

USG DUROCK™ BRAND MULTI-USE PRO SELF-LEVELING UNDERLAYMENT

Versatile, superior poured underlayment for multiple applications

- Meets the criteria of ASTM E136-16 for use in all types of noncombustible construction
- Fast application and fast setting allow for return of light traffic within hours
- No mechanical preparation required for most applications
- Ideal for gypsum concrete, and wood frame, renovation, light-commercial construction and radiant heat installations
- Meets resilient floor industry specifications for underlayment under commercial goods
- Exceptionally smooth, crack-resistant surface
- Helps maximize sound isolation between floors/units

DESCRIPTION

USG Durock™ Brand Multi-Use Pro Self-Leveling Underlayment is a cementitious floor underlayment designed by USG for interior use in commercial, multi-family and rehab construction. It provides a smooth, hard underlayment surface at thicknesses from 3/8 in. (9.5 mm) (with proper sand) to 3 in. (76.2 mm). Suitable for a variety of floor coverings, USG Durock™ Multi-Use Pro Self-Leveling Underlayment exceeds commercial vinyl floor-covering requirements as a high-performance underlayment. Properly prepared slabs typically yield compressive strengths ranging from 3500-4500 psi (24.1-31 MPa).

Quick set times and high production rates allow for light trade traffic within hours of installation. The exceptional surface hardness of USG Durock™ Multi-Use Pro Self-Leveling Underlayment resists indentation from trade traffic.

USG Pro Series underlayment products are mixed with sand and water at the job site to yield a lightweight underlayment with a smooth and monolithic surface. A 3/4 in. (19 mm) thick underlayment weighs approximately 7.5 lbs./sq. ft. (.3 kg/m²) and has an approximate dry density range of 118-124 lbs./cu. ft. (1890-1986 kg/m³).

VOC EMISSIONS

USG Durock™ Brand Multi-Use Pro Self-Leveling Underlayment is defined as a "Low Emitting" material per California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010 (CA Section 01350) for school classroom, single-family residence and private office modeling scenarios, and meets USGBC's LEED® v4 emission requirements.

EXCLUSIVE 10-YEAR LIMITED SYSTEM WARRANTY

A 10-year limited system warranty applies when using USG Durock™ Multi-Use Pro Self-Leveling Underlayment sealed with USG Durock™ Brand X2 Primer-Sealer and a XL Brands® manufactured adhesive. Please contact USG for further details.

INSTALLATION SUBFLOOR PREPARATION

All subfloors must be structurally sound, stable and solid. If there is any question about the structural soundness of the subfloor, consult with the engineer on the project or request the services of a professional structural engineer. Shot blasting is not required in most situations.

Subfloors must be clean and free of dirt, tar, wax, oil, grease, latex compounds, sealers, curing compounds, release agents, asphalt, water-soluble adhesives, paint, chemicals, loose old cementitious products, joint compounds from drywall installation or any other contaminant that might prevent proper bonding of the underlayment to concrete. Seal off floor drains before starting to pour underlayment to prevent drain pipes from clogging.

A weak or degraded concrete surface layer must be removed mechanically to provide a solid base. To decide whether mechanical preparation of substrate is required or not, the concrete substrate must be thoroughly assessed for its quality over the entire pour area. Simple visual appearance of concrete substrate as strong and solid does not necessarily guarantee that the concrete substrate is free of impurities and has the right tensile strength.

INSTALLATION SUBFLOOR PREPARATION CONT.

Concrete exhibiting signs of laitance (a layer of weak material on the concrete surface either visible or invisible), scaling, spalling, crumbling or delamination must be mechanically removed to achieve a solid and clean substrate. Prior to installation of the underlayment, remove weak or degraded concrete (as described above) with hammer, chisel or other simple means. It is not required to mechanically profile the concrete subfloor with methods such as shot blasting, scarifying or diamond grinding.

