

Levelrock® Floor Underlayment CSD® Early Exposure™

Usage with Corrugated Steel Deck Floor Systems

Engineer Requirements

1. Project must be designed by a professional licensed structural engineer.
2. Engineer must be licensed in the state where the project is to be built.
3. 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.

Design Limitations

1. Design limitations for all types of LEVELROCK® CSD® EARLY EXPOSURE™ floor underlayment steel deck systems:
 - a. 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.
 - b. Minimum steel deck gauge is 22.
 - c. Maximum joist spacing is 24 in. o.c.
 - d. ASTM-C627/Robinson tile testing indicates a light-commercial rating for LEVELROCK CSD EARLY EXPOSURE floor underlayment, with minimum thickness of 1 in. (above flutes), on 22-gauge corrugated steel deck, with joists spaced at 24 in. o.c.
 - e. Intended for interior use only.
2. LEVELROCK CSD EARLY EXPOSURE floor underlayment is used as a non-structural floor fill.
 - a. 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*. Fig. 15 shows the "Recommended Maximum Spans for Construction and Maintenance Loads."
 - b. The floor system is not designed as a conventional composite floor system.
 - c. LEVELROCK CSD EARLY EXPOSURE floor underlayment is not used to transfer diaphragm shear forces or gravity forces for the main structural system.
3. Any fasteners installed in LEVELROCK CSD EARLY EXPOSURE floor underlayment is limited to use with internal, non-load-bearing partitions only. In no case are fasteners installed in LEVELROCK CSD EARLY EXPOSURE floor underlayment to be used to transfer uplift/tension forces.
4. Floor system must be constructed in accordance with applicable UL fire-rated design considerations, consistent with local building codes for the building type and location. This includes ensuring that there is a 1-in. minimum of LEVELROCK CSD EARLY EXPOSURE floor underlayment above the top of the flutes. Certain designs involve the use of 6 in. or 8 in. deep joists for an economical shorter span design. These designs may require an additional 1/8 in. thickness of LEVELROCK CSD EARLY EXPOSURE floor underlayment for a total thickness of 1-1/8 in. above the top of the flute. (See UL design G564.) Most of the LEVELROCK CSD EARLY EXPOSURE floor underlayment UL designs fall into the non-combustible category suitable for Type 2B construction. For sound-rated flooring systems, the addition of a sound mat may affect the non-combustible classification of the system. Consult local building codes for further clarification.

Installation Requirements

1. For LEVELROCK CSD EARLY EXPOSURE floor underlayment, temporary windows and a permanent deck and exterior sheathing must be installed before the pour commences. In geographic areas subject to freezing conditions, LEVELROCK CSD EARLY EXPOSURE floor underlayment can be poured up to 30 days before permanent windows, doors and a roof is installed. For areas not subject to freezing temperatures, this time period is extended to 60 days.
2. Prime the corrugated steel deck with LEVELROCK™ CSD™ primer prior to installing LEVELROCK CSD EARLY EXPOSURE floor underlayment.

Post-Installation Requirements

1. Before, during and up to three days after installation of the underlayment, the building's interior temperature must be maintained above 40 °F and below 110 °F. Follow the instructions in the *LEVELROCK Applicator's Manual*.
2. Light foot traffic typically can resume within hours after floor underlayment installation. However, floors should be protected from heavy trade traffic for 24 hours after the pour. During the pour, protect the area from rain, wind and drafts until floor underlayment has set. Remove any standing water within 12 hours. Continue protecting the floor underlayment from rain for up to three days from installation. Once it has set (becomes walkable), good airflow and air exchange is required for proper drying.
3. When a sound mat is installed under LEVELROCK CSD EARLY EXPOSURE floor underlayment, a perimeter isolation strip must be used to prevent lateral transmission of sound.
4. LEVELROCK CSD EARLY EXPOSURE floor underlayment must be protected from heavy trade traffic and wallboard carts with plywood. This is especially true for any areas involving sound mats.

Additional Information

Consult USG publication *Poured Cementitious Floor Systems* (SA305), or go to levelrock.com for the latest sound control data for floor systems using LEVELROCK CSD EARLY EXPOSURE floor underlayment and corrugated steel decks.

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.**

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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.

