

# Levelrock® Floor Underlayment

## CSD® Early Exposure™



### Premium poured floor underlayment for early installation over corrugated galvanized steel deck

- Up to 55% lighter than 3 in. of conventional concrete
- Streamlines trade scheduling—can be installed early in the building's construction schedule
- Increases rentable/sellable square footage on same footprint
- Allows trade traffic to resume the next day (conventional poured concrete requires 7–10 days)
- Classified as to fire resistance and non-combustibility
- May assist in obtaining LEED® credits

### Description

LEVELROCK® CSD® EARLY EXPOSURE™ floor underlayment is a proprietary formulation designed for interior use in buildings with light-gauge steel frame construction and a corrugated steel deck. It can also be used over poured concrete and concrete planks. USG pioneered the use of high-strength gypsum underlayments through the invention of LEVELROCK CSD EARLY EXPOSURE floor underlayment, which is the only product of its kind to have a UL Non-combustible rating for Type II construction.

With a robust compressive strength of 3500-5000 psi, LEVELROCK CSD EARLY EXPOSURE floor underlayment may be applied at a much lower thickness than poured-in-place concrete. This innovative hybrid cementitious formula can be poured up to 60 days\* before installing a building's permanent windows and doors. LEVELROCK CSD EARLY EXPOSURE floor underlayment significantly speeds and streamlines construction trade scheduling, provides high early strength and offers outstanding resistance to incidental moisture. For those interested in green building, LEVELROCK CSD EARLY EXPOSURE floor underlayment may assist in obtaining LEED credits 5.1 and 5.2.

Typical LEVELROCK CSD EARLY EXPOSURE floor underlayments weigh approximately 13 lbs./sq. ft. and require a minimum of 1 in. above the top of the flutes. Pour thickness (as measured from the bottom of the flute) is 1-9/16 in. with a standard 9/16 in. steel deck (minimum 22 gauge). LEVELROCK CSD EARLY EXPOSURE floor underlayment reduces material cost, as well as total project cost, by reducing the weight of the floor system and supporting structure. This product can also provide scheduling advantages and may increase floor space by allowing additional floors to be added due to the lighter-weight construction.

USG poured cementitious floor underlayment systems provide an economical way to achieve lightweight, fire-resistant, sound-rated, smooth and monolithic 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 sound attenuation products.

**Note** \*In geographic areas not subject to freezing conditions; only up to 30 days in areas subject to freezing conditions.

**Limitations**

When considering the use of this floor system, a licensed structural engineer should first evaluate the building loads and framing system to determine whether this corrugated steel deck flooring system is appropriate.

LEVELROCK CSD EARLY EXPOSURE floor underlayment is not a structural element and does not provide any contribution to the floor diaphragm. The corrugated steel deck must be designed to address all floor diaphragm requirements and must conform to Steel Deck Institute standards. Reference the SDI Manual of Construction with Steel Deck, Section IX Special Considerations for Diaphragms. For additional requirements, please see *LEVELROCK CSD EARLY EXPOSURE Floor Underlayment Product Line Design Guidelines for use with Corrugated Steel Deck Floor Systems* (IG1741). Contact your USG or ALCORP Marketing representative to request a copy.

1. Do not use in exterior applications.
2. Do not use as a wearing surface.
3. Do not use as a structural element.
4. Do not install below-grade.
5. Do not install at thicknesses greater than 2 in. (as measured from top of flute).
6. Do not install when indoor temperature is below 40 °F. While pouring LEVELROCK floor underlayment, forced air space heaters must be turned off until after underlayment has set.
7. Do not install in any system not meeting the minimum criteria set forth in *LEVELROCK CSD EARLY EXPOSURE Floor Underlayment Product Line Design Guidelines for use with Corrugated Steel Deck Floor Systems* (IG1741).
8. Structure shall be designed so that deflection does not exceed L/240 from combined dead and live loads and L/360 from live load. Furthermore, the design criteria for metal deck selection is so the live load deflection does not exceed L/480. Certain floor coverings such as marble, limestone, travertine and wood may have more restrictive deflection limits. Consult the appropriate floor covering manufacturer.
9. Do not use with radiant heat systems.

**Product Data**

**Approximate Compressive Strength (aggregated) ASTM C472 (modified):** 3500–5000 psi\*

**Approximate Dry Density (aggregated):** 119–127 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.

**Installation**

LEVELROCK™ CSD™ floor underlayment primer should be applied at full strength to the corrugated galvanized steel deck.

In geographic areas *not* subject to freezing conditions, LEVELROCK CSD EARLY EXPOSURE floor underlayment can be poured up to 60 days before permanent windows and doors are installed (only up to 30 days in areas subject to freezing conditions).

If permanent windows, doors and a roof have not been installed before the time of pour, temporary windows and doors, plus a permanent deck and exterior sheathing, must be installed before the pour commences. Before, during and up to 3 days after installation of the underlayment, the building's interior temperature must be maintained above 40 °F and below 110 °F. The poured underlayment must be protected from wind until set has occurred, or a minimum of 4 hours after placing material.

LEVELROCK CSD EARLY EXPOSURE floor underlayment will set within 2–3 hours under normal conditions. Light foot traffic can occur after this time; normal trade traffic can resume the next day. After it has set, LEVELROCK CSD EARLY EXPOSURE floor underlayment will typically require 10–14 days to dry completely. During this period, adequate ventilation and air movement must be provided to ensure uniform drying. High ambient humidity will delay the drying process. Apply the floor covering only when LEVELROCK CSD EARLY EXPOSURE floor underlayment is completely dry. Protect floors from heavy trade traffic loads (i.e. loaded drywall carts, heavy tool cabinets, etc.) with plywood.

Concrete subfloors receiving cementitious 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. 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.

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

**UL Designation Type CSD**

G551, G553, G559, G564 and G571.  
For the most up-to-date UL Designation Type CSD, contact your USG representative.

**Compliance**

City of L.A. Research Report 25674; HUD–1314; New York City Department of Buildings MEA (Material and Equipment Acceptance) MEA 133-05-M.



**Submittal Approvals**

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

**Product Information**

See levelrock.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.

**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 trademarks used herein are owned by United States Gypsum Company or a related company: CSD, EARLY EXPOSURE, 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.

