

The background of the entire page is a photograph of a modern office hallway. On the left, there are wooden doors with blue frames and the number '18' on them. The floor is covered in a light-colored carpet. In the distance, there is a seating area with a table and chairs near large windows.

LEVELROCK[®]

Floor Underlayment Finished Floor Installation Guidelines



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Levelrock Floor Underlayment

From commercial to multi-family projects, renovation to new construction, LEVELROCK® floor underlayment from USG pours on the strength. STRONGER-THAN-CONCRETE™ fast-applying gypsum concrete, engineered cements and flooring systems offer the industry's highest compressive strengths with exceptional acoustical performance to reduce noise between floors and units. LEVELROCK floor underlayments provide a smooth, crack-resistant surface that accept virtually all types of floor coverings including vinyl, composition tile, ceramic tile, wood laminate, glue-down hardwood and carpeting.

Created for a wide range of applications, LEVELROCK floor underlayments are available in several formulations including radiant heat, corrugated steel deck and eco-friendly green formulations. LEVELROCK products and systems are designed to meet the new International Building Code (IBC) and were the first to ensure that all sound systems are fire-rated and easily specified by a UL Design number. LEVELROCK floor underlayments provide approximate compressive strengths of 2000 psi up to 10,000 psi (depending on the floor underlayment used and sand and water ratio).

Note *Commercial floor applications recommend underlayments with minimum compressive strengths of 3500 psi. In addition, the Tile council of North America recommends a minimum of 2000 psi as well as the use of a crack isolation membrane such as DUROCK™ tile membrane for all tile installations.

Substrate Requirements for Levelrock Floor Underlayment

LEVELROCK floor underlayment must be applied to a relatively dry substrate. In the case of new wood subfloors, any moisture from the subfloor has typically dissipated into the environment. However, where the underlayment is poured over structural concrete or concrete planks, the job scheduling may result in the subfloors being left open to the weather and will absorb moisture from rain and/or snow. In addition, in order to enable a concrete subfloor to qualify for LEED® credits, additives are sometimes used which can retain moisture. Therefore, a moisture test (calcium chloride test method ASTM F1869* or ASTM F2170 relative humidity test) should be conducted on the concrete substrate. The recommended limit for application of LEVELROCK floor underlayment is 5 lbs./1000 sq. ft. in 24 hrs. However, the floor covering manufacturer may have stricter standards and these will take precedence over those provided here. USG's limit for relative humidity is 75%-80% or less.

Note *The ASTM F1869 calcium chloride method is not an acceptable method for checking the dryness of LEVELROCK underlayments.



Surface Requirements

Test for Dryness

LEVELROCK floor underlayment must be dry before installing floor covering. Normal drying time for ¾ in. thickness is 5-7 days, with proper ventilation/good air flow (70 °F, 50% relative humidity). Underlayment thickness and drying conditions will affect drying time; allow approximately 4-5 additional days for each additional ¼ in. thickness. Also note that higher humidities and cooler temperatures – often found on jobsites – will inhibit drying.

As a general rule of thumb, LEVELROCK floor underlayments at their typical application rates will dry as follows:

- 0.5 inches: 3-5 days
- 0.75 inches: 5-7 days
- 1.5 inches: 17-19 days

Drafts occurring during the setting process – usually within the first 2-3 hours after the pour can cause dusting on the surface of LEVELROCK floor underlayment due to the surface drying before it sets. However, once the material is set, good air movement/air exchange is encouraged to speed the drying process. The exception to the aforementioned drying schedule is LEVELROCK® QUIK-TOP™ and QUIK-TOP™ Gray floor underlayments. These products have a unique technology that will allow them to accept a floor covering 15 hours after installation. Also note that the maximum recommended thickness for QUIK-TOP floor underlayments installation is 1 in.



Responsibility for Drying Environment

LEVELROCK floor underlayment must not be installed unless there is a minimum temperature of 50 °F day and night. The general contractor must be made aware of these conditions at the job meeting and is



responsible for ensuring that they are met. The best and easiest way to accelerate the drying process (after allowing 3 hours for setting) is by putting a fan on the floor and cracking the windows (even in winter) to ensure good air movement and air exchange. If the HVAC system in the building is operational, that should be turned on as well. However, this is not always possible (especially in new construction) because of the concern for construction dust being blown throughout the building.

If poor drying conditions are encountered (i.e. high humidity), then strong consideration should be given to utilizing mechanical desiccating ventilators such as those manufactured by Polygon Group US — formerly Munters — (polygongroup.us). In all cases, the use of fans is still recommended. Remember that raising the temperature without air movement will not be beneficial. In fact, certain types of heaters such as forced air space heaters, will actually increase the environmental moisture level. After the LEVELROCK pour has been completed, the responsibility for maintaining the proper drying environment rests with the general contractor. The applicator should advise the general contractor in writing about the importance of proper ventilation.