Concrete subfloors receiving cementitious underlayment systems must be cured properly (generally for a minimum of 28 days) prior to underlayment installation. Subfloor Moisture Vapor Emission Rate (MVER) exceeding 5 lb. (2.3 kg)/1,000 sq. ft. (92.9 m²)/24 hours per ASTM F1869 must be treated with USG Durock™ Brand RH-100™ Moisture Vapor Reducer. USG Durock™ Multi-Use Pro Self-Leveling Underlayment is not a vapor barrier. Transmission of excessive moisture vapors from the concrete subfloor through USG Durock™ Multi-Use Pro Self-Leveling Underlayment can interfere with floor-covering adhesives and compromise their performance. If sand broadcasting is not required during the installation of the moisture mitigation system, the surface must be primed with a Durock™ Primer-Sealer prior to application of USG Durock™ Multi-Use Pro Self-Leveling Underlayment.

To minimize the effect of underlayment expansion and cracking on outside corners, use USG Levelrock® Brand Perimeter Isolation Strip. See *USG Levelrock® Brand Perimeter Isolation Strip* submittal sheet (IG1874) at usg.com for further details.

Fill deep areas and holes prior to final application. Contact USG for further information.

Cracks in the existing concrete subfloor must be inspected to determine if the crack is due to typical concrete “shrink” or if it is a result of a structural movement. In the case of the latter, remediation of the crack must be addressed or eventually the crack will telegraph through USG Durock™ Multi-Use Pro Self-Leveling Underlayment. Repair all existing cracks in old and new concrete to minimize and control their ability to telegraph through the layer of USG Durock™ Multi-Use Pro Self-Leveling Underlayments. Remove the weak concrete along the length of the cracks by chiseling or other suitable means. Remove accumulated dust and debris from the crack cavities using a vacuum with a HEPA filter or other suitable means. Various cracks present in the concrete subfloor, including shrinkage cracks, must be filled with a suitable commercially available crack-fill epoxy adhesive designed for concrete flooring applications. To ensure superior resistance to crack growth, use injection epoxy crack-repair techniques per industry guidelines to repair cracks that are active or deep. Note that repair of existing cracks in the concrete subfloor only subdues but does not completely prevent their ability to telegraph through USG Durock™ Multi-Use Pro Self-Leveling Underlayment. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing through USG Durock™ Multi-Use Pro Self-Leveling Underlayment. Respect existing expansion and control joints. See Limitations, pg. 4, #7.

USG Durock™ Multi-Use Pro Self-Leveling Underlayment can be applied with metal lath over engineer-approved, APA-Rated exterior glue plywood or oriented strand board (OSB) (i.e., APA-Rated Exterior or Exposure 1 panels) wood subfloors following the Tile Council of North America’s F185-14 specification at a minimum 1/2 in. depth. Subfloor must be properly prepared and primed with USG Durock™ Brand Primer-Sealer. USG Durock™ Multi-Use Pro Self-Leveling Underlayment can be applied over wood subfloors without lath when poured to a minimum thickness of 3/4 in. depth. See Notes/Limitations, pg. 4, #4 for subfloor deflections.

For the application of USG Durock™ Multi-Use Pro Self-Leveling Underlayment over existing floor coverings on concrete subfloors such as ceramic tile, vinyl composition tile (VCT), cement terrazzo and thin cutback adhesive, the surface needs to be well bonded, sound and clean.

Tiles that exhibit a bubbled surface or that are debonding from the substrate are not suitable surfaces for receiving USG Durock™ Multi-Use Pro Self-Leveling Underlayment. These floor-covering surfaces need to be removed and the substrate inspected for potential water damage. If water damage is detected, the source of the moisture needs to be identified and addressed. These areas should be checked for MVER using the ASTM F1869 test method (see above). Depending on the MVER ratings, the subfloor may need to be treated with USG Durock™ Brand RH-100 Moisture Vapor Reducer.

Contact USG for applications over vinyl asbestos tile (VAT).

INSTALLATION SUBFLOOR PREPARATION CONT.

USG Durock™ Multi-Use Pro Self-Leveling Underlayment can be installed over non-water-soluble adhesives on concrete only. The adhesive residue must first be tested to make certain it is non-water-soluble. Any water-soluble adhesive residues must be mechanically removed down to clean concrete. Non-water-soluble adhesive residues should be prepared to a thin, well-bonded residue using the “wet-scraping” technique as recommended by the Resilient Floor Covering Institute (rfci.com) to remove thick areas and adhesive buildup, as well as any areas that are weak or not well bonded to the concrete. Any existing patches below the adhesive must be completely removed.

