

1. PRODUCT NAME

Rapid Patch® Self-Leveling Resurfacer

2. MANUFACTURER

Rapid Patch® is a registered trademark of TCC Materials
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Mendota Heights, MN 55120 USA
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3. PRODUCT DESCRIPTION

Rapid Patch® Self-Leveling Resurfacer is a cement-based product for resurfacing concrete floors with damaged finishes or as a wear surface for light industrial floors where a hard, flat smooth surface and a quick return to service is desired. Also use as an underlayment for installation of ceramic tile, stone, resilient flooring, carpet, or other finished flooring. Typical substrates include: fully cured concrete, APA rated exterior grade/exposure 1 plywood or OSB underlayment grade equivalent with expanded wire lath reinforcement. Install from 1/8 to 2 in. (50 mm) thick.

Features and Benefits

- Final set in 40-60 minutes
- Provides a smooth, hard, flat surface
- Underlayment or wear surface, interior or exterior
- Accepts foot traffic in 2-3 hours
- Apply from 1/8 in. to 2 in. (3-51 mm) neat. For thickness from 2 in. to 5 in. (51-127 mm), product can be extended with 25 lb. clean, dry, 3/8 pea gravel
- ASTM C109 > 8,000 psi (28 day compressive strength)
- ASTM C348 > 1,600 psi (28 day flexural strength)

When/Where to Use

Use to smooth and level properly prepared horizontal surfaces:

- New concrete floor slabs with unacceptable finishes
- Damaged existing concrete floors
- Interior and exterior concrete applications
- Interior use over APA rated exterior grade/exposure 1 plywood or OSB underlayment grade equivalent with expanded metal lath reinforcement

4. TECHNICAL DATA

Typical Values • Rapid Patch Self-Leveling Resurfacer (All testing performed per ASTM C1708)	
Mix Ratio (Water to Powder)	4.75 qt. (4.5 L) per 50 lb. (22.7 kg)
Flow	120–140 mm
Final Set Time @ 70°F (21°C)	40-60 minutes
Length Change	<+/- 0.10%
Compressive Strength ASTM C109	
24 hours	> 3,500 psi (24.1 MPa)
7 days	> 6,000 psi (41.4 MPa)
28 days	> 8,000 psi (55.2 MPa)
Flexural Strength ASTM C348	
28 days	> 1,600 psi (11.0 MPa)

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤

Available Sizes

- 50 lb. (22.7 kg) bag (BOM #103145)

Coverage

Per 50 lb. (22.7 kg) bag:

Nominal Thickness	Approximate Coverage
1/8 in. (3 mm)	44.0 sq. ft. (4.09 m2)
1/4 in. (6 mm)	22.0 sq. ft. (2.04m2)
1/2 in. (12 mm)	11.0sq. ft. (1.02 m2)

5. INSTALLATION

Preparation

Read all directions before starting work. All materials should be stored between 50°F-80°F (10°C-27°C) for a minimum of 24 hours prior to installation. Proper surface repair preparation is crucial to achieving a successful application.

Concrete Substrates:

- Concrete must be fully cured (28 days minimum), free of efflorescence, and not subject to hydrostatic pressure or moisture condensation.
- All surfaces must be clean, stable, solid, and structurally sound. Remove all unsound concrete, grease, oil, dirt, paint, sealers, curing compounds, waxes, old adhesive residue, gypsum based underlayments, old flooring, and any other foreign materials that will inhibit adhesion. Mechanical removal is recommended, chemicals often serve to drive them deeper into the concrete substrate.
- Maximum bond over a concrete substrate can be achieved by mechanically profiling the surface either by grinding, shot blasting, sand blasting, or scarifying to achieve an ICRI CSP3 to CSP5 standard. Structurally sound concrete that is porous, and has not been troweled smooth and flat may not require mechanical profiling. Typical applications that fall into this category include precast concrete floor panels, or concrete in new construction that is left unfinished in anticipation of receiving self-leveling underlayment.
- Repair deep areas, holes, and non-moving cracks with an appropriate concrete repair product, such as Rapid Patch Concrete Repair Mortar, prior to application of self-leveling and allow curing as recommended for the product.
- All surfaces require proper surface preparation followed by priming with a primer that is intended for use on concrete with a cementitious self-leveling underlayment, such as Akona Concrete Bonding Additive (sold separately). Follow primer manufacturer's instructions for installation. Allow primer to dry to the touch. Extremely porous concrete surfaces will need two coats of primer.
- Isolate and install a bond breaker, using 1/4 in. (6 mm) foam tape or caulking, where vertical surfaces meet new toppings and at all perimeters and sharp corners such as column bases, pedestals, supports, etc.