Variable Circumstances

The normal drying times listed are under ideal conditions. As noted, underlayment thickness, higher humidities, lower temperatures and poor air flow will lengthen drying times.

Other situations that affect drying times are: leaks in roofs; lack of a permanent roof, windows or doors; and windows left open during storms which result in flooding of the floor—all of which have a potential negative effect on drying.

The standard recommendations regarding environmental conditions for LEVELROCK specifically state permanent windows, doors and a roof must be in place prior to the installation of LEVELROCK floor underlayment.* Where jobsite conditions are not as specified, (windows get broken, doors left open or roofs leak), then any water covering a LEVELROCK floor underlayment should be removed as soon as possible. In most cases, a first wetting of a LEVELROCK underlayment will not affect the serviceability of the floor, assuming that it is allowed to dry properly. Repeated or continuous exposure to water however, can be detrimental. When in doubt, contact your LEVELROCK/ALCORP Network representative. More importantly, after a flooding incident, recognize that the floor has now taken up more free water and therefore standard drying times no longer apply. Again, good air circulation and fresh air exchange are critical to helping the floor dry quickly.

Note *LEVELROCK® CSD® EARLY EXPOSURE™ floor underlayment is the exception to this rule.

Checking for Dryness

Neither floor coverings nor any primer/sealers should be installed until it can be determined the LEVELROCK floor underlayment has dried. Likewise, non-breathable crack isolation membranes should not be installed until the underlayment is dry. The best way to determine this is by use of a GE® Protimeter moisture meter (ge-mcs.com). Two different models are acceptable for this purpose: the Surveymaster and the Aquant.

The entire floor should be surveyed to identify those spots which are taking longer to dry. Typically, a reading of 180 or less on the Protimeter moisture meter indicates less than 1% moisture content and suitable dryness of the floor. There can be slight variance

between meters and that is why USG has supplied its field quality personnel as well as the LEVELROCK applicators with standards to help calibrate the Protimeter moisture meter and determine where that “true dryness” level exists on a given instrument. USG has conducted an extensive investigation of various moisture meters and found the Protimeter to work the best for testing dryness of LEVELROCK floor underlayments. This meter uses radio frequency technology for checking dryness. There are various other meters that use probes and other types of technology, but none has provided results as consistent as the Protimeter.

Please strictly observe the manufacturer’s instructions regarding the proper operation, maintenance and calibration of all moisture meters.

Additional methods for checking for dryness include:

- Tape an 18 in. x 18 in. (457 mm x 457 mm) section of 6-mil vinyl plastic (as per ASTM D4263) to the surface of the underlayment and seal the edges.
- Lay a 24 in. x 24 in. high-density, smooth rubber mat on the underlayment surface and weigh down.

The underlayment is considered dry if there is no discoloration (darkening) of the underlayment or condensation on the test covering after 16 hours. Perform additional tests if necessary.

Perform tests in critical areas such as high underlayment thickness or in an area of poor air flow. More than one test may be necessary. ■



Underlayment Surface Preparation

Using LEVELROCK Floor Underlayment All Purpose Sealer

LEVELROCK™ floor underlayment all purpose sealer can be applied to most LEVELROCK floor underlayments prior to the application of floor-covering adhesives to enhance the bond between the underlayment and the adhesive. LEVELROCK all purpose sealer can be applied by the floor covering manufacturer or a USG LEVELROCK authorized applicator. The recommendations of the floor-covering and adhesive manufacturers will supersede those presented here.

LEVELROCK all purpose sealer is a concentrated formula and must be diluted prior to use. All purpose sealer is tinted light red to identify application and just one coat application is recommended. Note – Do not use LEVELROCK all purpose sealer with LEVELROCK® 4500 NXG® or LEVELROCK QUIK-TOP floor underlayments, as these contain a built-in sealer.

Instructions for USG LEVELROCK Authorized Applicator

LEVELROCK all purpose sealer can be applied to LEVELROCK floor underlayment by a USG LEVELROCK authorized applicator 2 hours after the underlayment has been installed; or as soon as the floor can be safely walked on.

At the jobsite, LEVELROCK all purpose sealer and the underlayment must be maintained between 50-95 °F for 48 hours before, during and after job completion. Radiant heat systems should be shut down and cooled off during application and drying of the sealer. Underlayment must be free of dirt, wax, polish, paint, excess dust or other contaminants before application of sealer. Should the surface of the LEVELROCK floor underlayment be excessively dusty, contact your LEVELROCK/ALCORP Network representative for further instructions.

