



USG DUROCK™ BRAND ADVANCED SKIM COAT™ FLOOR PATCH

Versatile, trowelable calcium aluminate skim coat and floor patch

- Ideal over concrete, gypsum, metal and wood subfloors and most interior floors, including tile
- Fast setting—floor coverings may be installed in as little as 15 minutes
- Innovative formulation offers significant yield advantage vs. competitive products
- May be retempered multiple times without addition of water
- No priming necessary over most surfaces
- Featheredge to 1/2 in. (13 mm) thick in large areas; any thickness in small well-defined areas such as thresholds and concave-shaped depressions in substrates
- Easy mixing and smooth finish over various substrates
- May be used as an embossing leveler¹

1. For maximum bond when embossing, use in conjunction with USG Durock™ Brand Matrix™ Bond Enhancer.

DESCRIPTION

USG Durock™ Brand Advanced Skim Coat™ Floor Patch is a versatile calcium aluminate floor patch and skim coat for interior use over wood, concrete and gypsum subfloors.¹ Its versatility allows USG Durock™ Advanced Skim Coat Floor Patch to be used over most interior floors, including ceramic and quarry tile, terrazzo, wood, metal and interior concrete, as well as properly prepared residues of cutback and other non-water-soluble adhesives on concrete and epoxy coatings. Simply mix USG Durock™ Advanced Skim Coat Floor Patch with water and apply with a trowel—no need for priming or a latex additive for most applications. USG Durock™ Advanced Skim Coat™ Floor Patch can be used as an embossing leveler over most floor coverings when mixed with water. To enhance bond to epoxy coatings or for high performance applications, use in conjunction with USG Durock™ Matrix™ Bond Enhancer.

1. See *Notes/Limitations* #20, pg. 5.

VOC EMISSIONS

USG Durock™ Advanced Skim Coat Floor Patch achieved GREENGUARD Gold Certification and qualifies as a “Low Emitting” material per California Department of Public Health CDPH/EHLB/Standard Method (CA Section 01350) for school classroom, single-family residence and private office modeling scenarios, and meets USGBC’s LEED® v4 emission requirements.



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.

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 USG Durock™ Advanced Skim Coat Floor Patch to the host substrate.

CONCRETE SUBFLOORS

Mechanical floor preparation such as shot-blasting, scarification or other methods of grinding may not be required prior to installation of the floor patch 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 a minimum tensile strength of 175 psi when tested per the ASTM C1583 standard.

A weak or degraded concrete surface or concrete exhibiting signs of laitance (either visible or invisible), scaling, spalling, crumbling or delamination must be mechanically removed to achieve a solid and clean substrate.

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

Concrete subfloors receiving cementitious floor patches must be cured properly (generally for a minimum of 28 days) prior to floor patch installation. Subfloor Moisture Vapor Emission Rate (MVER) exceeding 5 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m²)/24 hours per ASTM F1869 or a relative humidity (RH) greater than 80% per ASTM F2170, must be treated with USG Durock™ Brand RH-100™ Moisture Vapor Reducer. USG Durock™ Advanced Skim Coat Floor Patch is not a vapor barrier. Transmission of excessive moisture vapors from the concrete subfloor through USG Durock™ Advanced Skim Coat Floor Patch can interfere with floor coverings and/or floor-covering adhesives, thus compromising their performance. **Note** When applying USG Durock™ Advanced Skim Coat Floor Patch directly to the surface of USG Durock™ RH-100 Moisture Vapor Reducer, the patch must either be mixed with USG Durock™ Matrix Bond Enhancer or the epoxy surface must be primed with USG Durock™ Primer-Sealer.

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™ Advanced Skim Coat Floor Patch. 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™ Advanced Skim Coat Floor Patch. 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-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™ Advanced Skim Coat Floor Patch. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing through USG Durock™ Advanced Skim Coat Floor Patch. Respect existing expansion and control joints (see *Notes/Limitations* #8, pg. 4).