USG Durock™ Multi-Use Pro Self-Leveling Underlayment will set within two hours under normal conditions. Light foot traffic can occur after this time; normal trade traffic can resume the next day. After USG Durock™ Multi-Use Pro Self-Leveling Underlayment is firmly set (typically two hours after the pour), provide adequate ventilation to ensure uniform drying of the installed USG Durock™ Multi-Use Pro Self-Leveling Underlayment. High ambient humidity and higher thicknesses will delay the drying process. Protect floors from heavy trade traffic loads (i.e., loaded drywall carts, heavy tool cabinets, etc.) with plywood.

PRIMING

Use USG Durock™ Primer-Sealer for preparing the concrete prior to application of USG Durock™ Multi-Use Pro Self-Leveling Underlayment. Proper use of USG Durock™ Primer-Sealer enhances the bond of the underlayment and effectively seals the subfloor and prevents formation of pinholes, domes and craters in USG Durock™ Multi-Use Pro Self-Leveling Underlayment due to the upward migration of air bubbles from the subfloor. Refer to submittal sheet *USG Durock™ Brand Primer-Sealer* (CB519) at usg.com for installation instructions and application rates.

Floors to be primed must be dry, structurally sound and clean. Remove any dirt, tar, wax, oil, grease, latex compounds, sealers, curing compounds, release agents, asphalt, water-soluble adhesives, paint, chemicals, loose topping, joint compounds from drywall installation or any other contaminant that might interfere with development of good bond.

For primer application, the temperature of the USG Durock™ Primer-Sealer, subfloor and room must be maintained between 50 °F and 95 °F (10-35 °C) for a period of 48 hours before and after application.

CONTINUOUS MIXER AND PUMP

Contact USG to determine the appropriate mixing equipment required.

MIXING

When opening bags, use engineering controls—including local exhaust—to reduce exposure to dust. Wear NIOSH-recommended respirator if needed.

USG Durock™ Multi-Use Pro Self-Leveling Underlayment is mixed with sand and water at the job site. Use QUIKRETE® Commercial Grade Sand (No. 1962)—Medium or a sand that has been approved by USG. Note—The US sieve range for this sand product is 20-50 mesh (0.8 mm-0.3 mm). Each 80 lb. bag of USG Durock™ Multi-Use Pro Self-Leveling Underlayment will require 80-100 lbs (36-45 kg) of sand. Add sand and 1 bag (80 lbs. [36.2 kg]) of USG Durock™ Multi-Use Pro Self-Leveling Underlayment powder to 3.5 to 4.0 gallons (13.25 to 15.1 L) of cool, clean potable water and mix for a minimum of 45 seconds, but no longer than 3 minutes as this may induce air into the mixture.

TEST PROCEDURES SLUMP TEST

Set Plexiglas® sheet on a level, stable surface, away from foot traffic. Ensure that the 2 in. (51 mm) X 4 in. (102 mm) cylinder is clean and dry. Place the cylinder in the middle of the Plexiglas sheet. Pour the USG Durock™ Multi-Use Pro Self-Leveling Underlayment slurry into the cylinder, slightly overfilling it. Screenshot the excess material from the top of the poured cylinder away from the Plexiglas sheet. Lift the cylinder up smoothly to form the patty. Do not shake any excess slurry from the cylinder. Wait one minute and measure the patty in two directions 90° apart and calculate the average of the two measurements +/- 1/8 in. (3.2 mm) Ensure that the average patty diameter is within the 5 in. (127 mm) to 6-1/2 in. (165.1 mm) range.

APPLICATION

During the entire installation process, the building must be enclosed and temperature maintained at a minimum of 50 °F (10 °C) minimum until permanent heating is available. Adequate ventilation must be provided to ensure uniform drying of the installed floor underlayment, which typically occurs within 5-7 days at a 1/2 in. (12.7 mm) thickness.

During application and until the USG Durock™ Multi-Use Pro Self-Leveling Underlayment is firmly set (typically the first two hours immediately following the pour), close all doors, windows and other openings in the building and turn off HVAC systems to prevent air drafts. Protect installation areas from direct sunlight exposure for at least 24 hours. Thereafter, normal operation of the HVAC system can resume, as well as the use of doors, windows and other openings.

