

Technical
Data Sheet



Willamette Valley Company

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Partnering through service,
innovation, and integrity

POLYQuik® FASTPATCH MD/GC

Flexible Concrete Spall Repair

DESCRIPTION

FASTPATCH MD/GC MD(Meter Dispensed)/GC(Gravel Extended Kit) is a flexible, two-component urethane designed as a fast curing repair product for concrete roadways. It is a 100% solids product supplied in ready-to-use kits or drums/totes for meter applied applications. FASTPATCH MD/GC has excellent adhesion to concrete. Concrete repaired with FastPatch MD/GC can be opened to traffic in as little as an hour.

WHERE TO USE

- **Roadways**—repair cracks, spalls, broken slabs
- **Parking Lots**—repair damaged areas
- **Warehouse**—transitions or spalls
- **Sidewalks**—broken or damaged areas

FEATURES AND BENEFITS

- **Cold Applied**—easy to use and safe to apply
- **Fast Curing**—reopen to traffic quickly
- **Flexible**—absorbs impact and stress
- **Excellent Adhesion**—restores damaged areas
- **Two Set Times**—for a wide range of application condition

PACKAGING

5-gallon kit
High yield kit
50-gallon drums
200-gallon totes

COLORS

Gray, Black

YIELD

5-gallon kit = 1.25 gal resin mixed (0.167ft³).
With gravel volume = 2.25 gal (0.3ft³)

High Yield Kit = 3.75 gal resin mixed (0.5ft³).
With gravel volume = 7 gal (0.9ft³).

SHELF LIFE

1 year when properly stored.

STORAGE

Store and ship this product in a clean, dry, low-humidity, shaded or covered environment at 60-90°F (15-32°C).

TECHNICAL INFORMATION

Typical Properties

VOC , lbs/gal (g/L), ASTM D 2369	0
Viscosity , cps, ASTM D 4878, mixed	2400
Service Temperature , ° F (° C)	-30 to 170 (-34 to 77)
Potlife , min., 70° F (21° C)	5min MD/GC, 2min MD180
Set Time In Mass , 70° F (21° C)	10min MD/GC , 4min MD180
Tack Free Time In Mass , 70° F (21° C)	60min MD/GC , 30min MD180
Hardness , Shore A, ASTM D 2240	85
Concrete Adhesion , psi (MPa), ASTM D 4541	500 (3.4) 100% cohesive (primed)

Processing Parameters

Ratio by Volume	4 to 1 (Resin to Iso)
Application Temp. , ° F (° C)	38 to 100 (10 to 37)
Recommended Thickness	Varies, refer to application instructions
Recommended Repair Size	Less than 16 ft ² (1.49m ²)
Mix Tube Size for MD (Meter Dispensed)	13 mm diameter with 32 elements

MD/GC (not MD180): Effect of temperature on pot life and set time

Temp. °F (°C)	Pot Life (min.)	Set Time (min.)
100 (38)	4	5
70 (21)	5	10
50 (10)	8	45

APPLICATION

SURFACE PREPARATION

CONCRETE

1. The concrete surface being repaired must be fully cured 28 days, structurally sound (200psi or greater according to ASTM D7234), clean (ASTM D4258), and dry (less than 5%, ASTM E1907).
2. Concrete surface must be dry and clean. Water or oil present can result in poor adhesion. Apply product only if surface temperature is 5° F (3° C) above the dew point to avoid application over damp surface.
3. Remove any contaminants before profiling surface.
4. It is recommended to profile surface according to ICRI Guide 03732 to a minimum of CSP 3 by abrasive blasting.
5. Saw cut spall area in shape of a square 1-3 inches (2.54-7.6 cm) deep, hammer (15 lb) spall area and remove debris. Recommended repair size is less than 16 ft² (1.49m²).
6. Use a minimum 120 PSI continuously dry compressed air to blow out loose debris, dirt and dust prior to applying product. Moist concrete can be torched dry. If moisture returns immediately after torching, stop and do not install FASTPATCH in this area.
7. Use a steel bristle brush to remove dirt on vertical and horizontal concrete surfaces and use compressed air to blow out prior to applying product.
8. As necessary, plug all gaps or joints surrounding the spall area with foam backer rod and choose a rod width that fits tightly in the area.
9. Priming all concrete surfaces is recommended. Prime with POLYPrime or POLYQuik® IK Primer. Contact WVCO for proper primer selection. Refer to primer TDS sheets for detailed instructions.
10. For spall areas, honor all joints or moving cracks in the spall area by saw-cutting after FASTPATCH has cured.

OTHER MATERIALS

1. Previously installed polymer materials must be tested to determine the best method of preparation to achieve acceptable adhesion. Consult manufacturer for recommendations. Typically, methods will include solvent cleaning, abrading, and vacuuming surface.
2. FASTPATCH is not typically recommended for use in asphaltic roadways. Exceptions do occur; contact Willamette Valley Co. for more details.
3. Avoid placing FASTPATCH on asphaltic materials, bare ground, dirt, grass or other non-structural surfaces.

