



Extended Pot Life, Rapid Setting Structural Concrete Repair Product

TECHNICAL DATA

RRXP-1

1. Product Name

Rapid Refloor XP Rapid Set Structural Concrete Repair Product

2. Manufacturer

Metzger/McGuire

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3. Product Description

Composition:

Rapid Refloor XP is a two-component, 100% solids structural polyurethane/polyurea hybrid. When cured, **Rapid Refloor XP** is a rigid structural polymer with a Shore D Hardness of 75-80.

Basic Use:

Rapid Refloor XP was developed to repair a wide range of surface defects in industrial or stained/polished concrete floors including surface spalls/pop-outs, surface pitting, bolt-holes, random cracks and more. **Rapid Refloor XP** is designed for use in industrial or stained/polished concrete floors where final building temperatures are 32°F (0°C) to +120°F (49°C).

4. Limitations

- **Rapid Refloor XP** is a structural repair product with very high adhesive and tensile properties; consequently it will restrain concrete movement wherever placed and may lead to concrete tearing if substantial concrete movement occurs after placement.
- **Rapid Refloor XP** is not designed for use in temperatures below 32°F (0°C).
- **Rapid Refloor XP** may exhibit a moisture reaction on damp or wet surfaces; repair area should be clean and dry prior to use.
- **Rapid Refloor XP** has a relatively short pot life which reduces working time when placing. Always start with small batches when mixing by hand and test various amounts to determine comfortable mix volume.

5. Advantages

- Permanent, durable structural concrete repair in minutes.
- Ready for traffic in 60-120 minutes depending on application **Rapid Refloor XP's** low viscosity allows for penetration into cracks as narrow as 1/64" (.016 or .40 mm) and micropits in the floor surface.
- Unlike many low viscosity structural repair products, **Rapid Refloor XP** is virtually odorless.
- **Rapid Refloor XP** is non-hazardous and can be shipped overnight by air carrier.
- When used as a grouting product, **Rapid Refloor XP** can enhance floor surface continuity and gloss.
- **Rapid Refloor XP** can be mixed with aggregate to extend yield and provide better blended repairs.

6. Packaging

Rapid Refloor XP is available in 2 gallon and 10 gallon kits. Standard colors are Amber, Dovetail, Warm Stone, Porpoise and Ryno Gray. Additional popular colors are available (please see ColorFast Color Chart). Custom colors are available through special order.

7. Technical Properties

Viscosity Profile

Part A..... 640 cps

Part B..... 40 cps

Mixed..... 340 cps

Reaction Profile

(100 grams, 74°F/23°C Sample)

Pot life..... 3^{1/2}-4 minutes

Tack Free Time..... 5-8 minutes

Traffic Ready..... 60-120 minutes

Typical Physical Properties

Shore D Hardness..... 75-80

Compressive Strength (ASTM D-695), psi..... 4190

Tensile Strength (ASTM D638), psi..... 4300

Elongation at break (ASTM D638), %..... 14-18

Mix Ratio by Volume..... 1:1

Odor..... Odorless

Shrinkage..... Negligible

8. Applicable Specifications

There are no applicable government or ASTM standards for structural polyurea/polyurethane repair products.

9. Use in Regulated Food Facilities

Rapid Refloor XP is acceptable for use in floors subject to USDA, FDA, CFIA and AIB inspection/regulation.

10. Use in USGBC LEED® Projects

Rapid Refloor XP contains no VOC's (0%) and is fully compliant with USGBC LEED® green building standards.

11. Technical Assistance

Complete technical support and literature are available by contacting our headquarters at 800-223-6680 or visiting us online at www.metzgermcguire.com

12. Installation

Rapid Refloor XP is designed to be mixed using a low RPM drill (500 rpm) and helix style paint mixing paddle. Mixing with

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12. Installation (continued)

a paint stick is possible but may require additional mixing time and curing results may vary. Material should be preconditioned to 65°-75°F (18°- 24°C) prior to use for best results.

Pre-mix colored resin side (Part A) to completely re-disperse color prior to mixing with isocyanate hardener (Part B). Thoroughly mix both A & B for a minimum of 45 seconds until uniform in color and no streaking is present. **Rapid Refloor XP** is designed for use in concrete floors at temperatures of 32°F (0°C) or higher. If concrete temperature is lower than 32°F, temporary heat tenting, etc. must be used to warm up floor area prior to installing material.

If adding aggregate:

Pre-mix Parts A&B as noted above prior to introducing aggregate to the mix. Aggregate should be of engineered type (clean and dry) preferably between 16#-30# grit. Do not use playbox/beach sand. Add up to a maximum of two parts aggregate to one part material depending on desired working consistency and finished appearance.