Spray apply LEVELROCK all purpose sealer for best results. When spray-applying, a uniform application is critical. Voids may compromise the sealer performance and detrimentally affect adhesive bond. May also be broom- or roller-applied. Apply diluted solution of sealer at a rate of 300 sq. ft./gal. (see pages 14-15 for recommended application and dilution rates). Do not allow sealer to puddle, back-roll if necessary. For smaller areas, a roller may simplify application. LEVELROCK all purpose sealer is not a wear surface.

General Recommendations

In all cases, follow floor-covering manufacturer's installation recommendations to maintain floor-covering manufacturer's warranties.

Before applying any of the USG floor treatments and the floor-covering, all surfaces must be clean and free of oil, paint, chemicals, wax, grease, dust, dirt and other construction debris.

The use of sweeping compounds on LEVELROCK floor underlayment is not recommended, as these products often contain oil, which can cause a poor bond between the LEVELROCK floor underlayment and the adhesive or mortar used to attach the floor goods.



Installation

Floor-Covering Installation

LEVELROCK floor underlayments accept virtually every type of floor covering – from vinyl and carpet to hardwood and marble tile. For a successful finished floor, follow the specific installation recommendations below.

Carpet and Pad

A variety of carpets, carpet pads, and adhesives can be used with LEVELROCK floor underlayment (see page 12).

Glue-Down Attachment

Follow *Surface Requirements* instructions to prepare the underlayment. Also, follow floor goods manufacturer's adhesive recommendations. Prior to installation, conduct a sample test to confirm bond compatibility.

Carpet Modules. Follow *Surface Requirements* instructions to prepare the underlayment. Install carpet modules with 100% adhesive coverage. A bond test should be conducted no sooner than 72 hours after the adhesive has been applied (cool temperatures and/or high humidity

may lengthen this time). A successful bond test should have 90-100% of the adhesive remaining on the floor after the carpet tile has been pulled up.

Mechanical Attachment

Note: Mechanical attachment of tackless strips is not recommended when LEVELROCK floor underlayment has been poured over expanded or extruded polystyrene, over a sound mat, or on the edges of a corrugated deck installation. (See *Adhesive Attachment Tackless Strips*.)

Tackless Strips Over Wood Subfloors.

When LEVELROCK floor underlayment has been applied to a wood subfloor to ¾ in. (19 mm) thick, use tackless strips such as those manufactured by Halex Corporation (halexcorp.com). For thicker underlayment, install filler nails every 12 in. to 18 in. (305 mm to 457 mm) o.c. Filler nail should be long enough to penetrate at least ¼ in. (6 mm) into the subfloor.

Tackless Strips Over Concrete. When LEVELROCK floor underlayment has been applied to a concrete subfloor:

- Install standard tackless strips with concrete nails every 18 in. to 24 in. (457

mm to 609 mm) o.c. Concrete nails should be long enough to penetrate at least ¼ in. (6 mm) into the subfloor.

- Install diamond-point nails through the tackless strip and underlayment with an air compressor-driven automatic nailer.

Carpet Tack Strips. If a carpet tack strip is used, a 1-1/4 in. x 12 gauge spiral shank anchoring nail is recommended for LEVELROCK floor underlayments.

Adhesive Attachment

Tackless Strips. Follow the *Surface Requirements* instructions. To attach tackless strips to the underlayment, use PL 400 heavy duty construction adhesive from OSI Sealants or CX-948 polyurethane adhesive/sealant from Chemrex. Before installing carpet, wait 24 hours after applying PL 400 adhesive; wait overnight after applying CX-948 adhesive/sealant. (Apply CX-948 adhesive/sealant with a minimum 3/8 in. bead, which equates to 30 lineal ft./10 oz. tube, where the tackless strip will be placed. Do not install more than 30 ft. of the product before applying the tackless strip.)

Laminated Hardwood and Engineered Wood Flooring

Follow the *Surface Requirements* instructions to prepare the underlayment. Underlayment dryness is critical for wood floor coverings. Make sure all critical areas are tested for dryness using the Protimeter moisture meter. Follow wood floor-covering manufacturer's recommendations for maximum moisture levels.

Mechanical Attachment

Follow and adhere to floor goods manufacturer's general and installation recommendations.

Floating Floors

Follow and adhere to floor goods manufacturer's general and installation recommendations.

Solid Wood Flooring

Follow the *Surface Requirements* instructions to prepare the underlayment. Underlayment dryness is critical for wood floor coverings. Make sure all critical areas are tested for dryness using the Protimeter moisture meter. Follow wood floor-covering manufacturer's recommendations for maximum moisture levels.

Mechanical Attachment

Attach flooring based on installation recommendations from the National Oak Flooring Manufacturers Association, Inc. (NOFMA). Refer to the Sweet's Catalog section 09550/NAT and National Wood Flooring Association recommendations.