APPLICATION CONT.

USG Durock™ Multi-Use Pro Self-Leveling Underlayment—either mixed or in powdered form—subfloor and room temperature must be between 50 °F and 95 °F (10-35 °C) at the time of application and for 72 hours after installation of USG Durock™ Multi-Use Pro Self-Leveling Underlayment. For temperatures above 95 °F (35 °C), follow the American Concrete Institute's (ACI) *Hot Weather Concrete Guidelines* to ensure proper installation. If available water is not cool, chill water to 70 °F (21 °C).

When uncertain or unknown construction conditions are present on the job site, it is recommended to pour a small test area before conducting full installation. The test area must also include finish flooring to establish suitability of the complete system for intended use.

USG Durock™ Multi-Use Pro Self-Leveling Underlayment has a flow time of approximately 15 minutes at 70 °F (21 °C). At higher temperatures the flow time is shortened; at lower temperatures the flow time is extended. Work as a team to obtain a satisfactory installation. Ensure continuous flow of slurry and promptly spread the USG Durock™ Multi-Use Pro Self-Leveling Underlayment to desired thickness and finish using a gage rake and a smoother. Perform these operations promptly to avoid trapping air bubbles, prevent formation of cold joints and achieve a satisfactory finish surface.

Apply the USG Durock™ Multi-Use Pro Self-Leveling Underlayment in an even ribbon along the short dimension of the room or area to be poured. Maintain a continuous wet edge. If pouring the USG Durock™ Multi-Use Pro Self-Leveling Underlayment against an edge that has been allowed to set, the edge of the previous pour should be treated with USG Durock™ Primer-Sealer.

The typical minimum thickness of USG Durock™ Multi-Use Pro Self-Leveling Underlayment over a concrete subfloor is 3/8 in. (9.5 mm). For thicknesses less than 3/8 in. (9.5 mm), consult USG.

Prior to floor covering installation, we recommend priming the surface of USG Durock™ Multi-Use Pro Self-Leveling Underlayment with USG Durock™ X2 Primer-Sealer or USG Durock™ Brand Primer-Sealer. However, the recommendations of the floor-covering manufacturer will always take precedence over those presented here. If a floor-covering manufacturer's sealer is used, a bond test for compatibility should be conducted. When installing high-solids floor-covering adhesives, we do not recommend priming the surface.

FLOOR-COVERING INSTALLATION

- USG Durock™ Multi-Use Pro Self-Leveling Underlayment can be walked on two hours after installation.
- Floor coverings can be installed after the USG Durock™ Multi-Use Pro Self-Leveling Underlayment is dry. Drying time will vary depending on underlayment thickness and ambient climate conditions.
- Check with floor-covering and adhesive manufacturers for installation guidelines and suitability of their manufactured products over USG Durock™ Multi-Use Pro Self-Leveling Underlayment.
- Perform field bond test to determine adhesive/flooring performance over USG Durock™ Multi-Use Pro Self-Leveling Underlayment. Install floor covering with adhesive over the sealed surface and perform field bond test approximately 72 hours after installation.
- Follow floor-covering manufacturers' recommendations for surface-sealing requirements. If the floor-covering or adhesive manufacturer requirements are more stringent, their requirements take precedence.

For further details on installation requirements, specifications and the most up-to-date product information, please see usg.com.

NOTES/LIMITATIONS

1. Do not use in exterior applications.
2. Do not use as a wear surface.
3. Do not install where continuous exposure to moisture is a possibility (for instance, exterior balconies or large commercial/institutional shower rooms).
4. Structure shall be designed so deflection does not exceed L/240 from combined dead and live loads and L/360 from live loads. Certain floor coverings such as marble, limestone, travertine and wood may have more restrictive deflection limits. Consult the appropriate floor-covering manufacturer.
5. When the MVER exceeds 5 lb. (2.3 kg)/1,000 sq. ft. (92.9 m²)/24 hours, treat the concrete subfloor with USG Durock™ RH-100 Moisture Vapor Reducer in all areas of use where potential for moisture problems may exist. USG Durock™ Multi-Use Pro Self-Leveling Underlayment is not a vapor or moisture barrier. Transmission of excessive water vapor or moisture from the concrete subfloor through the USG Durock™ Multi-Use Pro Self-Leveling Underlayment can interfere with floor-covering adhesives and compromise their performance.

