



# USG DUROCK™ BRAND PROFLOW™ Series SELF-LEVELING UNDERLAYMENTS

## High-strength premium poured underlayment

- Ideal for commercial, institutional and renovation construction
- Self-leveling properties speed production and provide a smooth, crack-resistant surface
- Fast application and setting times facilitate return of light trade traffic within hours
- Featheredge to 3 in. (76 mm) thick
- No mechanical preparation required for most applications
- May be used as a decorative wear surface with an appropriate coating system
- Qualifies as a "low emitting" material

## USG Durock™ ProFlow FR Self-Leveling Underlayment

- Provides improved impact resistance
- Enhances crack reduction and reduces further propagation
- Cost-effective reinforcement solution with improved load distribution

## DESCRIPTION

USG Durock™ Brand ProFlow™ Series Self-Leveling Underlayments (USG Durock™ ProFlow and ProFlow FR) are premium interior cementitious underlayments that provide some of the highest compressive strengths in the industry—more than 6,000 psi (41.4 MPa). Designed by USG for interior use in commercial, institutional and rehab construction, they provide a smooth, hard underlayment surface over concrete slabs, pre-stressed concrete or concrete planks at thicknesses from featheredge to 3 in. (76 mm). USG Durock™ ProFlow FR Self-Leveling Underlayment is reinforced with fibers that improve impact strength. It is a cost-effective solution for interior use in new and renovation construction in residential and commercial applications.

Suitable for use with a variety of floor coverings, including commercial-grade resilient floor coverings, USG Durock™ ProFlow Series Self-Leveling Underlayments can also be used as a decorative wear surface with an approved coating system. USG Durock™ ProFlow Series Self-Leveling Underlayments are an economical solution for commercial and institutional floors. Typical applications are less labor intensive than many other types of construction, while the products' high compressive strength minimizes floor damage from trades. Quick set times and high production rates allow light trade traffic within 24 hours of installation. In addition, the exceptional surface hardness of USG Durock™ ProFlow Series Self-Leveling Underlayments resist indentation. This poured underlayment is blended with sand at the factory and mixed with water at the job site to yield a lightweight, self-leveling slurry. A 1/2 in. (13 mm) thick underlayment weighs approximately 5 lbs./sq. ft. (24.4 kg/m<sup>2</sup>) and has an approximate dry density range of 113-123 lbs./cu. ft. (1810-1970 kg/m<sup>3</sup>).

## VOC EMISSIONS

USG Durock™ ProFlow Series Self-Leveling Underlayments have been tested and qualify as a "Low Emitting" material per California Department of Public Health CDPH/EHLB/Standard Method (CA Section 01350) for school classroom and private office modeling scenarios, and contributes towards USGBC's LEED® v4 emission requirements.

## EXTENDED WARRANTY

An extended warranty may apply when using USG Durock™ ProFlow Series Self-Leveling Underlayments in a system application. Please contact USG for further details.

## 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. Mechanical preparation is not required for most applications.

**SUBFLOOR PREPARATION CONT.**

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 underlayment. Clean all surface debris and dust by sweeping or vacuuming with a HEPA filtration industrial vacuum. Seal off floor drains before starting to pour underlayment to prevent drain pipes from clogging.

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

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

To minimize the effect of expansion and cracking, wrap USG Levelrock® Perimeter Isolation Strip 2.5 (1/4 in. (6 mm) thick) around all door jambs, columns and pipes. For outside corners, the strip should extend a minimum of 24 in. (610 mm) from the corner on both sides. For more information on perimeter isolation strip installation, see *USG Levelrock® Brand Perimeter Isolation Strip Submittal (IG1874)*.

**CONCRETE SUBFLOORS**

Mechanical floor preparation such as shot-blasting, scarification or other methods of grinding may not be required prior to installation of the underlayment over a well-bonded, sound and clean subfloor. 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 the concrete substrate as strong and solid does not necessarily guarantee that the concrete substrate is free of impurities and has the right tensile strength.

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 USG Durock™ ProFlow Series Self-Leveling Underlayment must be cured properly (generally for a minimum of 28 days) prior to underlayment installation. Subfloor Moisture Vapor Emission Rate (MVER) exceeding 5 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m<sup>2</sup>)/24 hours per ASTM F1869 or a relative humidity (RH) greater than 80% per ASTM F2170, must be treated with a USG Durock™ Brand Moisture Vapor Reducer (see chart below).