Sheet Vinyl and Vinyl Composition Tiles

Follow the *Surface Requirements* instructions to prepare the underlayment. As a general rule, prior to application of the vinyl, the moisture level on the floor should be less than 1%, as measured in a variety of locations throughout the underlayment surface using a Protimeter moisture meter. However, the vinyl floor manufacturer's recommendations will always supercede the recommendations provided here. Carefully follow and adhere to floor goods manufacturer's recommendations.

Prior to installation, conduct a sample test to confirm bond compatibility.

Ceramic, Quarry and Marble Tile

When a sound reduction mat is present, USG recommends using a crack isolation membrane such as Durock™ tile membrane, or a product intended for this use and warranted by its manufacturer.

Movement Joints. Follow and adhere to expansion joint requirements found in the Handbook for Ceramic Tile Installation under EJ171 specification. Contact the Tile Council of America (TCA) at (864) 646-8453 or tileusa.com for a copy of the handbook.

Decorative Floors

LEVELROCK PROFLOW™, QUIK-TOP and QUIK-TOP Gray floor underlayments are the only recommended underlayments for use with an approved decorative floor coating. When combined with a suitable coating system, these underlayments may be stained or used by themselves as a finished floor. It is the coatings manufacturer's responsibility to determine the correct product, system and surface preparation for use over these underlayments.



Radiant Heat Systems

Adhere to the Radiant Panel Association (RPA) Guidelines for Hydronic Radiant Floor

Heating regarding temperature and fluid temperatures. See radiantpanelassociation.org for detailed information. Fluid temperatures of radiant systems shall not exceed 140 °F at the exit of the heating device. To limit risk of injury, floor temperatures shall not exceed 110 °F in general and shall be limited to 85 °F in areas of direct contact by building occupants. Start up of radiant systems shall be in accordance with manufacturers' and RPA recommended start-up procedures. To minimize any potential of shocking the LEVELROCK radiant heat flooring product, the radiant heat system should be ramped up slowly over several days until the underlayment is fully dry. However, the radiant heat system manufacturer's recommendations for startup procedure will take precedence.

The temperature of the radiant heat system should be lowered when applying any adhesive and floor covering. Allow thin-set mortar to cure at least 7 days before turning on hydronic or electric heating systems to allow the material to hydrate adequately.

Floor-Covering Installation for Radiant Heat Systems

Carpet and Pad

Select a tackless system and install. Achieve appropriate heat transfer by using a low-R-value carpet cushion. Be careful not to puncture radiant heating tubes with tack nails when mechanically installing the tackless strip. An adhesive attachment of tackless strip is preferred.

Laminated Hardwood and Engineered Wood Flooring

These flooring systems are ideal with radiant heat systems. The systems are very stable and resist expansion and contraction while improving the overall performance of radiant systems. Follow and adhere to floor goods manufacturer's adhesive recommendations.

Laminated Hardwood. During adhesive and floor installation, lower the temperature of the radiant heat system. Higher temperatures may adversely affect the working properties of the adhesive.



Layered Warranties

The following manufacturers provide a warranty on their products when used as specified in conjunction with LEVELROCK products. For further details, please contact the product manufacturer or your LEVELROCK/ALCORP Network representative.

Merkrete (merkrete.com), a division of **Parex USA Inc.**, will provide a 15-year warranty over all LEVELROCK materials meeting TCNA requirements as tile/stone underlayments. When installed with **Merkrete Fracture Guard 5000, Fracture Guard FD; Merkrete Hydro Guard 2000, Hydro Guard 1, Hydro Guard SP-1;** and **Merkrete grouts** and **Merkrete 700 and 800 series thin-set mortars** as a system, Merkrete will provide their standard 15-year warranty over LEVELROCK materials meeting USG specifications and standard of care requirements for application.

Custom Building Products (custombuildingproducts.com) provides a 10-year warranty on its **MegaFlex® crack prevention mortar** when used in place of a crack-isolation membrane, with LEVELROCK floor underlayment and LEVELROCK™ SRM-25™ READY SEAM™ sound mat or LEVELROCK™ SRB™ sound board. For floors without a sound reduction mat, Custom Building Products provides a 10-year warranty with **FlexBond® crack prevention mortar** when used over LEVELROCK floor underlayment in place of a crack isolation membrane. For more information, contact your LEVELROCK/ALCORP Network representative or Custom Building Products.

Installation

Floating Floors. Glue boards edge to edge and float on a 1/8 in. (3 mm) foam pad.