13. Use of Rapid Refloor XP on Ground and Polished Floors

If using **Rapid Refloor XP** to repair surface defects in conjunction with grinding/polishing decorative concrete floors, we recommend the following:

Install **Rapid Refloor XP** after initial course grind but prior to last metals cut. This will help ensure that any residual staining or shadowing from **Rapid Refloor XP** overfill is removed in second grind. If staining is a critical concern, test on an inconspicuous area first to confirm that any stain is removed during subsequent grinds.

14. Defect Preparation and Repair

Repair area should be completely free of dust, debris, dirt, oils and moisture prior to application of material.

Surface Defects/Spalls

Remove all loose concrete chips, spalls, islands, etc. back to structurally sound concrete with a hammer and chisel or dry cut saw equipped with diamond blade.

Slightly overfill defect and monitor the installation for any seepage. If seepage into defect is detected, dispense additional material to restore flushness with surface. After **Rapid Refloor XP** cures into a hard solid, grind off any excess flush with surface using a medium grit finishing pad (if used neat) or a more aggressive grinding disc if mixed with aggregate.

Anchor Bolt Holes

If anchor is still intact, cut off as much of the bolt as possible prior to slightly overfilling defect with **Rapid Refloor XP**.

Random Cracks

Cracks up to 1/8" (3 mm) in width should be cleaned using a soft Nyalox-type wheel or brush prior to filling with neat **Rapid Refloor XP**. Fill/overfill crack with neat **Rapid Refloor XP** and grind off any high spots after cure. When filling non-moving cracks exceeding 1/8" (3 mm) in width aggregate can be added if desired.

Random Cracks (continued)

For cracks where continual movement is suspected, an alternate recommended repair method is to rout out the crack using a diamond blade to a depth of 1/2" (12 mm) to 3/4" (18 mm) and filling the crack with a semi-rigid filler, such as our **Spal-Pro RS 88** Polyurea or **MM-80** Epoxy Joint Fillers.

Surface Pitting-Use as Grouting Product

For best results in achieving a flush repair surface profile, we recommend pre-filling defects larger than a penny (3/4" diameter) flush/slightly high with neat material and allowing it to cure (approximately 30 minutes) prior to coating the entire floor area with **Rapid Refloor XP**.

Application

Apply material generously on the floor and work into the surface using a metal smoother, rigid edged trowel or screeding device. Monitor surface for air holes resulting from entrapped air and re-apply as needed. In some cases, more than one coat may be required for best results. If two coats are desired, first coat should be ground off prior to installing a second coat. Allow 90-120 minutes for full cure prior to grinding excess off surface. If faster access to floor area is required Metzger/McGuire's **Rapid Refloor Pit Grout** may be a better option. Grinding excess will typically require 80-150 metal bond diamonds.

15. Coverage Rates

Coverage rates for **Rapid Refloor XP** will vary substantially depending upon application and whether aggregate is added. To follow are some base guidelines for use in calculating material needs. Please contact our technical services department to discuss possible coverage rates for your specific application.

Large Surface Spalls 231 cubic inches per gallon

Bolt-Holes (3/4" diameter)..... Approximately 300 per gallon

Grouting 400 - 800 square feet per gallon

Extended Yield When Adding Aggregate:

1 gallon RRXP to 1 gallon Aggregate: 1.6 gallons

1 gallon RRXP to 2 gallon Aggregate: 2.2 gallons

16. Safety

Rapid Refloor XP is for professional use only. Use only in well ventilated areas. Practice all normal job site safety precautions (clear work area, etc). Thoroughly review MSDS for additional information prior to use.

17. Warranty

Metzger/McGuire Co. solely and expressly warrants that Rapid Refloor XP shall be free from defects in material and workmanship for 365 days from the date of purchase. Unless authorized in writing by an officer of Metzger/McGuire, no other representations or statements made by Metzger/McGuire or its representatives, in writing or orally, shall alter this warranty. Metzger/McGuire makes no warranties, implied or otherwise, as to the merchantability or fitness for ordinary or particular purposes of its products and excludes the same. If any Metzger/McGuire product fails to conform with this warrant, Metzger/McGuire will replace the product at no cost to the purchaser. Purchaser's sole remedy in any case shall be limited to the purchase price or replacement cost of product and specifically excludes labor and the cost of labor, lost wages and opportunity costs, and all other possible incidental, consequential or special damages resulting from any claim of breach of warranty, breach of contract, negligence or any legal theory. Any warranty claim must be made within one (1) year from the date of material purchase. Metzger/McGuire does not authorize anyone on its behalf to make any written or oral statements which in any way alter the installation procedures or written installation instructions published in its product literature or on its packaging labels. Any installation of Metzger/McGuire products which fails to conform with such installation information or instructions shall void this warranty. Purchaser shall be solely responsible for determining the suitability of Metzger/McGuire's products for the purchaser's intended purpose.

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