**USG MOISTURE VAPOR REDUCER PRODUCT SELECTOR**

UP TO 12 MVER	UP TO 14 MVER	UP TO 25 MVER
USG Durock™ CST™ Moisture Vapor Reducer	USG Durock™ CoverPrep Moisture Vapor Reducer	USG Durock™ CoverPrep Moisture Vapor Reducer – 2 coats
USG Durock™ CoverPrep Moisture Vapor Reducer	USG Durock™ RH-100™ Moisture Vapor Reducer	USG Durock™ RH-100™ Moisture Vapor Reducer
USG Durock™ RH-100™ Moisture Vapor Reducer		

**Note** See appropriate submittal sheet for application instructions of USG Durock™ Brand Moisture Vapor Reducers at [usgperformanceflooring.com](http://usgperformanceflooring.com).

USG Durock™ ProFlow Series Self-Leveling Underlayment is not a vapor barrier. Transmission of excessive moisture vapors from the concrete subfloor through USG Durock™ ProFlow Series Self-Leveling Underlayment can interfere with floor coverings and/or floor-covering adhesives, thus compromising their performance. If the concrete subfloor has been treated with a USG Durock™ Brand Moisture Vapor Reducer, it must be primed with USG Durock™ Primer-Sealer prior to application of USG Durock™ ProFlow Series Self-Leveling Underlayment.

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™ ProFlow Series Self-Leveling Underlayment. Consult with the engineer on the project or request the services of a professional structural engineer for all suspected structural cracks.

Repair all non-structural cracks in old and new concrete to minimize and control their ability to telegraph through the layer of USG Durock™ ProFlow Series Self-Leveling Underlayment. First remove the weak concrete along the length of the cracks by chiseling or other suitable means. Next, remove accumulated dust and debris from the crack cavities using a HEPA filtration industrial vacuum or other suitable means. Various cracks present in the concrete subfloor including shrinkage cracks must be filled with a suitable commercially available crack-repair material designed for concrete flooring applications. To ensure superior resistance to crack growth, use

**SUBFLOOR PREPARATION CONT.****CONCRETE SUBFLOORS CONT.**

injection 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™ ProFlow Series Self-Leveling Underlayment. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing through USG Durock™ ProFlow Series Self-Leveling Underlayment. Respect existing expansion and control joints (see *Notes/Limitations #8*, pg. 6).

USG Durock™ ProFlow Series Self-Leveling Underlayments 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. Subfloor must be properly prepared and primed prior to underlayment application.

**WOOD SUBFLOORS**

USG Durock™ ProFlow Series Self-Leveling Underlayments 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 specification at a minimum 1/2 in. (13 mm) depth. Subfloor must be properly prepared and primed with USG Durock™ Brand Primer-Sealer. USG Durock™ ProFlow Series Self-Leveling Underlayment can be applied over wood subfloors without lath when poured to a minimum thickness of 3/4 in. (19 mm) depth. See *Notes/Limitations, #20*, pg. 7 for subfloor deflections.

**GYPSUM UNDERLAYMENTS**

Existing compromised gypsum underlayments must be solid. Loose, debonded gypsum underlayment must be completely removed until a sound bonding surface remains. Using a stiff bristle broom, sweep the old gypsum surface while wearing proper dust protection. This will help to remove the old gypsum “scale” from the surface. It is highly recommended that a HEPA filtration industrial vacuum be used after sweeping to remove as much dust as possible. Next, prime the surface with either USG Durock™ Primer-Sealer or Fusion™ Primer per the application instructions. For more information about the use of USG Durock™ ProFlow Series Self-Leveling Underlayments as a repair treatment for compromised gypsum underlayments, please see *USG Rehabilitation Guidelines for Damaged Gypsum Underlayments* (CB822).

**STRUCTURAL CONCRETE PANELS**

USG Durock™ ProFlow Series Self-Leveling Underlayments can be applied over USG Structural Panel Concrete Subfloors. For joist spacing up to 24 in. (610 mm) o.c., a minimum 1/2 in. (13 mm) depth is required. Subfloor must be properly prepared and primed with USG Durock™ Brand Primer-Sealer per the non-porous application instructions. For more information, see *USG Structural Panel Concrete Subfloor Submittal* (SCP3) at usg.com. See *Notes/Limitations #20*, pg. 7 for subfloor deflections.