Solid Wood Flooring

Use a nail-down sleeper system. Install tubing between 2 x 4 sleepers, which are attached to the subfloor. Pour LEVELROCK RH floor underlayment or LEVELROCK Commercial RH floor underlayment between the spaces around the tubes to provide thermal mass. Underlayment must be 3/4-in. minimum above the top of the radiant heating tubes. When floor underlayment is completely dry, install a vapor barrier, and nail boards to the nailing sleepers. Be careful not to puncture the radiant heating tubes when nailing down

solid wood floor. This system offers limited insulation above the radiant system. For best results, refer to the radiant heat system manufacturer's recommendations.

Note: The floor surface temperature should never exceed 85 °F (29 °C) when laminated, parquet or solid wood floors are installed over radiant systems.

Sheet Vinyl and Vinyl Composition Tiles

According to vinyl industry recommendations, the floor surface temperature should never exceed 85 °F (29 °C). During adhesive and tile installation, lower the floor temperature. Working time and open time of adhesive can be affected by floor temperature. ■





References

LEVELROCK floor underlayments are compatible with a variety of ancillary products that complete the installation of finished floors. The following pages include references for crack isolation and waterproof membranes, thin-sets, adhesives and floor coverings. For surface treatment recommendations, see pages 14 – 15.

For more information about **LEVELROCK floor underlayments**, visit levelrock.com or contact your LEVELROCK/ALCORP Network representative at **817 329.1808**.

Crack Isolation and Waterproof Membrane and Thin-Set Manufacturers Reference

Manufacturer	Product	Phone Number/Web Site
Amorim Cork Composites	AcoustiCORK® R12 crack suppression membrane	(800) 255-2675 acousticorkusa.com
Bonsal American	ProSpec® Flex-Guard crack isolation system, ProSpec® Speed-Flex crack isolation system	(800) 738-1621 bonsal.com
Bostik, Inc.	Hydroment® Ultra-Set Advanced waterproofing/crack/sound isolation membrane and setting adhesive	(800) 7BOSTIK (726-7845) bostik-us.com
C-Cure	UniFlex® 916 elastomeric dry-set mortar and anti-fracture membrane, Pro-Red® waterproofing membrane 963, UltraCure® 971 elastomeric waterproofing and anti-fracture membrane	(800) 895-2874 c-cure.com
Compotite Corporation	Composeal Gold crack isolation waterproof membrane	(800) 221-1056 compotite.com
Custom Building Products	FlexBond® crack prevention mortar, MegaFlex® crack prevention mortar, RedGuard® waterproofing and crack prevention membrane	(800) 272-8786 custombuildingproducts.com
Flex-Guard Products, Inc.	Flex-Guard® crack isolation system	(800) 279-7600 flexguardproducts.com
Flextile Ltd.	WP-980 waterproof and crack isolation membrane	(800) 699-3623 flextile.net
Laticrete International, Inc.	Laticrete® 9235 waterproofing membrane, Laticrete® 254 Platinum thin-set, Laticrete® Hydro Ban™	(203) 393-0010 (800) 243-4788 laticrete.com
Mapei Corporation	Mapelastic™ AquaDefense, Mapelastic™ HPG waterproofing membrane, Kerabond™/Keralastic™ system premium flexible tile mortar, Granirapid® system premium, rapid-setting, flexible, polymer-modified mortar system Ultraflex™ 1 standard tile mortar with polymer, Ultraflex™ 2 professional tile mortar with polymer, Ultraflex™ 3 premium tile mortar with polymer, Ultracontact™ premium, full contact tile mortar with polymer, Ultracontact™ RS ultra-premium, rapid-setting, full-contact mortar, Mapelastic™ 315 flexible cement-based waterproofing membrane, Planicrete® W flexible setting compound	(800) 992-6273 mapei.us
Parex USA, Inc.	Merkrete Hydro Guard 2000 interior and exterior waterproof and crack isolation membrane, Merkrete Hydro Guard SP-1 elastomeric waterproofing/antifracture membrane, Merkrete Hydro Guard 1 elastomeric waterproofing/antifracture membrane, Merkrete Fracture Guard 5000 crack isolation mold resistant membrane	(800) 226-2424 parexusa.com
Noble Company	NobleSeal® TS thin-set waterproofing membrane	(800) 878-5788 noblecompany.com
Proflex Products Inc.	PROFLEX™ 40 CISM crack isolation sound membrane, PROFLEX™ 70 SSC super sound control membrane, PROFLEX™ 90 MSC mega-sound control membrane, PROFLEX™ Hydra-Seal waterproofing and crack isolation membrane, PROFLEX™ 95-KIT waterproofing and crack isolation membrane, PROFLEX™ CISM-KIT crack isolation repair kit, PROFLEX™ PRO-STICK 35 mastic	(877) 538-3437 proflex.us
Schluter Systems L.P.	Schluter®-DITRA mat	(800) 472-4588 schluter.com
SGM, Inc.	Southcrete™ 1132 anti-fracture and waterproofing membrane	(800) 641-9247 sgm.cc
SonoGrip	SonoGrip™ acoustic and crack isolation membrane	(888) 770-3434 sonogrip.com
Spectrum Mfg. Corp	Spectrum Super-Flex anti-fracture membrane	(623) 362-0076 specmfgcorp.com
TEC Specialty Products	1Flex® crack isolation mortar over approved LEVELROCK® sealer	(800) 832-9002 tecspecialty.com
USG Corporation	DUROCK™ tile membrane	(800) USG-4YOU (874-4968) usg.com