Notes: This product is very fluid and will keep flowing down sloped surfaces if it is not contained until it sets. It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

May be used for outdoor applications, the smooth surface may prove too slippery when wet. To provide better traction, a light broom finish may be applied when material has reached initial set. Alternatively, traction may be improved by adding a traction additive to the protective sealer when sealer is used.

Wood Subfloors:

Residential and light commercial interior applications.

- Follow Tile Council of North America (TCNA) F185 Installation method for cementitious self-leveling underlayments over plywood.
- All wood subfloors must be structurally sound, securely fastened. When using as underlayment the maximum deflection allowed is L/360 for ceramic tile, or L/720 for stone (including live, dead, impact, and concentrated loads).
- The wood must be either ¾ in. (19 mm) tongue and groove, APA rated exterior grade/exposure 1 plywood or OSB underlayment grade equivalent.
- The surface must be clean, free from any contaminants that may act as bond breakers such as dirt, paint, wall compound, varnish, grease, oils, or wax. All loose boards must be refastened.
- Allow a ⅛ in. (3 mm) gap between sheets. Fill gaps and all nail holes or areas where flow could leak with caulk.
- All surfaces require priming with a primer that is intended for use on wood with a cementitious self-leveling underlayment, such as Akona Concrete Bonding Additive (sold separately). Follow primer manufacturer's instructions for installation. Allow primer to dry to the touch.
- Securely fasten every 4-6 in. (10-15 cm) either galvanized metal lath or plastic lath designed for this purpose to the wood surface after priming, and prior to applying self-leveling cement. Overlap lath edges by ¼ in. (6 mm) and secure using a minimum ⅜ in. (9.5 mm) staple with no gaps, keeping lath flat. Be sure to offset lath joints. To keep the job moving, it is helpful to prime first, then stand on the lath while fastening securely.
- Install expansion joints where self-leveling cement meets restraining surfaces such as perimeter walls and sharp corners such as column bases, pedestals, supports, etc. using ¼ in. (6 mm) foam tape or caulking. Restrict flow from moving to unwanted areas by creating small dams constructed of 1"x2" lumber edges wrapped with duct tape.
- When using over lath, install no less than ¼ in. (6 mm) thickness of self-leveling above the surface of the lath.
- Use metal or plastic lath designed for this purpose when going over wood subfloors.

Mixing

1. In a clean 5 gal. container, add 4.75 qt. (4.5 L) of clean, cool, potable water. Next add the 50 lb. (22.7 kg) bag of powder, while mixing at full speed using a square mortar paddle mixing blade attached to a heavy-duty ½ in. drill (400-600 rpm). Measure water carefully, be accurate, do not add extra water.
2. Mix completely for a minimum of 2-3 minutes until lump free, adding no additional water. Avoid over watering, over mixing, or moving the mixer up and down during mixing as this will entrap air, lower the strength, and may cause cracking and/or pin-holing. The formation of a white film on the surface is an indication of over watering.
3. For larger jobs, to keep the job moving, it is recommended that multiple mixing containers be used simultaneously. This will allow one mixing container to be poured while the other is being mixed.
4. After use clean all mixing equipment thoroughly to avoid hardened product in subsequent batches.
5. Use neat (without additional aggregate) up to 2" deep. May be extended up to 50% with clean pea gravel (¾ in.) for areas deeper than 1 in. (25 mm). For best results when extending, apply a final ¼ in.- 2 in. (6-50 mm) topping layer without extension. A self-leveling primer must be used when layering.

Application

Apply only to surfaces that are frost free and between 50°F-90°F (10°C-32°C) for 24 hours prior and 48 hours after application.