GYPSUM UNDERLAYMENTS

USG Durock™ Advanced Skim Coat Floor Patch can be used over gypsum underlayments. For more information on compromised gypsum underlayments, please see *USG Rehabilitation Guidelines for Damaged Gypsum Underlayments* (CB822). Existing gypsum underlayments must be solid with no cracks and be dust free. Underlayment must be sealed with USG Durock™ Brand Primer-Sealer, USG Durock™ Brand X2 Primer-Sealer or USG Durock™ Fusion™ Primer. First test surface hardness by scratching existing underlayment with a coin. If surface can be gouged, do not use USG Durock™ Advanced Skim Coat Floor Patch and consult USG for alternative repair methods.

METAL SUBFLOORS

Ensure that metal subfloors are structurally sound, stable, well supported, rigid, properly anchored and free of undue flex and vibration. (See *Notes/Limitations* #19, pg. 5. Also note that the design criteria for metal deck selection is so the live load deflection does not exceed L/480.) Metal subfloors must be clean and free of rust, corrosion or any contaminant that might prevent proper bonding of USG Durock™ Advanced Skim Coat Floor Patch to the metal subfloor.

Paint steel surfaces with an anti-corrosive coating to prevent rust from recurring. Allow coating to dry thoroughly. Follow coating manufacturer’s instructions, including cure time. An anti-corrosive coating is not necessary for aluminum, copper and lead subfloors.

Next, prime the prepared metal subfloor with USG Durock™ Primer-Sealer. Mix and apply USG Durock™ primers per their corresponding installation instructions. After the USG Durock™ primer has dried, USG Durock™ Advanced Skim Coat Floor Patch may be applied.

WOOD SUBFLOORS

USG Durock™ Advanced Skim Coat can be applied over engineer-approved, APA-Rated exterior glue plywood or oriented strand board (OSB) (i.e., APA-Rated Exterior or Exposure 1 panels) wood subfloors. Subfloor must be properly prepared. See *Notes/Limitations*, #19, pg. 5 for subfloor deflections.

SPECIALTY APPLICATIONS**ADHESIVE RESIDUES**

USG Durock™ Advanced Skim Coat Floor Patch 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’s (rfci.com) *Recommended Work Practices for Removal of Resilient Floor Coverings* 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.

SPECIALTY APPLICATIONS CONT.**CUTBACK ADHESIVE RESIDUES**

To use USG Durock™ Advanced Skim Coat Floor Patch over cutback adhesive residue, first remove all loose debris from the cutback. Spread dry USG Durock™ Advanced Skim Coat Floor Patch over the cutback adhesive, then work the dry powder into the floor with a broom. Next, use a razorblade scraper to scrape the cutback down to a very thin thickness and allow to thoroughly dry prior to the application of USG Durock™ Advanced Skim Coat Floor Patch to the area.

EPOXY COATINGS

All epoxy coatings must be solidly bonded to the existing substrate and be cured, clean and sound. A weak or degraded epoxy surface layer must be mechanically removed to provide a solid base. See *Subfloor Preparation, Concrete Subfloors*, pgs. 1-2 for further information.

For direct application of USG Durock™ Advanced Skim Coat Floor Patch directly to the surface of USG Durock™ RH-100 Moisture Vapor Reducer, the patch must be mixed with USG Durock™ Matrix Bond Enhancer. For all other epoxy applications, prime the prepared epoxy coating with USG Durock™ Primer-Sealer. Mix and apply USG Durock™ Primer-Sealer per the corresponding installation instructions. After USG Durock™ Primer-Sealer has dried, USG Durock™ Advanced Skim Coat Floor Patch may be applied.

MIXING**TOOLS**

- Mixing bucket
- Trowels
- Razor scraper
- Mixing drill type 2 through 7—as outlined in the *Technical Guidelines* prepared by the International Concrete Repair Institute, *Pictorial Atlas of Concrete Repair Material Mixing 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 Material Mixing Equipment* (Guideline No. 320.5R-2014).