Note: For crack isolation and waterproof membrane and thin-set recommendations, contact the floor goods manufacturer. USG does not guarantee the performance of any membrane or thin-set; contact the manufacturers listed for information about their warranties.



Adhesives Approved for Use Over LEVELROCK Floor Underlayments

Floor Covering	LEVELROCK Floor Underlayment	Adhesive*
Action back carpet	CSD® EARLY EXPOSURE™	APAC™ 440
Carpet	2500	Mapei® Ultrabond ECO® 185
Commercial vinyl	3500	Mannington® V-82
Domco® commercial vinyl	4500 NXG®	Tarkett® 800
DuraStone	2500	Congoleum® DS 100 DuraSet adhesive
Laminated wood plank	2500	Bruce® Connection PR, Bruce® Equalizer
Non vinyl-backed modular carpet tiles	3500/CSD EARLY EXPOSURE	XL Brands Dyna-Mix NPB pressure sensitive adhesive
Residential felt-backed vinyl	2500/CSD EARLY EXPOSURE	Mannington® V-31, Armstrong® S-235 & S-254, Tarkett® FB-1
Rubber flooring	4500 NXG	Nora® 410 Acrylic, Nora® 310 Polyurethane
Solid,engineered and parquet	3500	XL Brands Gold Stix adhesive
Solid,engineered and parquet	3500/4500 NXG	DUROCK™ wood floor adhesive
Solid,engineered and parquet	4500 NXG	SikaBond®-T55
Station Square™ vinyl	3500	Armstrong S-235
Vinyl composition tile	2500	Congoleum® AD42 or 3044
Vinyl composition tile	3500	Armstrong® S-515, Henry® 430, Armstrong® S-700
Vinyl composition tile	4500 NXG	Armstrong S-515, Congoleum AD42 or 3044
Vinyl composition tile	CSD EARLY EXPOSURE	Congoleum AD42 or 3044
Vinyl-backed carpet	3500	Mannington® MT-711
Vinyl-backed carpet tile	3500	Enpress™ pressure sensitive adhesive

*Check with adhesive manufacturers for current recommendations.

Additional Floor Covering and Adhesive Manufacturers Reference

Manufacturer	Floor Covering	Adhesive Product	Phone Number/Web Site
Armstrong Products	Residential vinyl, felt backed	S-235, S-254	877-276-7876 armstrong.com *Medintech is used in hospitals and should only be installed over the following LEVELROCK® underlayments: 3500, 4500 NXG®, Commercial RH, CSD® EARLY EXPOSURE™ and PROFLOW™.
	Commercial vinyl back - Medintech*	S-580, S-599	
	Safeguard	S-599	
	Safeguard Spa	S-599, S-230, S-580	
	VCT tile	S-89, S-515, S-700, S-750	
	Vinyl tile, no-wax (dry back)	S-750	
	Urethane tile, no-wax (dry back)	S-89, S-700, S-750	
	Commerical felt back vinyl – Commission Plus	S-235	