GRAVEL INFORMATION

1. Use recommended FASTPATCH Gravel for applications. Gravel may be purchased from multiple sources. Suitability must be determined by the End User. Contact WVCO for recommended tests and evaluation procedures or for gravel approval. Gravel should be approximately 3/8" round rock that is washed and dried. Sourced gravel should have Mohs scale hardness: ≥ 5 .
2. Gravel makes up 40-50% of the repair volume.
3. Typically 20-lbs (9 kg) of gravel is required for each gallon of mixed resin/iso.

KIT PROCESSING

1. Precondition the resin, iso, and gravel to 70°F (21°C) for 24 hours before use. Gravel must be dry and relatively free of dust.
2. Resin, iso, and gravel can be heated up to 100°F (38°C) to speed cure at colder temperatures. It is recommended to heat all components when the surface temperature is below 50°F (10°C).
3. Check that primed surfaces are ready for application of FASTPATCH before applying mixed material.
4. Ensure that the mixing station is a short distance from the application area. Multiple kits can be mixed at the same time when repairing large or multiple repairs.
5. Use entire kit and do not divide.
6. Attach a clean mixing blade with a width 1/3 the diameter of the mixing container to a 500RPM drill.
7. POTLIFE IS LESS THAN 5 MINUTES. USE IMMEDIATELY AFTER MIXING.

APPLICATION

1. Protect the surfaces around the application area to prevent contamination during the installation.
2. Prime all surfaces.

3. Remove all the contents from the bucket: the two containers and the gravel. Inside are two containers (1 gal – resin, 0.25 gallon – iso), and gravel.
4. Place gravel in spall below surrounding surface by 0.25-0.5 in (0.64-1.3 cm). Gravel should be placed in repairs ≥ 1 in thick or material may pull away from surrounding substrate. Material can be used neat in cracks, joints, or shallow repairs. Discard excess gravel and use the bucket for mixing the resin and iso.
5. Shake the resin container for 30 seconds and pour the contents into the mixing bucket.
6. Add the iso to the mixing bucket and mix together for 20 seconds. Scrape the SIDES and BOTTOM of the bucket with a wooden straight edge and continue to mix for an additional 20 seconds. All of the iso must be thoroughly incorporated in the resin before adding it to the spall. THE MATERIAL MAY NOT SET-UP IF IT IS IMPROPERLY MIXED. Signs of poor mixing include dark swirls and tacky material that does not solidify.
7. IMMEDIATELY pour mixed FASTPATCH over the gravel.
8. Use a plastic trowel to level FASTPATCH and 0.25 inch (0.60 cm) below surrounding surface until it cures. Avoid overfilling spall.
9. Add the topping sand as necessary when the material has gelled. Add topping sand to refusal.

METER PROCESSING

1. For meter applied applications contact Willamette Valley Company Precision Technologies Division for equipment recommendations.
2. Precondition the resin, iso and gravel to 70°F (21°C) for 24 hours before using. Gravel must be dry and free of dust.
3. Mechanically mix resin for at least 30 minutes before proportioning begins. Use a mixer fitted with blades that are 1/3 the diameter of the container to redistribute any settled material.
4. Test the meter operation and FASTPATCH before dispensing in spall area using a 13 mm diameter mixer with 32-elements. Dispense in test area to verify FASTPATCH material sets up in less than 15 minutes.

APPLICATION

1. After priming, dispense FASTPATCH on the walls and ENTIRE floor of spall.
2. Place gravel in spall below surrounding surface by 0.25-0.5 in (0.64-1.3 cm). Gravel should be placed in repairs ≥ 1 in thick or material may pull away from surrounding substrate. Material can be used neat in cracks, joints, or shallow repairs.
3. Insert mix tube nozzle in the lowest elevation of the gravel and dispense until FASTPATCH floats on the gravel. Move the mix tube to higher elevations while dispensing until the entire spall is flooded with FASTPATCH.
4. Trowel (plastic) FASTPATCH level with surrounding surface. Avoid overfilling spall area.
5. If topping sand is desired: when the material has gelled, add topping sand to refusal.
6. Sanding Larger Repairs: use skim coat and apply additional topping sand for desired texture. Sanding must be completed within 1-hour after the initial repair has solidified.

NOTE: Material is typically ready for traffic in 1-hour at 70°F (21°C). Colder temperatures and cold gravel will slow the cure. Warmer temperatures will speed the cure.

SKID RESISTANCE: It is the responsibility of the Applicator to ensure the product meets the minimum skid resistance requirement. Refer to the Agency or End-user friction management policy or specifications to determine the minimum skid resistance and test method requirement. Aggregate (Sand, pumice, flint) can be added topically at the gel stage or Fastpatch can be ground, sanded or abraded to achieve any necessary skid resistant texture.

CLEANING & MAINTENANCE

- Clean equipment with POLYQuik® Cleaner or acetone immediately after use. Cured material must be removed mechanically.

HEALTH AND SAFETY

Before handling, you should become familiar with the Material Safety Data Sheet (MSDS) regarding the risks and safe use of this product. To obtain an MSDS please call 800 333 9826 or send an email to: msds@wilvaco.com.

DISCLAIMER OF WARRANTY

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