**RADIANT HEAT**

For radiant heat applications, USG Durock™ ProFlow Series Self-Leveling Underlayments should be applied at a minimum thickness of 3/4 in. (19 mm) over the top of the electrical cables or hydronic tubes. Hydronic tubes are typically 3/4 in. (19 mm) thick (o.d.), resulting in a total USG Durock™ ProFlow Series Self-Leveling Underlayment thickness of 1-1/2 in. (38 mm) (as measured from the subfloor to the top of the USG Durock™ ProFlow Series Self-Leveling Underlayment); electrical cable systems are typically 1/8 in. (3 mm) to 1/4 in. (6 mm) thick, resulting in a total underlayment thickness of 7/8 in. (22 mm) to 1 in. (25 mm) (as measured from the subfloor to the top of the USG Durock™ ProFlow Series Self-Leveling Underlayment). At 1-1/2 in. (38 mm) thickness, the dry time for USG Durock™ ProFlow Series Self-Leveling Underlayments will be 14-17 days depending on environmental conditions. After 48 hours, the radiant heat system may be turned on at low temperature to help accelerate the drying process. However, good ventilation remains critical to speed the drying process.

**EXISTING FLOOR COVERINGS**

For the application of USG Durock™ ProFlow Series 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 pre-sanded floor underlayments. 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 or for RH using the ASTM F2170 test method (see *Concrete Subfloors*, pgs. 2-3). Depending on the MVER ratings, the subfloor may need to be treated with a USG Durock™ Brand Moisture Vapor Reducer.

**PRIMING**

Use the appropriate USG Durock™ Brand primer for preparing the subfloor prior to application of USG Durock™ ProFlow Series Self-Leveling Underlayments (see specific subfloor sections above). Proper use of USG Durock™ primers enhance the bond of the underlayment and effectively seals the subfloor and prevents formation of pinholes, domes and craters in USG Durock™ ProFlow Series Self-Leveling Underlayments due to the upward migration of air bubbles from the subfloor. Refer to submittal sheets *USG Durock™ Brand Primer-Sealer* (CB519) and *USG Durock™ Brand Fusion™ Primer* (CB836) at [usgperformanceflooring.com](http://usgperformanceflooring.com) for installation instructions and application rates.

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

**MIXING****TOOLS**

- Mixing drum (15 gallons)
- Gage rake
- Smoother/spreader
- Nonmetallic cleated shoes
- Measuring bucket
- Mixing drill type 2 through 7—as outlined in the *Technical Guidelines* prepared by the International Concrete Repair Institute, *Pictorial Atlas of Concrete Repair Equipment* (Guideline No. 320.5R-2014)
- Mixing paddle type 2, 3, 4, 8 or 9—as outlined in the *Technical Guidelines* prepared by the International Concrete Repair Institute, *Pictorial Atlas of Concrete Repair Equipment* (Guideline No. 320.5R-2014)
- 1 in. x 2 in. (25 mm x 51 mm) brass or plastic cylinder
- 12 in. x 12 in. x 1/4 in. (305 mm x 305 mm x 6 mm) Plexiglas® sheet
- Minimum 2 in. (51 mm) putty/drywall taping knife
- Ruler or tape measure

**BARREL MIXING**

When opening bags use engineering controls, including local exhaust, to reduce exposure to dust. Wear NIOSH-recommended respirator if needed. It is important that the mixing water for the total number of bags to be mixed is in the barrel prior to adding the dry material.

Determine the number of bags needed. Add 4.0 - 4.8 quarts (3.7 - 4.5 liters) of cool, clean potable water for each 50 lb. (22.7 kg) bag of USG Durock™ ProFlow Series Self-Leveling Underlayment powder to the dry mixing barrel. Next, slowly add one bag to the barrel while mixing. Mix for 30 seconds, making sure that all material is wetted out thoroughly. Slowly add the second and any additional bags to the mixing barrel while continuing to mix. Make sure the barrel sides are thoroughly scraped free of dry powder and that there is no unmixed material on the bottom of the barrel. Mix for an additional 90 seconds and ensure the material is uniform and lump free.

Perform a slump test on the material before application. See *Test Procedures* for instructions.

Do not add additional water until the two-minute mixing cycle has been completed. Do not overwater the material. If additional water is required, add no more than 0.4 quarts (0.38 liters) per bag and mix for 30 seconds or until mix is uniform. Do not overmix (more than three minutes), as this may induce air into the material.