NOTES/LIMITATIONS CONT.

- For on-grade applications, use USG Durock™ RH-100 Moisture Vapor Reducer over concrete. Moisture mitigation system may not be needed if a vapor retarder is installed below the concrete slab in accordance to industry specifications and practice (ASTM E1745, ASTM E1993, ASTM E1693) and the MVER value of the concrete slab is below 5 lb. (2.3 kg)/1,000 sq. ft. (92.9 m²)/24 hours.
- Do not use over expansion or isolation joints. Continue all movement joints in the concrete slab up through the layer of underlayment. In areas where the expansion or isolation joints are not present in the floor or where the concrete slab has developed systematic cracks in response to slab movement, consult with an engineer on the project or request the services of a professional structural engineer to provide such joints as part of the system in accordance with engineering requirements and industry standards.

PRODUCT DATA

Approximate Compressive Strength (aggregated) ASTM C472 (modified): 3500-4500 psi (24.1-31 MPa)²

Approximate Dry Density: 118-124 lbs./cu. ft.(1890-1986 kg/m²)²

Mixing Ratio: Add 3.5 to 4.0 gallons (13.25 to 15.1 L) of water to 80-100 lbs (36-45 kg) per 80 lb. (36 kg) bag

Approximate Coverage:

22-25 sq. ft. (2.0-2.3 m²) per batch at 3/4 in. (19 mm) thickness

44-50 sq. ft. (4.0-4.6 m²) per batch at 3/8 in. (9.5 mm) thickness

Approximate Flow Time: 15-20 minutes at 70 °F (21 °C)

Approximate Final Set ASTM C191: 60-90 minutes²

Approximate Walkable (light foot traffic): 2 hours (after set)

Thickness Range—Over Wood Subfloor without Wire Lath: 3/4 in.-3 in. (19-76.2 mm)

Thickness Range—Over Wood with Wire Lath: 1/2 in.- 3 in. (12.7-76.2 mm)

Thickness Range—Over Concrete Subfloor: 3/8 in.-3 in. (9.5-76.2 mm)

Surface pH Range ASTM F710: 11

Packaging: 80 lb. (36 kg) multi-wall paper bags

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

DANGER

Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Use only in a well-ventilated area, wear a NIOSH/MSHA-approved respirator. If exposed, swallowed, inhaled, or skin irritation occurs get medical attention. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Dispose of in accordance with local, state, and federal regulations.

For more information call Product Safety: 800 507-8899 or see the SDS at usg.com.

KEEP OUT OF REACH OF CHILDREN

TRADEMARKS

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NOTE

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NOTICE

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions 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 SDS and literature before specification and installation.

Notes:

- See Mixing instructions for sand type recommendations.
- Results 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 USG Durock™ Brand Multi-Use Pro Self-Leveling Underlayment, as well as differences in mixing/pumping equipment.

UL DESIGNATION TYPE LRK

G524, G230, G516, G535, G551*, G553*, G556, G561, G562, G564*, G566, G587, G588, G591, J917, J919, J920, J924, J927, J931, J957, J958, J991, J994, L006, L201, L206, L208, L209, L210, L211, L212, L501, L502, L503, L504, L505, L506, L507, L508, L509, L510, L511, L512, L513, L514, L515, L516, L517, L518, L519, L520, L521, L522, L523, L524, L525, L526, L527, L528, L529, L530, L532, L533, L534, L535, L536, L537, L538, L539, L540, L541, L542, L543, L545, L546, L547, L549, L550, L551, L552, L556, L557, L558, L559, L562, L563, L564, L565, L568, L569, L570, L571, L573, L574, L577, L579, L581, L583, L585, L587, L588, L589, L590, L592, L593, M500, M501, M502, M503, M504, M505, M506, M508, M510, M511, M513, M515, M517*, M521*, M522*.

For the most up-to-date UL Designation Type LRK, contact your USG representative.

Note: *UL Design requires greater minimum pour depths and compressive strengths and/or additional requirements. See individual UL Designs for specifics.

SUBMITTAL APPROVALS

Job Name	
Contractor	Date

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