Additional Floor Covering and Adhesive Manufacturers Reference

Manufacturer	Floor Covering	Adhesive Product	Phone Number/Web Site
Bostik, Inc. (DURABOND® adhesives)	Carpet, jute back	D-910™, D-850™, D-905™	800-7BOSTIK (726-7845) bostik-us.com
	Carpet, rubber back	D-1400™, D-1500™	
	Carpet, action back (latex & polyurethanes)	D-920™	
	Carpet, unitary (latex & polyurethanes)	D-920, D-670™	
	Carpet, hot melt	D-920, D-990™, D-910 and D-850	
	Carpet, double stick-pad to subfloor	D-870™ (pressure sensitive)	
	Carpet, double stick-pad to subfloor	D-870, D-850, D-807™ (permanent)	
	Carpet tiles – PVC and polyurethane cushion back	D-870 (pressure sensitive)	
	Resilient tile, solid & laminated vinyl	D-640™, D-650™	
	Resilient tile, VCT	D-640, D-650	
	Sheet goods, mineral & synthetic felt	D-670	
	Sheet goods, vinyl backed, full spread only	D-640	
	Wood flooring	Bostik's BEST®	
Congoleum Products	VCT, dry back DIY vinyl	AD42	800-274-3266 congleum.com
	Forum wood plank	AD72	
	White Shield felt back	3044 premium flooring	
	DuraCeramic	DuraSet DS 100	
	DuraStone	DuraSet DS 100	
	DuraPlank	DuraSet DS 100	
Forbo Flooring Products	Marmoleum®	414 Euroflex Lino Plus, 514 Eurosafe Lino Plus, 614 Eurostar Lino Plus, 615 Eurostar Lino EL, 650 Eurostar Fastcol	800-842-7839 forboflooringna.com
Mannington Floors	Commercial bio-spec, vinyl blocked	V-82 (porous), V-95 (non-porous)	800-241-2262 mannington.com
	Commercial VCT	V-11	
	Residential felt backed vinyl	V-31	
	Vinyl tile and plank	V-68	
Nora Systems, Inc.	Rubber flooring	Nora® 310 polyurethane adhesive, Nora® 410 water-based acrylic adhesive	800-332-NORA nora.com
W.F. Taylor Co., Inc.	Carpet and pad, polypropylene, latex foam, rubber-back	2055, 2056, 2057, 2060, 2070, 2072, 2080, 2082, 2085, 2089, 2100	800-868-4583 wftaylor.com
	Carpet and pad, urethane foam, hot melts, latex, unitary needle, punched (indoor only)	2055, 2056, 2081	
	Carpet tiles	2027, 2903	
	Felt back vinyl, mineral back sheet vinyl	2037, 2087	
	VCT	2033, 2083	
	Vinyl & rubber	2090, 2091, 501	
	Engineered laminated plank and parquet wood	2021, 2091	
	Solid plank	Meta-tec® MS Plus Advance™ wood flooring adhesive	
W.W. Henry Company	Felt back vinyl	356C, 660, 256	800-232-4832 wwhenry.com
	Linoleum	482, 582	
	Commercial carpet	356C, 176, 451, 351, 256, 391	
	VCT	640, 660, 430, 530, 130, 420	
	Vinyl back sheet goods	640, 650, 422	
	Rubber tile	412	
	Engineered wood	971, 1171N	

Check individual flooring and adhesive manufacturers for the most up-to-date product information.



General Surface Treatment Recommendations For LEVELROCK Floor Underlayment To Receive Floor Coverings

Building Type	Floor Covering	Adhesive	LEVELROCK Floor Underlayment	Recommended Surface Treatment For LEVELROCK Floor Underlayment	Comments
RESIDENTIAL / WOOD FRAME / MULTI-FAMILY	CARPET	WBA	2500, RH	APS/FTP	
	FELT-BACKED VINYL	WBA	2500, RH	APS/FTP	
	VINYL COMPOSITION TILE	WBA	2500, RH	APS/FTP	
	CERAMIC TILE	THINSET	2500, RH	APS/FTP	
	WOOD LAMINATE, WOOD PLANK	URETHANE	2500, RH	NONE	Use of an adhesive manufacturer's proprietary primer may be required.
COMMERCIAL / 2- & 3-STORY WOOD FRAME / HOTEL, MOTEL, ASSISTED LIVING	CARPET	WBA	2500, 3500, Commerical RH	APS/FTP	Use FTP where urine-resistance is required.
	FELT-BACKED VINYL	WBA	2500, 3500, Commerical RH	APS/FTP	Use FTP where urine-resistance is required.
	VINYL COMPOSITION TILE	WBA	2500, 3500, Commerical RH	APS/FTP	Use FTP where urine-resistance is required.
	LINOLEUM	WBA	2500, Commerical RH	APS/FTP	Use FTP where urine-resistance is required.
	CERAMIC TILE	THINSET	2500, 3500, Commerical RH	APS/FTP	Use FTP where urine-resistance is required.
	WOOD LAMINATE, WOOD PLANK	URETHANE	2500, 3500, Commerical RH	NONE	Use of an adhesive manufacturer's proprietary primer may be required.
RESIDENTIAL / CORRUGATED STEEL DECK LIGHT-GAUGE STEEL FRAMING / CONDO	CARPET	WBA	CSD® EARLY EXPOSURE™	NONE	pH adjustment may be required. Check with adhesive manufacturer.
	FELT-BACKED VINYL	WBA	CSD EARLY EXPOSURE	NONE	pH adjustment may be required. Check with adhesive manufacturer.
	VINYL COMPOSITION TILE	WBA	CSD EARLY EXPOSURE	NONE	pH adjustment may be required. Check with adhesive manufacturer.
	CERAMIC TILE	THINSET	CSD EARLY EXPOSURE	NONE	
	WOOD LAMINATE, WOOD PLANK	URETHANE	CSD EARLY EXPOSURE	NONE	Use of an adhesive manufacturer's proprietary primer may be required.