1. Apply only to surfaces that are frost free and between 50°F-90°F (10°C- 32°C) for 24 hours prior and 48 hours after application.
2. Close all interior windows, doors, and HVAC vents to minimize air flow. Protect exterior application areas from excessive drying due to temperatures, air movement, direct sunlight and rainfall.
3. Divide the areas to permit continuous placement without cold joints.
4. Pour the blended material directly from the mixing container across the surface in a continuous, uniform manner to achieve a flat, level surface. No troweling is required. The mixed compound remains fluid for approximately 15-20 minutes.
5. To prevent ridges work a narrow dimension, best results are obtained pouring across the shorter distance in the room in continuous strips about 1 foot (31 cm) wide. Optimum results can be obtained by providing a continuous wet flow throughout the placement, always pouring into a wet edge.
6. Troweling is not recommended, do not overwork material once it is on the floor.
7. Honor all existing expansion joints, control joints, and moving cracks through the resurfacer application. Failure to do so could result in delamination or cracking.
8. Rapid Patch Self-Leveling Resurfacer has a working time of 25 to 30 minutes at 70°F (21°C). Temperatures and humidity will affect flow, working time, and set time.
9. If a higher build-up is needed over the first pour, allow 24 hours drying time between pours and prime surface again with a self-leveling bonding primer .
10. Rapid Patch Self-Leveling Resurfacer will not correct or compensate for a structurally defective substrate. Faults in the substrate can appear in the resurfacer. The use of alkali resistant glass fabric or galvanized metal reinforcing (Federal Specification QQL.101C) can be helpful in reducing reflective cracking.
11. Typically surfaces will accept foot traffic in 2-3 hours, non-moisture sensitive tile and stone in 4-6 hours, and resilient flooring after 16 hours at temperatures of 72°F (22°C).
12. Before laying floor tiles and other flooring materials test for MVER (moisture vapor emission rate, reference ASTM F1869) and concrete substrate's relative humidity (RH, reference ASTM F2170). The requirements of the floor covering and floor adhesive manufacturers must be followed with respect to, but not limited to, levels of moisture.
13. When used as a wear surface, the application of a protective sealer or coating is recommended in order to guard against salts, oils and surface wear. It is the responsibility of the installer / applicator to select the sealer based on intended use. Waterborne sealers can be applied once the surface is hard, generally in 2-3 hours. Solvent-borne or 100% solids coatings should not be applied for at least 24 hours. For coatings over 20 mils thick, wait 3-5 days to apply.

Clean Up

Use soapy water to clean hands and tools immediately after use. Dried material must be mechanically removed. Use a waste water hardener (e.g. Congelz® or similar product) for cementitious waste disposal.

Limitations

- Most outdoor applications require the surface to slope for drainage, however Rapid Patch Self-Leveling Resurfacer flows easily to provide a level surface and will not provide that slope.
- Do not over trowel or over work.
- Do not install over dimensionally unstable substrates such as gypsum, gypsum based patching compounds, particle board, luan, asbestos, or chip board.
- Do not install over old tacky or pressure sensitive adhesive residue, paints, sealers, curing compounds, old flooring, and other foreign material.
- Do not allow heavy or sharp metal objects to be dragged directly across the fresh surface. Protect new surface from use until material is completely hard and set.
- Protect from excessive drying due to temperatures, air movement, and direct sunlight.
- The use of damp curing or the use of curing compounds is not recommended.
- Allow 14 days curing time before turning on in-floor radiant heating systems, bring heat up slowly during the first usage.
- Rubber gloves and goggles are recommended safety equipment

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com

Cautions

Read complete cautionary information printed on product container prior to use.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Rapid Patch brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

6. AVAILABILITY

To locate Rapid Patch products in your area, please contact:

Phone: 1.651.688.9116
Website: tccmaterials.com

7. WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

Shelf Life	Best when used within one year in original, unopened bags
Storage Conditions	Store dry, cool, out of direct sunlight. Best to condition material to 65-75°F (18°-24°C) before using.
Color	Gray

WARNING: INJURIOUS TO EYES

KEEP OUT OF REACH OF CHILDREN



Rapid Patch is manufactured by TCC Materials
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