floor coverings including resilient floors, ceramic tile, carpeting and wood.

The non-shrinking nature of LEVELROCK commercial RH and commercial RH Green floor underlayments locks hydronic tubes and electric cables in place, preventing noise and tube chafing, while the special formulation is designed to be used within the elevated operating temperature ranges associated with radiant heat floors. In addition to locking the tubes and cables in place, the direct contact of LEVELROCK commercial RH and commercial RH Green floor underlayments provides for efficient transfer of heat to the underlayment by eliminating any air space that may act as an insulator and lower heat transfer efficiency.

LEVELROCK commercial RH Green 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, the high recycled content of LEVELROCK commercial RH Green floor underlayment may assist in obtaining LEED credits 4.1, 4.2, 5.1 and 5.2.

USG poured cementitious underlayment products are mixed with sand and water at the job site to yield a light-weight slurry. Most hydronic radiant heat jobs will be poured at a 1-1/2 in. total thickness to cover the tubes. Encasing electrical radiant heat systems typically requires less material. There should be a minimum thickness of 3/4 in. of LEVELROCK commercial RH or commercial RH Green floor underlayment above the cables. Most electrical systems' typical total thickness (including LEVELROCK commercial RH or commercial RH Green floor underlayment) may be at a 1-in. thickness.

A 1-1/2-in. thick underlayment weighs approximately 15 lbs./sq. ft. and has an approximate dry density range of 118-124 lbs./cu. ft.

Limitations

1. Do not use in exterior applications.
2. Do not use as a wearing surface.
3. Do not install where continuous exposure to moisture is a possibility (for instance, exterior balconies or large commercial/institutional shower rooms).
4. Do not install in below-grade applications.
5. Do not use with radiant heat systems having prolonged operation temperatures exceeding 140 °F.
6. Install only on tongue-and-groove edge plywood or OSB, or square-edge wood subfloor with back-bracing.

7. Structure shall be designed so that deflection does not exceed L/360 live or dead load. 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 14 to 17 days at a 1-1/2 in. thickness. Ensure that all hydronic piping or radiant heat mats are attached firmly to the subfloor. The application of LEVELROCK™ floor underlayment primer to the subfloor is necessary to provide maximum bond between the underlayment and the subfloor.

Concrete subfloors receiving cementitious underlayment systems must be cured properly (generally for a minimum of 28 days) prior to the underlayment installation. For on-grade applications on concrete subfloors, measure the Moisture Vapor Emission Rate (MVER) using ASTM F1869. MVER should be below 3 lbs./1000 sq. ft./24 hrs. Contact USG for further information. Concrete subfloors should be treated properly with LEVELROCK™ floor underlayment concrete primer, according to USG recommendations. Refer to *LEVELROCK Floor Underlayment Finished Floor Installation Guidelines* (IG1457) for floor covering installation.

Product Data

Approximate Compressive Strength (aggregated) ASTM C472 (modified): 3500-4500 psi*

Approximate Dry Density (aggregated): 118–124 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 LEVELROCK floor underlayment, as well as differences in mixing/pumping equipment.

UL Designs

G230, G516, G562, J917, J919, J920, J924, J927, J931, J957, J966, J991, J994, K906, L206, L501, L502, L505, L506, L508, L511, L512, L513, L514, L515, L516, L518, L521, L523, L524, L525, L526, L527, L528, L529, L530, L532, L534, L535, L536, L537, L538, L539, L541, L542, L543, L547, L548, L549, L550, L551, L552, L553, L555, L556, L557, L559, L560, L562, L563, L565, L568, L569, L570, L571, L573, L574, L577 and L588.

Additional UL designs may be available. Contact your USG representative for more information.

Compliance

HUD-1314; ICC Evaluation Service Legacy Report No. ER-5885.*

Note *ESR pending.

Submittal Approvals

Job Name		
Contractor	Date	

Product Information

See levelrock.com for the most up-to-date product information.
WARNING!
 When mixed with water, this material hardens and becomes very 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. Portland cement is strongly alkaline. Direct contact

can be corrosive and cause severe damage or chemical burns to the eyes and wet or moist skin. Avoid contact with eyes and skin. Wear eye protection, alkali-resistant protective gloves, long-sleeved shirts and pants to prevent direct contact. If eye contact occurs, immediately flush thoroughly with water for 30 minutes and seek medical advice. Inhalation of dust may be corrosive or cause chemical burns or irritation to nose, throat and respiratory tract. Avoid breathing dust.

Use in a well-ventilated area or provide sufficient local ventilation. If dusty, wear a NIOSH/MSHA-approved dust respirator. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. Product safety information: 800 507.8899 or usg.com.
KEEP OUT OF REACH OF CHILDREN.
 VOC Content: Zero g/L

Trademarks

The following trademarks used herein are owned by United States Gypsum Company or a related company: LEVELROCK, USG, USG in stylized letters. 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 MSDS and literature before specification and installation.