LEGEND APS: LEVELROCK All Purpose Sealer at a 4:1 ratio (water to sealer concentrate) applied at 300 sq. ft./gal. FTP: SIKAFLOOR Fast Track Primer at a 4:1 ratio (water to standard SIKA blend) applied at 400 sq. ft./gal. PSA: Pressure Sensitive Adhesive WBA: Water Based Adhesive

Note: In all cases, both floor-covering manufacturer and USG recommends that a field bond test be conducted prior to full flooring installation. Allow a minimum of 72 hours before conducting the pull test. Homogenous vinyl may require an additional 1-2 days. Cool temperatures and high humidity will require additional days.

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Building Type	Floor Covering	Adhesive	LEVELROCK Floor Underlayment	Recommended Surface Treatment For LEVELROCK Floor Underlayment	Comments
RESIDENTIAL / CONCRETE DECK OR CONCRETE PLANK / HIGH-RISE CONDO	CARPET	WBA	2500, RH, CSD EARLY EXPOSURE*	APS/FTP	
	FELT-BACKED VINYL	WBA	2500, RH, CSD EARLY EXPOSURE*	APS/FTP	
	VINYL COMPOSITION TILE	WBA	2500, RH, CSD EARLY EXPOSURE*	APS/FTP	
	LINOLEUM	WBA	2500, RH, CSD EARLY EXPOSURE*	APS/FTP	
	CERAMIC TILE	THINSET	2500, RH, CSD EARLY EXPOSURE*	APS/FTP	
	WOOD LAMINATE, WOOD PLANK	URETHANE	2500, RH, QUIK-TOP™ & Gray, PROFLOW™, CSD EARLY EXPOSURE	NONE	Use of an adhesive manufacturer's proprietary primer may be required.
	CARPET	WBA	QUIK-TOP & Gray, PROFLOW	NONE	
	FELT-BACKED VINYL	WBA	QUIK-TOP & Gray, PROFLOW	NONE	
	VINYL COMPOSITION TILE	WBA	QUIK-TOP & Gray, PROFLOW	NONE	
	LINOLEUM	WBA	QUIK-TOP & Gray, PROFLOW	NONE	
	CERAMIC TILE	THINSET	QUIK-TOP & Gray, PROFLOW	NONE	
COMMERCIAL / CONCRETE DECK OR CONCRETE PLANK / HIGH-RISE OFFICE	CARPET	WBA	3500, CSD EARLY EXPOSURE*	APS/FTP	
	CARPET TILE, COMMERCIAL GRADE	PSA	3500, CSD EARLY EXPOSURE*	APS/FTP	
	VINYL COMPOSITION TILE	WBA	3500, CSD EARLY EXPOSURE*	APS/FTP	
	LINOLEUM	WBA	3500, CSD EARLY EXPOSURE*	APS/FTP	
	CERAMIC TILE	THINSET	3500, CSD EARLY EXPOSURE*	APS/FTP	
	WOOD LAMINATE, WOOD PLANK	URETHANE	3500, CSD EARLY EXPOSURE	NONE	Use of an adhesive manufacturer's proprietary primer may be required.
HIGH-END COMMERCIAL / CONCRETE DECK OR CONCRETE PLANK / INSTITUTIONAL, HOSPITAL	HOMOGENOUS VINYL	WBA	4500 NXG®, QUIK-TOP & Gray, PROFLOW	FTP	
	CARPET	WBA	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	
	CARPET TILE, COMMERCIAL GRADE	PSA	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	
	VINYL COMPOSITION TILE	WBA	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	
	LINOLEUM	WBA	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	
	CERAMIC TILE	THINSET	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	
	WOOD LAMINATE, WOOD PLANK	URETHANE	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	Use of an adhesive manufacturer's proprietary primer may be required.
	RUBBER	WBA	4500 NXG, QUIK-TOP & Gray, PROFLOW	FTP	
	RUBBER	URETHANE	4500 NXG, QUIK-TOP & Gray, PROFLOW	NONE	

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*CSD EARLY EXPOSURE does not require the use of a surface treatment prior to the application of LEVELROCK floor underlayment.

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Product Information

See usg.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 working with LEVELROCK products, be sure to wear the appropriate personal protective equipment. When user operations generate dust, take the proper precautions to avoid dust inhalation. Many LEVELROCK products contain crystalline silica, a known occupational carcinogen. See individual product material safety data sheets (MSDS) for further information.

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Safety First!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read MSDS and literature before specification and installation.