

Gypsum Solutions

Product News and Technical Reports from
the Industrial Products Division of United States Gypsum Company

Application

Multifamily and commercial construction

Product

LEVELROCK® Brand Floor Underlayment

Summary



Pourable Before Drywall™

With a minimum compressive strength of 2,500 psi, LEVELROCK Brand Floor Underlayment is the industry's only full line of poured gypsum floors strong enough to be applied before drywall.

For More Information

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High-Strength LEVELROCK Brand Floor Underlayments Are Pourable Before Drywall

Process Speeds Installation, Improves Scheduling, Reduces Moisture Concerns

Thanks to their high compressive strengths and low water demand, United States Gypsum Company's full line of LEVELROCK® Brand Floor Underlayments can be successfully applied prior to the installation of drywall. This offers architects, general contractors and building owners a number of key cost, quality and convenience benefits, and it is helping to position LEVELROCK Brand products as the preferred choice for a growing number of commercial, institutional and multifamily projects.

By pouring a gypsum underlayment floor before the drywall is applied, general contractors gain improved construction scheduling flexibility, enhanced job site moisture control and a safer working environment for trades. Building owners can realize savings in underlayment application time and costs, and architects will know that the floor will stand up to construction materials and traffic.

Historically, gypsum underlayments have always been poured following the drywall application. That's because the floors simply were not strong enough to stand up to ongoing construction trade activities. Even when completely dry, competing entry-level gypsum underlayments are often too "soft" to stand up to trade traffic and construction materials. Heavy stacks of drywall, for example, may cause these floors to powder or crack. Other normal construction activities may



Scheduling Flexibility

Pouring a LEVELROCK floor prior to the application of drywall gives general contractors increased scheduling flexibility.



Reduced Application Time

LEVELROCK underlayment applicators are able to work more quickly and more efficiently when pouring floors before the gypsum board walls are installed.



Moisture Protection

When a gypsum floor is poured immediately following “dry in,” the floor is given more time to fully dry, which helps protect against potential moisture problems.

also result in dusting, chipping and cracking of the gypsum underlayment.

LEVELROCK Brand Floor Underlayments from the Industrial Products Division of United States Gypsum Company have changed all that.

High-Strength Floors

With a minimum compressive strength range of 2,500 to 3,200 psi, LEVELROCK Brand Floor Underlayment 2500 is 40 to 50 percent stronger than competing entry-level gypsum underlayments (which usually range from 1,200 to 1,600 psi). LEVELROCK Brand Floor Underlayment 3500 offers even greater strengths (3,500 to 4,000 psi).

LEVELROCK brand products also feature lower water demand, which assures faster drying times, allowing trade activities to begin more quickly following the pour.

“Because LEVELROCK requires less water to achieve premium flowability, there is less moisture to evaporate,” said Ben Allen, president of ALCORP Marketing, Inc., a Southlake, Texas-based company that provides underlayment applicator training, sales support and quality control services for U.S. Gypsum Company.

And less moisture means fewer potential problems for general contractors such as Mike Cook of Northwest Construction Company in Austin, Texas. Cook recently supervised the application of LEVELROCK Brand Floor Underlayment 2500 floors in 160 units in the \$7 million Central Park Apartments project in Bastrop, Texas.

“We were pouring three to four buildings at a time – right after the buildings were ‘dried in’ and before the drywall was up,” said Cook. “Pouring the floors that early provided ample time for the water to evaporate and the floors to fully dry. The product hardens

so quickly, we had our trades back working on the units the next day.”

Bob White, vice president of Fort Worth, Texas-based general contractor CGI Inc., agreed. Following the application of LEVELROCK floors in the

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*–Mike Cook, Project Manager,
Northwest Construction Company*

Arbrook Retirement Complex in Arlington, Texas, White noted, “We were able to stock materials and wheel carts of drywall down the halls within 48 hours of the pour.”

A LEVELROCK gypsum floor achieves 80 percent of its compressive strength within 24 to 36 hours following application. Even at only 80 percent strength, a LEVELROCK floor is stronger than most competing gypsum underlayments are when completely dry – and that’s more than enough strength to allow for ongoing construction traffic. With proper ventilation, a typical LEVELROCK floor (3/4-inch thick) dries completely in five to seven days.

Scheduling Flexibility

When a LEVELROCK floor is poured immediately after “dry in” (after the windows and roof are installed and the structure is secure from moisture), general contractors can take advantage of significant scheduling benefits.

Not only is the application timeframe for the pour broadened, but the work of other trades proceeds without interruption. J.D. Culp, of William Taylor & Company, a Waco, Texas-based

general contractor, appreciated these benefits as he supervised construction of a new 113,000-sq.-ft. apartment complex in Waco. Culp contracted with Associated Interiors, Inc., a Fort Worth-based LEVELROCK applicator, to pour gypsum floors throughout the Place Apartments prior to the drywall application.

“Pouring before the drywall was applied helped in the timing, logistics

and appreciate being able to work on a smooth, new underlayment surface. “Providing drywall installers and other subcontractors with a high-strength underlayment to work on makes it easier for them to perform their jobs,” he said. “And it helps alleviate safety concerns. Injuries such as sprained ankles happen much more frequently on an uneven or cracked surface, as opposed to a smooth underlayment.”