The presence of bleed water on the surface and/or material segregation (settling of sand) indicates overwatering. Adjust the amount of water added to the mix to prevent bleed water and material segregation.

**CONTINUOUS MIXER AND PUMP**

Contact USG for information.

**TEST PROCEDURES****SLUMP TEST**

Set Plexiglas sheet on a level, stable surface, away from foot traffic. Ensure that the 1 in. x 2 in. (25 mm x 51 mm) cylinder is clean and dry. Place the cylinder in the middle of the Plexiglas sheet. Pour the USG Durock™ ProFlow Series Self-Leveling Underlayment slurry into the cylinder, slightly overfilling it. Screed off 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 mm). Ensure that the average patty diameter is within the 6 - 6-3/4 in. (152-171 mm) range for USG Durock™ ProFlow Series Self-Leveling Underlayments.

## APPLICATION

During application and until the USG Durock™ ProFlow Series Self-Leveling Underlayments are 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. Thereafter, the HVAC system can resume, as well as the use of doors, windows and other openings. Light foot traffic can also occur after this time. High ambient humidity and deeper thicknesses will delay the drying process. Protect floors from heavy trade traffic loads (i.e., loaded drywall carts, heavy tool cabinets, etc.) with plywood. Protect installation areas from direct sunlight exposure for at least 24 hours.

USG Durock™ ProFlow Series Self-Leveling Underlayments—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™ ProFlow Series Self-Leveling Underlayments. 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™ ProFlow Series Self-Leveling Underlayments have 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™ ProFlow Series Self-Leveling Underlayments to desired thickness and finish using a gauge 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™ ProFlow Series Self-Leveling Underlayments 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™ ProFlow Series Self-Leveling Underlayments against an edge that has been allowed to set, the edge of the previous pour should be treated with USG Durock™ Primer-Sealer.

### DEEP FILL APPLICATION

Contact USG for information.

### WEAR SURFACE APPLICATION

- USG Durock™ ProFlow Series Self-Leveling Underlayments can be used as a wear surface with a protective coating system.
- USG Durock™ ProFlow Series Self-Leveling Underlayments can be integrally colored or stained using a tested stain and either polished or sealed with a protective coating system.
- Coating systems must be tested for adhesion to USG Durock™ ProFlow Series Self-Leveling Underlayments. The bond test and performance of coatings are the responsibility of the coating manufacturer. Contact USG for further information regarding decorative coating options.

### POLISHING PROCEDURES

- USG Durock™ ProFlow Series Self-Leveling Underlayments can typically accept foot traffic approximately four hours after the pour.
- Polishing can begin in as little as 24 hours when thicknesses do not exceed 1/2 in. (13 mm). For deeper pours, polishing can begin in 48 hours depending on topping thickness and drying conditions.
- Protect the surface of USG Durock™ ProFlow Series Self-Leveling Underlayments from contaminants and water until installation of a wear surface coating is applied.
- USG Durock™ ProFlow Series Self-Leveling Underlayments can be ground and polished much like concrete to achieve the desired Distinctness-of-Image (DOI). Due to equipment and procedural variations, it is recommended to perform a test area using the equipment and procedures required to meet the client's expectation.
- Wear recommended PPE during the polishing procedure. Read all applicable SDSs and data sheets for associated polishing products.
- **CAUTION** Color variation is to be anticipated and can be highlighted by variations in the amount of mixing water, mixing time, application methods, raw materials and wear surface coatings.

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

## FLOOR-COVERING INSTALLATION

- USG Durock™ ProFlow Series Self-Leveling Underlayments can be walked on approximately two hours after installation.
- Floor coverings can be installed within three to five days when USG Durock™ ProFlow Series Self-Leveling Underlayments are applied at 1/2 in. (13 mm) thickness. 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™ ProFlow Series Self-Leveling Underlayments.
- Perform field bond test to determine adhesive/flooring performance over USG Durock™ ProFlow Series Self-Leveling Underlayments. Install floor covering with adhesive 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 [usgperformanceflooring.com](http://usgperformanceflooring.com).