RATIO

Three parts USG Durock™ Advanced Skim Coat Floor Patch to one part water by volume, or up to 2.25 qt. (2.1 L) of water per one 9 lb. (4.0 kg) bag of USG Durock™ Advanced Skim Coat Floor Patch.

INSTRUCTIONS

When opening bags and mixing use engineering controls, including local exhaust, to reduce exposure to dust. Wear NIOSH-recommended respirator if needed. It is important that the mixing water is in the bucket prior to adding the dry material.

To mix a 9 lb. (4.0 kg) bag of USG Durock™ Advanced Skim Coat Floor Patch, first add up to 2.25 qt. (2.1 L) of clean water to a mixing bucket, then add the USG Durock™ Advanced Skim Coat Floor Patch. Mix with a paddle and drill.

To mix smaller quantities by hand, use three parts USG Durock™ Advanced Skim Coat Floor Patch to one part water by volume. Mix vigorously for 2 to 3 minutes with a trowel to achieve a lump-free consistency. Do not overwater. Use USG Durock™ Advanced Skim Coat Floor Patch within 10–15 minutes after mixing. Working time may be extended by retempering without adding water. Dispose of any USG Durock™ Advanced Skim Coat Floor Patch once setting has occurred.

APPLICATION

During application and until USG Durock™ Advanced Skim Coat Floor Patch is set (typically within 15–30 minutes, depending on floor patch thickness and drying conditions), 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 during setting time. Thereafter, the HVAC system can resume, as well as the use of doors, windows and other openings.

The subfloor, room temperature and USG Durock™ Advanced Skim Coat Floor Patch product—either mixed or in powdered form—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™ Advanced Skim Coat Floor Patch. For temperatures above 95°F (35°C), consult USG.

It is recommended to patch several small test areas before conducting full installation of USG Durock™ Advanced Skim Coat Floor Patch. The test areas must also include finish flooring to establish suitability of the complete system for intended use.

USG Durock™ Advanced Skim Coat Floor Patch has a working time of approximately 10–15 minutes at 70°F (21°C)/50% RH. At higher temperatures the working time is shortened; at lower temperatures the working time is extended.

FLOOR-COVERING INSTALLATION

- USG Durock™ Advanced Skim Coat may be ready for floor covering in as little as 15 minutes after application (at 70°F (21°C)). Drying time is dependent on job site temperature and humidity conditions as well as application thickness. For example, high humidity and/or low substrate temperatures will extend dry times.
- Floor coverings such as ceramic tile, VCT, sheet vinyl and carpeting can be installed as soon as USG Durock™ Advanced Skim Coat Floor Patch can be worked on without damaging the surface.
- Nonbreathable floor coverings requiring special adhesives that are sensitive to moisture; high-performance adhesives such as urethanes or epoxies; and wood flooring can be installed after 16 hours.
- Check with floor-covering and adhesive manufacturers for installation guidelines and suitability of their manufactured products over USG Durock™ Advanced Skim Coat Floor Patch.
- Protect the surface of USG Durock™ Advanced Skim Coat Floor Patch from contaminants and water until installation of floor covering is accomplished.
- Perform field bond test to determine adhesive/flooring performance over USG Durock™ Advanced Skim Coat Floor Patch. 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.