“Pouring (LEVELROCK underlayment) first, without a doubt, saved us at least two weeks’ time from what we had originally scheduled.”

—Bob White, Vice President, CGI Incorporated

and scheduling of all aspects of the project,” said Culp. “It didn’t inhibit work progress at all.”

White, with CGI, agreed. “When you’re pouring a floor after the drywall installation, you have to stop everything. But with the LEVELROCK product, we didn’t have to do that. Pouring first, without a doubt, saved us at least two weeks’ time from what we had originally scheduled ... and that saves quite a bit of money.”

In addition to speeding job completion, an early pour can also decrease installation labor costs. That’s because the flooring applicators are able to work more quickly and efficiently in an open space versus pouring room by room after the drywall is installed.

“Pouring before drywall allows workers to move freely – they can basically walk through walls that aren’t there yet,” said Phil Martin, president of Associated Interiors. “That can translate into significant labor cost savings.”

Martin finds that tradesmen also

Culp agreed with that assessment. “All our subcontractors involved in the Place Apartments project liked working on level, smooth surfaces,” he said. “It also made it easier to clean as the drywall was installed and finished.”

Culp added that the early pour also eliminated the possibility for the gypsum floor to spatter on gypsum board surfaces during the pour. If not removed during the drywall finishing process, the spatters can result in less-than-perfect finished surfaces.

Minimizing Moisture Concerns

Reducing job site moisture conditions that may promote the growth of mold and mildew is another top priority for building owners and contractors. It’s also another reason why pouring gypsum floors prior to drywall is a smart construction strategy.

Typically, poured gypsum floor underlayments are installed over wood or concrete subfloors, then covered with floor finish materials such as vinyl, wood or carpeting. How much



Cleaner, Safer Work Environment
With the floors in place prior to drywall, there’s no chance for the poured gypsum cement to inadvertently spatter gypsum board surfaces. It’s also easier to maintain a clean, safe working environment.



A High-Strength Floor
Placing pallets of gypsum board over other gypsum underlayments may cause the floor to powder or crack. Only LEVELROCK Brand Floor Underlayment has the required strength to stand up to construction traffic and materials.



A Smart Strategy

When all the advantages are considered, it's clear that a pourable-before-drywall LEVELROCK underlayment installation is a smart construction strategy.

moisture a gypsum underlayment introduces into a building depends on when the floor is poured, the strength of the floor and how quickly it dries.

When gypsum underlayments are poured after drywall, it leaves a narrower window of opportunity to ensure that the floor is completely dry. The earlier the pour, the longer the drying time and the less moisture present during subsequent construction phases. This minimizes the chances for the floor finish materials to be applied before the floor has fully dried – a key contributor to moisture-related problems.

“The LEVELROCK floors we applied dried more quickly because there were no walls up to impede air flow,” said White. “As a result, moisture concerns about the floor were virtually non-existent.”

Drying times are particularly critical when floors are covered with vinyl, ceramic tile or glued-down hardwoods.

Any moisture present in the floor will negatively impact adhesion and may result in moisture-related problems down the road.

Cook noted this benefit during construction of the Central Park Apartments project. “Thanks to the long-term drying cycle achieved by pouring the floors prior to the drywall, we had absolutely no problems adhering the vinyl composition floor (VCT) finish to the underlayment,” he said.

When all the advantages are combined – easier, more flexible construction scheduling ... faster, more economical installations ... a safer work environment ... and a reduced potential for moisture-related job site problems – it adds up to a significant package of construction benefits.

As CGI's White puts it, “When you find a product that is superior to all the other choices, it's hard not to want that product.”

Technical Assistance

For more information about installing LEVELROCK Brand Floor Underlayments prior to drywall, contact the Industrial Products Division of United States Gypsum Company's Customer Service Department at (800) 487-4431, e-mail industrial@usg.com or visit the division's Web site at www.gypsumsolutions.com

The Industrial Products Division of United States Gypsum Company is a leading producer and marketer of a wide range of industrial products used in manufacturing, tooling, plastics, coatings, construction, agriculture, pharmaceuticals, food processing, statuary, ceramics, road repair and other applications.

SPECIFICATION GUIDELINES

Creating Specs for Pourable-Before-Drywall LEVELROCK Installations is Simple

Creating a specification for a pourable-before-drywall LEVELROCK Brand Floor Underlayment installation is easily accomplished.

Simply use the standard specification for the product, but in Section 3.3 (Application), the pourable-before-drywall specification must note that 4.0 to 4.5 gallons of water and no more than 1.6 cu. ft. of sand should be added to an 80-pound bag of LEVELROCK Brand Floor Underlayment 2500. This ensures that the floor will deliver the needed strength to stand up to construction trade traffic.

If LEVELROCK Brand Floor Underlayment 3500 (or any higher-strength U.S. Gypsum products) is being used in a pourable-before-drywall application, there is no change from the standard specification.

The early-pour specification should also emphasize that the building must be “dried in” prior to the application and that voids in the floor must be filled to minimize underlayment leakage.

To obtain a copy of the LEVELROCK Brand Floor Underlayment specification for pourable-before-drywall applications, contact the Industrial Products Division of United States Gypsum Company at (800) 487-4431 or visit the division's Web site at www.gypsumsolutions.com.



Voids and penetrations in the floor must be carefully sealed before pouring LEVELROCK underlayment.