## NOTES/LIMITATIONS

1. Do not use in exterior applications.
2. USG Durock™ ProFlow Series Self-Leveling Underlayments can be used as a wear surface with a tested decorative, protective coating system. Coating systems must be tested for adhesion to USG Durock™ ProFlow Series Self-Leveling Underlayments. The bond test and performance of coatings are the responsibility of the coating manufacturer. Contact USG for further information regarding decorative coating options.
3. Do not install where continuous exposure to moisture is a possibility.
4. Do not install over dimensionally unstable, improperly prepared, weak subfloors.
5. Do not install over concrete subfloor less than 28 days old. For untreated (without an approved moisture mitigation system) concrete subfloors less than 28 days old, contact USG.
6. For below-grade applications, contact USG.
7. Contact USG for use over sound mats.
8. 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 services of a professional structural engineer to provide such joints as part of the system in accordance with engineering requirements and industry standards.
9. Existing cracks in the new and old concrete must be repaired with an appropriate crack-repair material in accordance with industry recommendations prior to installation of the underlayment. Note that repair of existing cracks in the concrete subfloor only subdues but does not completely prevent their ability to telegraph through USG ProFlow Series Self-Leveling Underlayments. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing through the poured underlayment.
10. When the MVER exceeds 5 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m<sup>2</sup>)/24 hours or an RH greater than 80% per ASTM F2170, treat the concrete subfloor with a USG Durock™ Brand Moisture Vapor Reducer. For appropriate moisture vapor reducer product, see chart on page 2. USG Durock™ ProFlow Series Self-Leveling Underlayments are not a vapor or moisture barrier. Transmission of excessive water vapor or moisture from the concrete subfloor through the USG Durock™ ProFlow Series Self-Leveling Underlayment can interfere with floor coverings and/or floor-covering adhesives, thus compromising their performance. 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 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m<sup>2</sup>)/24 hours or has an RH less than 80% per ASTM F2170.
11. Do not use acid etching as a method of cleaning and preparing the concrete subfloor. Profiling the concrete surface with USG Durock™ LSP Liquid Surface Profiler should be used in lieu of acid etching solutions.
12. Do not use sweeping compounds to clean and prepare the concrete subfloor. Use of such sweeping compounds leaves an oil film on the surface of the concrete that will interfere with the underlayment's bond development. Use a HEPA filtration industrial vacuum to remove the dust and debris and prepare the subfloor for USG Durock™ ProFlow Series Self-Leveling Underlayment application.

**NOTES/LIMITATIONS CONT.**

- 13.** The use of adhesive-removing chemicals or solvents to eliminate contaminants from the concrete subfloor can transport oil, grease and other contaminants further into the concrete pores. These chemicals can leech back to the surface over time thus compromising the bond performance of flooring adhesives to USG Durock™ ProFlow Series Self-Leveling Underlayments. To remove contaminants from the concrete subfloor, use USG Durock™ LSP™ Liquid Surface Profiler to clean and prepare the surface. See *USG Durock™ Brand LSP™ Liquid Surface Profiler Submittal* (CB5246) at usgperformanceflooring.com for more information.
- 14.** Do not mechanically remove organic adhesives, asphalt, coal-tar-based adhesives or other materials containing asbestos. Contact USG for applications of USG Durock™ gypsum-based cement self-leveling underlayments over asbestos tiles.
- 15.** Do not overwater or over mix.
- 16.** Do not add any chemical additives or polymers to USG Durock™ ProFlow Series Self-Leveling Underlayments.
- 17.** Do not use wet curing or curing compounds.
- 18.** Do not mix with other cementitious products or self-leveling materials.
- 19.** Do not apply USG Durock™ ProFlow Series Self-Leveling Underlayments over wood subfloor without metal lath at less than 3/4 in. thickness. Differential or excessive movement of the wood subfloor may lead to development of cracks in USG Durock™ ProFlow Series Self-Leveling Underlayments at the wood subfloor joints and adjacent areas.
- 20.** 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.
- 21.** Existing gypsum underlayments must be solid and dust free. Gypsum underlayment must be sealed with USG Durock™ Primer-Sealer or Fusion Primer. First test surface hardness by scratching existing underlayment with a coin. If surface can be gouged, please see *USG Rehabilitation Guidelines for Damaged Gypsum Underlayments* (CB822) at usgperformanceflooring.com for alternative repair methods.
- 22.** For thicknesses greater than 1 in. (25 mm), contact USG for special application instructions.
- 23.** Adhere to the Radiant Panel Association (RPA) Guidelines for Hydronic Radiant Floor Heating regarding temperature and fluid temperatures. Fluid temperatures of radiant systems shall not exceed 140 °F (60 °C) at the exit of the heating device. To limit risk, floor temperatures shall not exceed 100 °F (38 °C) in general and shall be limited to 85 °F (29 °C) in areas of direct contact by building occupants. To minimize any potential of shocking the USG Durock™ ProFlow Series Self-Leveling Underlayment, the radiant heat system should be ramped up slowly over several days until the underlayment is fully dry. Startup of radiant systems shall be in accordance with manufacturers' and RPA-recommended startup procedures.
- 24.** Saw cutting in a diamond pattern is recommended around columns, from column to column over structural beams and at locations where framing members change direction in an effect to control where stress cracks occur. The saw cuts should be 1/3 of the thickness of the pour.

