

1. PRODUCT NAME

ProSpec® Rapid Patch® Horizontal Repair

2. MANUFACTURER

Bluestone Products™, a TCC Materials® company
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120 USA

Phone: 1.651.688.9116
Fax: 1.651.688.9164
Internet: tccmaterials.com

3. PRODUCT DESCRIPTION

ProSpec® Rapid Patch® Horizontal Repair is a high-strength, fast-setting, non-shrink patching material for commercial and industrial concrete horizontal surfaces, as well as concrete pavements and highway applications. Approved by MNDOT under Rapid Hardening Materials for Repairs.

Features and Benefits

- Fast-setting patching material, initial set-time of 35 minutes
- Easy to mix and handle
- Excellent freeze/thaw and salt resistance properties
- High-strength, exceeds 1,500 psi in 3 hours
- Non-shrink formula, will not crack due to shrinkage
- Meets requirements of ASTM C928-R2 "Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs" and its related standards
- Suitable for DOT horizontal concrete repairs

*Call TCC Materials for state DOT approvals

Uses

- For use when downtime is critical
- When high early strength and fast-setting is required
- Patching concrete slabs
- Repair industrial concrete floors
- Concrete leveling and underlayments

SAFETY

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com or contact TCC Materials® at 651-686-9116 (7:30 AM to 4:00 PM M-F, Central US Time).

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 ProSpec® brand product(s) under normal environmental and working conditions. Because each project is different, neither ProSpec® nor TCC Materials® can be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

4. TECHNICAL DATA

Tests Performed	ProSpec® Horizontal Repair	ASTM C928-R2 Requirements	Typical Value when mixed with 3/8" minus aggregate
Flow (ASTM C239)			
Percentage	155%	N/A	140%
No. of drops	9	N/A	19
Consistency after 5 min.	155% @ 15 drops	100% min. @ 25 drops	130% min. @ 25 drops
Set Time (ASTM C230)			
Initial (hrs:min)	:33	N/A	:37
Final (hrs:min)	1:08	N/A	1:10
Compressive Strength, psi (ASTM C109)			
3 hour	1,580	1,000 min.	1,950
24 hour	3,480	3,000 min.	3,000
7 day	4,110	4,000 min.	4,000
28 day	5,790	N/A	3,930
Tensile Strength, psi (ASTM C190)			
Average	485	N/A	416
Bond Strength, psi (ASTM C882)			
1 day	1,100	1,000	1,040
7 day	1,150	1,500	1,500
Sealing Resistance to Deicing Chemicals after 25 Freeze/Thaw Cycles (ASTM C672)			
Concrete, Visual Rating	N/A	2.5 max.	1
Mortar, Scaled Material	0.17 lb./sq. ft.	1 lb./sq. ft.	N/A

4. TECHNICAL DATA (cont.)

Tests Performed	ProSpec® Horizontal Repair	ASTM C928–R2 Requirements	Typical Value when mixed with 3/8" minus aggregate
Length Change, % 28–day in water			
A	0.063	0.047	
B	0.062	0.045	
C	0.062	0.046	
Average	0.062	0.046	Allowable increase after 28 days in water +0.15
Length Change, % 28–day in air			
A	–0.037	–0.008	
B	–0.036	–0.004	
C	–0.037	–0.006	
Average	–0.037	–0.006	Allowable increase after 28 days in air –0.15

Note: Independent test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity.

LEED® Eligibility¹

- Regional Materials (MR–c4, MR–c5)

Product Enhancement



Expansion Stabilization Technology (EST®) – Special additive designed to reduce the potential for cracking and shrinkage.

Packaging

Gray: 50 lb. (22.7 kg) bag (BOM #126173)

Shelf Life

12 months from the date of manufacture when stored in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight.

Commercial Approvals

- MNDOT approved for Rapid Hardening Materials for Repairs
- NDOR approved for Rapid Hardening Materials for Repairs

5. INSTALLATION

Preparation

All materials should be conditioned to 40°–75°F (4°–24°C) 24 hours prior to installation. Proper surface repair preparation is crucial to achieving a successful application.

1. Roughen surface and remove all unsound concrete. Clean area and remove grease, oil, paint, and any other foreign

materials that will inhibit performance.

2. All concrete surfaces must be fully cured, structurally sound, and non–flexing.
3. The surface should be saturated with water, Surface Saturate Dry (SSD) with no puddling of water, prior to placement.
4. For repairs deeper than 1 in. (2.5 cm) make a vertical cut around the perimeter of the repair making a minimum width of repair at 2 in. (5 cm). Prepare as described in above steps.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Refer to:

- ACI 546 [Concrete Repair Guide](#)
- ICRI Technical Guideline Number 03730 [Guide for Surface Preparation for the Repair of Deteriorated Concrete from Reinforced Steel Corrosion](#)

Job Mockups

The manufacturer requires that when its ProSpec® products are used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance and long–term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documentation of the tests performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project–specific conditions being addressed, and standardized tests performed for each proposed system or variation.