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.
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. Do not apply directly to sound mat.
8. Do not use over expansion or isolation joints. Continue all movement joints in the concrete slab up through the layer of floor patch. 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 USG Durock™ Advanced Skim Coat Floor Patch. Note that repair of existing cracks in the concrete subfloor only subdues but does not completely prevent their ability to telegraph through USG Durock™ Advanced Skim Coat Floor Patch. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing through the floor patch.
10. When the MVER exceeds 5 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m²)/24 hours or an RH greater than 80% per ASTM F2170, treat the concrete subfloor with USG Durock™ RH-100 Moisture Vapor Reducer. USG Durock™ Advanced Skim Coat Floor Patch is not a vapor or moisture barrier. Transmission of excessive water vapor or moisture from the concrete subfloor through the USG Durock™ Advanced Skim Coat Floor Patch can interfere with floor coverings and/or floor-covering adhesives, thus compromising their performance. 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 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m²)/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.
12. Do not use oil-based 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 floor patch's bond development. Use a HEPA filtration industrial vacuum to remove the dust and debris and prepare the subfloor for USG Durock™ Advanced Skim Coat Floor Patch application.
13. Do not use adhesive-removing chemicals or solvents to eliminate contaminants from the concrete subfloor. Use of such chemicals can transport oil, grease and other contaminants further into the concrete pores. These chemicals can be released back to the surface at a later time to interfere with the floor-covering adhesives, thus compromising the bond performance with USG Durock™ Advanced Skim Coat Floor Patch. Mechanically removing the organic adhesives, asphalt, coal-tar-based adhesives and other oil-based contaminants is the sole recommended method of preparing the subfloor for application of USG Durock™ Advanced Skim Coat Floor Patch.

NOTES/LIMITATIONS CONT.

- 14. For applications over materials containing asbestos, contact USG. Do not mechanically remove organic adhesives, asphalt, coal-tar-based adhesives or other materials containing asbestos.
- 15. Do not overwater or overmix.
- 16. Do not add non-USG approved chemical additives or polymers to USG Durock™ Advanced Skim Coat Floor Patch.
- 17. Existing curing compounds on concrete surfaces must be removed. Shot blasting is the only recommended method of removal.
- 18. Do not mix with other cementitious products or self-leveling materials.
- 19. 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.
- 20. Existing gypsum underlayments must be solid with no cracks and dust free. First test surface hardness by scratching existing underlayment with a coin. If surface can be gouged, do not use USG Durock™ Advanced Skim Coat Floor Patch and see *USG Rehabilitation Guidelines for Damaged Gypsum Underlayments* (CB822).

PRODUCT DATA

Mixing Ratio: 9 lb. (4.0 kg) bag USG Durock™ Advanced Skim Coat Floor Patch requires up to 2.25 quarts (2.1 L) of water (three parts USG Durock™ Advanced Skim Coat Floor Patch to one part water by volume)

Approximate Coverage:

Up to 76 sq. ft. (7.1 m²) at 1/16 in. (2 mm) thickness

Up to 38 sq. ft. (3.5 m²) per bag when applied at 1/8 in. (3 mm) thickness

Up to 19 sq. ft. (1.7 m²) per bag when applied at 1/4 in. (6 mm) thickness

Approximate Working Time: 10–15 minutes

Approximate Time to Flooring: In as little as 15 minutes or when USG Durock™ Advanced Skim Coat Floor Patch can be worked on without damaging the surface. Drying time is dependent on job site temperature and humidity conditions as well as application thickness.

Thickness Range: Featheredge to 1/2 in. (13 mm) thick in large areas; any thickness in small well-defined areas such as thresholds and concave-shaped depressions in substrates.

Packaging: 9 lb. (4.0 kg) multiwall paper bags.

Note: Physical characteristics 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™ Advanced Skim Coat Floor Patch, as well as differences in mixing equipment.

STORAGE

USG Durock™ Advanced Skim Coat Floor Patch 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. Protect unused material by removing air from bag and sealing tightly. Remove damaged or deteriorated materials from the job site. USG Durock™ Advanced Skim Coat Floor Patch has a shelf life of 12 months from the manufactured date when in original unopened packaging.

SUBMITTAL APPROVALS

| | |
|-------------------|-------------|
| Job Name | |
| Contractor | Date |

PRODUCT INFORMATION

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

GREENGUARD INFORMATION

GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.

DANGER!

Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation. 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.

KEEP OUT OF REACH OF CHILDREN.

TRADEMARKS

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SAFETY FIRST!

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

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