**PRODUCT DATA**

USG Durock™ ProFlow Series Self-Leveling Underlayments are sanded at the factory. Job site addition of sand is not recommended and will void the warranty. USG Durock™ ProFlow Series Self-Leveling Underlayments are mixed with water to yield a self-leveling slurry.

**Approximate Compressive Strength ASTM C109 (modified):** 6,000–8,000 psi<sup>2</sup> (41.4–55.2 MPa)

**Approximate Dry Density:** 113–123 lbs./cu. ft. (1810–1970 kg/m<sup>3</sup>)

**Mixing Ratio:** 4.0–4.8 quarts (3.7–4.5 liters) of water per 50 lb. (22.7 kg) bag

**Approximate Coverage:** 21 sq. ft. (1.9 m<sup>2</sup>) per bag at 1/4 in. (6 mm) thickness

**Approximate Flow Time:** 15 minutes

**Approximate Final Set ASTM C191:** 60–90 minutes<sup>2</sup>

**Approximate Light Foot Traffic:** 2–4 hours

**Approximate Time to Flooring:**

3–5 days at 1/2 in. (13 mm) thickness.

(Drying time will vary depending on underlayment thickness and ambient climate conditions.)

**PRODUCT DATA CONT.**

**Thickness Range:**

Concrete: Featheredge to 3 in. (76 mm)  
Wood: 1/2 in. (13 mm) – 3 in. (76 mm)  
Structural Concrete Panels: 1/2 in. (13 mm) – 3 in. (76 mm)

**Surface pH Range ASTM F710: 11**

**Packaging:** 50 lb. (22.7 kg) multiwall paper bags

**Notes:**

1. ASTM C109 modified refers to air drying as opposed to damp curing.
2. Results published herein were achieved under controlled laboratory conditions. Actual field results may differ due to environmental conditions, inconsistent proportioning of field-applied water and USG Durock™ ProFlow Series Self-Leveling Underlayments, as well as differences in mixing/pumping equipment.

**UL DESIGNATION TYPE HSLRK**

G230, G516, G524, G535, G551\*, G553\*, G556, G559, G561, G562, G564\*, G566, G587, G588, G591, G592, H502, 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, L533, L534, L535, L536, L537, L538, L539, L540, L541, L542, L543, L545, L546, L547, L549, L550, L551, L552, L556, L557, L558, L559, L560, L562, L563, L564, L565, L568, L569, L570, 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\*, M525, M527, M530, M531, M532, M534, M535, M536, M538, M541.

**STORAGE**

For the most up-to-date UL Designation Type HSLRK, 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**

USG Durock™ ProFlow Series Self-Leveling Underlayments should be stored in an enclosed shelter providing protection from damage and exposure from the elements. During winter, dry mix material should be stored in a heated room before application, as deeply cooled material may increase the risk that some additives may not dissolve during mixing. If temperature is too high, premature setting may occur. Remove damaged or deteriorated materials from the job site. USG Durock™ ProFlow Series Self-Leveling Underlayments have a shelf life of 12 months from the manufactured date.

**PRODUCT INFORMATION**

See [usgperformanceflooring.com](http://usgperformanceflooring.com) for the most up-to-date product information.

**DANGER**

Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer by inhalation of respirable crystalline silica. Do not handle until all safety precautions have been read and understood. Avoid breathing dust. Use only in a well-ventilated area, wear a NIOSH/MSHA-approved respirator. Wear protective gloves/protective clothing/eye protection. If 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](http://usg.com)

**KEEP OUT OF REACH OF CHILDREN.**

**TRADEMARKS**

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We shall not be liable for consequential, incidental or special 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 the replacement of defective goods or a refund of the purchase price, at USG's option, and does not include costs of labor, floor-covering materials, or any other costs associated with material replacement. 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 applicable SDSs and literature before specification and installation.

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

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CB579-USA-ENG/rev. 4-20  
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