USG
Tile &
Flooring
Solutions

USG DUROCK™ BRAND

CRACK REPAIR COMPOUND

Versatile, pourable polyurea crack repair compound

- Ideal for repairing cracks in concrete substrates
- Fast-setting – allows for foot traffic in as little as 15 minutes
- Install coatings, toppings or floor coverings in as little as 30 minutes
- Innovative formulation allows for rapid curing in temperatures below zero
- Easy mixing, smooth finish
- Durable and strong - up to 6,200 psi (42.7 MPa)

DESCRIPTION

USG Durock™ Crack Repair Compound is a 100% solids* polyurea formula ideal for repairing cracks and voids in concrete as well as gypsum underlayments, wood, fiberglass and asphalt. Ready for foot traffic in 15 minutes or less, USG Durock™ Crack Repair Compound is ideal for quick return to service applications. It's innovative formulation also allows for rapid curing in sub-zero temperatures. With a compressive strength up to 6,200 psi (42.7 MPa), this durable but flexible compound achieves a tenacious bond without a bonding primer. USG Durock™ Crack Repair Compound is both trowelable and pourable, and changes color from black to grey when fully cured.

*Note – Product does not shrink during curing process.

EXTENDED WARRANTY

An extended warranty may apply when using USG Durock™ Crack Repair Compound 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.

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. The minimum required tensile strength is 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.

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 may telegraph through toppings, coatings or floor coverings. Consult with the engineer on the project or request the services of a professional structural engineer for all suspected structural cracks.

Small hairline cracks must be chased using a v-shaped diamond crack chasing blade on a handheld grinder. The crack should be opened to a minimum of 1/4 in. (6 mm) wide. Any oil or grease that may have seeped into a crack and contaminated the edge of the concrete must be removed by grinding if washing is not sufficient. For larger or deep cracks, use dry silica sand to fill the crack leaving a depth of 1/4 in. (6 mm) down from the surface. The USG Durock™ Crack Repair Compound will soak into the silica and fortify the patch.

New concrete and areas to be treated must be clean and free of dirt, tar, wax, oil, grease, latex compounds, sealers, curing compounds, release agents, 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™ Crack Repair Compound to the host substrate.

SUBFLOOR PREPARATION CONT.

Remove all dirt, grease, oil, salt or other contaminants by cleaning the surface with USG Durock™ LSP™ Liquid Surface Profiler. (See *USG Durock Brand LSP™ Liquid Surface Profiler Submittal* (CB5246) at usgperformanceflooring.com for more information.) Rinse thoroughly with fresh, clean water. Remove all loose, unsound or deteriorated concrete.

Concrete substrates receiving USG Durock™ Crack Repair Compound must be cured properly (generally for a minimum of 28 days) and dry prior to installation. Transmission of excessive moisture vapors from the concrete slab may interfere with coatings, floor coverings and/or floor-covering adhesives, thus compromising the compound's performance. Therefore, concrete slabs exhibiting Moisture Vapor Emission Rates (MVER) exceeding 5 lbs. (2.3 kg)/1000 sq. ft. (92.9 m^2)/24 hours per ASTM F1869 or a relative humidity (RH) greater than 80% per ASTM F2170 must be treated with USG Durock™ RH- 100™ Moisture Vapor Reducer. **Note** – Concrete surfaces and cracks that have been treated with Durock™ RH-100™ Moisture Vapor Reducer will no longer need to be treated with USG Durock™ Crack Repair Compound.

MIXING

TOOLS

- Splash-proof safety goggles
- Chemical resistant gloves
- Graduated mixing container
- Stir stick

RATIO

One part USG Durock™ Crack Repair compound Part A to one part Part B, or up to ½ gal. (1.8 L) Part A to ½ gal. (1.8 L) Part B.

INSTRUCTIONS

To prepare USG Durock™ Crack Repair Compound, remove parts A and B from the packaging kit and shake each for 10 seconds. Pour a 1:1 ratio of each part into a graduated mixing container and stir the components together for 30 seconds. Note – Mix only what can be used in two minutes; USG Durock™ Crack Repair Compound cures quickly.

APPLICATION

USG Durock™ Crack Repair Compound is suitable for application temperatures down to -5 °F (-20.5 °C). Within one minute of mixing, pour the mixture into the crack to be filled. Fill the crack to a slight excess and allow to cure. For some repairs such as spalled areas or edge repair, graded, clean, washed, kiln-dried sand can be added and mixed in to create a trowelable paste. **Never use more than two parts sand to one part activated liquid by volume.**

USG Durock™ Crack Repair Compound changes color from black to grey when fully cured, typically within 10 - 15 minutes. Once cured, this product will not be able to be scraped, only mechanically abraded. **Note** – USG Durock™ Crack Repair Compound must be profiled by grinding or sanding if it is going to be top coated. Use proper engineering controls and personal protective equipment (PPE) to protect from the dust generated.

