

Levelrock® Floor Underlayment

RH



Premium poured gypsum flooring underlayment products

- Fast application, fast setting allows for return of light trade traffic within hours
- Specially formulated for radiant flooring
- UL designs available up to 2-hour fire rating
- Smooth, crack-resistant surface
- Helps maximize sound isolation between floors/units
- Applied by USG-authorized applicators

Description

LEVELROCK® brand RH (Radiant Heat) floor underlayment is a fast-applying gypsum cement designed by USG for use in residential construction. (For commercial construction, use LEVELROCK commercial RH floor underlayment.) LEVELROCK RH floor underlayment is formulated specifically for electrical and hot water radiant heat floor installations. It is formulated to provide compressive strengths of up to 3500 psi at a 3/4" minimum thickness, up to a 3" maximum thickness. The tough compressive and surface strengths of LEVELROCK RH floor underlayment provide long-term resistance to trade activity typical of single- and multi-family home construction. It accepts virtually all types of floor coverings such as ceramic tile, carpeting and wood.

The non-shrinking nature of LEVELROCK RH floor underlayment locks tubing in place, preventing noise and tube chafing, and its special formulation prevents the high temperature associated with radiant heat floors from breaking down the floor matrix. In addition to locking the tubes in place, the direct contact of LEVELROCK RH floor underlayment to hydronic pipes 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.

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

A 1-1/2"-thick gypsum underlayment weighs approximately 14.4 lbs./sq.ft.; a 1" system weighs 9.6 lbs./sq.ft. The density of LEVELROCK RH floor underlayment is only 115 lbs./cu.ft.

Limitations

1. Do not use as a wearing surface.
2. Do not install where continuous exposure to moisture is a possibility (for instance, exterior balconies or large commercial/institutional shower rooms).
3. Do not install in below-grade applications.
4. Do not use with radiant heat systems having prolonged operation temperatures exceeding 150 °F.
5. Do not install on square-edge wood subfloor without back bracing.
6. Do not install on a subfloor that does not meet L/360 design.

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 10 to 14 days at a 1-1/2" 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 type plywood is recommended for meeting this deflection criterion. Ensure that all hydronic piping or radiant heat mats are firmly attached to the subfloor. The application of LEVELROCK™ primer to the subfloor is necessary to provide maximum bond between the underlayment and the subfloor. Concrete subfloors that are receiving gypsum

underlayment systems must be cured properly (generally for a minimum of 28 days) prior to the underlayment installation. Concrete subfloors should be treated properly with LEVELROCK™ concrete primer according to the manufacturer's recommendations.

For ceramic tile, vinyl and resilient floor covering, apply LEVELROCK™ SE-100™ surface enhancer as soon as the floor can be walked on, but within 16 hours of the installation of LEVELROCK floor underlayment. No treatment is required for glue down wood floors using a high solids adhesive. Do not turn on the radiant heating system until after the LEVELROCK SE-100 surface enhancer has been applied.

Product Data

Typical Compressive Strength (aggregated) ASTM C472: 2500-3500 psi*

Typical Density (aggregated): 115 lbs./cu.ft.

Note *Strengths will change depending on sand mix ratios. See manufacturer's recommendations.

Test Data

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.

Model Building Code Approvals

International Conference of Building Officials (ICBO) Report No. ER-5885
 Building Officials and Code Administrators International, Inc. (BOCA) Research Report No. 2152
 Southern Building Code Congress International (SBCI) Evaluation Report No. 2114

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.**

Trademarks

The following trademark used herein is owned by United States Gypsum Company or a related company: LEVELROCK, SE-100, 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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