Mixing

Mix only the amount of material that can be placed within the 20–30 minute initial set–time.

For SHALLOW or THIN repairs (< 1 in. thick):

1. Blend 2–3 qt. (1.9–2.8 L) of ProSpec® Mighty Bond™ bonding agent and up to 2 qt. (1.9 L) of potable water per 50 lb. (22.7 kg) bag of ProSpec® Rapid Patch™ Horizontal Repair. When using the ProSpec® Mighty Bond™ bonding agent, the initial set–time may be extended up to ½ hour.
2. Using a portable mixer, add dry mix to liquid at a ratio of approximately 4 qt. (3.8 L) per 50 lb. powder. Always add liquid to powder for easier blending. Mix for 1 minute to form a lump–free, workable mix. If necessary, additional liquid may be added to achieve desirable mixture consistency, do not exceed a total of 5 qt. (4.7 L).
3. Improved bond may be achieved by mixing a slurry coat consisting of the ProSpec® Rapid Patch™ Horizontal Repair powder mixed with ProSpec® Mighty Bond™ to a pancake batter–like consistency and brushing it around the area to be repaired just prior to placement. Slurry coat should be dry, yet tacky, when applying repair mortar.
4. Do not add aggregate (sand and rock) for thin repairs.

For DEEP repairs (> 1 in. thick):

Add between 3–4 qt. (2.8–3.8 L) clean, potable water to a portable mixer.

Mixing

For DEEP repairs (> 1 in. thick): (Cont.)

2. Add clean 25 lb. (11.3 kg) SSD $\frac{3}{8}$ " (9 mm) graded aggregate per 50 lb. (22.7 kg) bag of ProSpec® Rapid Patch™ Horizontal Repair.
3. Add one 50 lb. (22.7 kg) bag of ProSpec® Rapid Patch™ Horizontal Repair.
4. Mix for 1 minute until a lump-free mixture is reached. If necessary additional water may be added to achieve desirable mixture consistency, do not exceed a total of 5 qt. (4.7 L) water.

Application

Apply only when air and substrate temperatures are between 50°–90°F (10°–32°C) within 24 hours of application and placement, and when rain is not forecast 24 hours after.

1. Do not apply on substrates that are frozen or contain frost.
2. Do not bridge over existing expansion or control joints.
3. Minimum application thickness is $\frac{1}{2}$ in. (13 mm) neat; maximum thickness 1 in. (25 mm) neat.

Curing

- Do not wet-cure the surface of the repair when modified with bonding agents.
- Protect patches from rapid drying on hot windy days.
- Maintain a minimum of 40°F (4°C) for 24 hours after application.
- Refrain from using curing or sealing compounds over patching materials for a minimum of 2 weeks.

Cleaning

Use clean potable water to clean all tools immediately after use. Dried material must be mechanically removed. Use a waste water hardener (e.g. Conglez™ or similar product) for cementitious waste disposal.

Limitations

- Application with job-site aggregate added are not covered under ASTM C928–R2.
- Shade and protect patch in windy and/or hot weather conditions.
- During weather warm conditions, keeping mixing water and material cool should assist in maintaining open time of the product. During cold weather conditions, the use of warm mixing water and warming surfaces should accelerate set times.
- Do not over-work, over-water, retemper or overmix.
- Do not apply to surfaces that are frozen or contain frost.
- Do not use product when ambient air temperature is below 40°F (4°C) or if it is expected to drop below 40°F (4°C)

©Copyright 2020 TCC Materials®

Rapid Patch® is a trademark of TCC Materials®

LEED® is a registered trademark of U.S. Green Building Council.

Data Sheets are subject to change without notice. For the latest revision, check our website at tccmaterials.com

within 24 hours of placement.

- Do not bridge expansion joints, control joints, or cold joints.
- Clean trowel frequently during application
- ProSpec® Rapid Patch™ Horizontal Repair should be installed in accordance with local building code provisions and all applicable ASTM standards.

Coverage

50 lb. (22.7 kg) bag yields:

Neat = 0.41 cu. ft. (11.6 L)

Extended by 50% with pea gravel = 0.58 cu. ft. (16.4 L)

6. AVAILABILITY

To locate ProSpec® products in your area, please contact:

Phone: 1.651.688.9116

Email: info@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.

8. MAINTENANCE

Not applicable.

9. TECHNICAL SERVICES

Technical Assistance:

Information is available by calling TCC Materials® (hours 7:30 AM to 4:00 PM CST):

Phone: 1.651.688.9116

Email: info@tccmaterials.com

Web: tccmaterials.com

Technical and Safety Literature:

To acquire technical and safety literature, please visit our website at: tccmaterials.com.

10. FILING SYSTEM

Division 3

¹ ProSpec® products can contribute to LEED® credits within the Material Resource, (Recycled Content & Regional Materials) and Indoor Environmental Quality (Low Emitting Materials).



2025 Centre Pointe Blvd, Suite 300,
Mendota Heights, MN 55120

REV 09/20