COATINGS, TOPPINGS AND FLOOR-COVERING INSTALLATION

- USG Durock™ Crack Repair Compound is ready for coatings, toppings or floor covering in as little as 15 minutes after application.
- Check with floor-covering and adhesive manufacturers for installation guidelines and suitability of their manufactured products over USG Durock™ Crack Repair Compound.
- Perform a field bond test to determine coatings/toppings/floor-covering adhesive performance over USG Durock™ Crack Repair Compound. Install floor covering with adhesive and perform field bond test approximately 72 hours after installation.

NOTES/LIMITATIONS

1. Do not install over dimensionally unstable, improperly prepared, weak subfloors.
2. Do not install over concrete subfloor less than 30 days old.
3. 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.
4. Note that repair of existing cracks in the concrete subfloor only subdues but does not completely prevent their ability to telegraph through a coating, topping or floor covering. Growth of existing cracks or formation of new cracks in the concrete subfloor can lead to cracks telegraphing.

NOTES/LIMITATIONS CONT.

5. When the MVER exceeds 5 lbs. (2.3 kg)/1,000 sq. ft. (92.9 m^2)/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™ Crack Repair Compound is not a vapor or moisture barrier. Transmission of excessive water vapor or moisture from the concrete subfloor through the USG Durock™ Crack Repair Compound can interfere with coatings, 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 m^2)/24 hours or has an RH less than 80% per ASTM F2170.
6. Do not use acid etching as a method of cleaning and preparing the concrete subfloor.
7. 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™ Crack Repair Compound application.
8. Existing curing compounds on concrete surfaces must be removed. Use of USG Durock™ Brand LSP™ Liquid Surface Profiler or shot blasting are the only recommended methods of removal.
9. Do not mix with other cementitious products or self-leveling materials.
10. 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.

PRODUCT DATA

Mixing Ratio: 1:1 base to activator by volume

Working Time: Up to 5 minutes at 77 °F (25 °C)[1]

Pot Life: None. Pour out all material after mixing.

Approximate Coverage: 230 lf per activated gallon at 1/4 in. (6 mm) wide and 1/4 in. (6 mm) deep[2]

Cure Time at 72 °F (24 °C) and 50% relative humidity:
Dry Hard: 5 – 10 minutes[1]
Foot Traffic: 15 minutes[1]
Vehicle Traffic: 30 minutes[1]

Tensile Strength (ASTM D412): 4,800 psi (33.1 MPa)[1]

Compressive Strength (ASTM C109): 5,600 psi (38.6 MPa)[1]

Compressive Strength with Silica (ASTM C109): 6,200 psi (42.7 MPa)[1]

Elongation (ASTM D412): 6-8%[1]

Hardness, Durometer (ASTM D2240): 67-72 D[1]

Abrasion Resistance (ASTM D4060): CS-17 Wheel, 1,000 g load, 1,000 cycles 20[1]

VOC Content: 0 g/L

Flash Point: >200 °F (93.3 °C)[1]

Packaging: Carton containing 1/2 gal. (US) (1.9 L) jug of Part A and 1/2 gal. (US) (1.9 L) jug of Part B

Notes
1. Physical characteristics published herein were achieved under controlled laboratory conditions. Actual field results may differ due to environmental conditions, inconsistent proportioning of USG Durock™ Crack Repair Compound, as well as differences in mixing equipment.
2. Coverage rate is estimated and accounts for material lost when grinding away excess material for a smooth finish.

STORAGE

USG Durock™ Crack Repair Compound should be stored in an enclosed shelter providing protection from damage and exposure from the elements. Keep USG Durock™ Crack Repair Compound from freezing and extreme heat — recommended storing temperature is 45-90 °F (7-32 °C). Dispose of any waste material according to federal/state/local regulations. USG Durock™ Crack Repair Compound has a shelf life of 24 months from the date of manufacture.

SUBMITTAL APPROVALS

Job Name	
Contractor	Date

PRODUCT INFORMATION
See usgperformanceflooring.com for the most up-to-date product information.

DANGER
Combustible liquid. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs (Lungs, Respiratory system) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects. Wear nitrile or other protective gloves/clothing/eye/face protection suitable for contact with isocyanates. In case of inadequate ventilation wear respiratory protection. When sanding or grinding, wear a NIOSH approved dust mask or other NIOSH approved respirator that is protective against isocyanates and chemical laden dust. Use dust collector or other engineering controls to reduce airborne dust when sanding or grinding. Keep away from flames and hot surfaces-No smoking. Do not breathe mist/vapors. Wash thoroughly after handling. Use only in a well-ventilated area. Take off contaminated clothing and wash it before reuse. Avoid release to the environment. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Use alcohol resistant foam, dry chemical powder, dry sand, carbon dioxide (CO2) to extinguish. Collect spillage. Store in a well-ventilated place. Keep container tightly closed. Keep in an area equipped with sprinklers. Dispose of contents/containers to an approved waste disposal plant. For more information call Product Safety: 1-800-507-8899 or see the SDS at usg.com.
KEEP OUT OF REACH OF CHILDREN.

TRADEMARKS

NOTE
The information in this document is subject to change without notice. USG Corp. assumes no responsibility for any errors that may inadvertently appear in this document. Consult your USG Company sales office or representative for information.

NOTICE
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SAFETY FIRST!
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read applicable SDSs and literature before specification and installation.

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USG
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