



Fast-Set, Low-Viscosity, Structural
Concrete Repair Product

TECHNICAL DATA

RR-1

USGBC LEED® EQ Credit 4.1 - Low Emitting Multipurpose Construction Adhesive

1. Product Name

Rapid Refloor Fast-Set, Structural Concrete Repair Product

2. Manufacturer

METZGER/MCGUIRE

PO Box 2217 Concord, NH 03302 (USA) Phone: 603-224-6122
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3. Product Description

Composition:

Rapid Refloor is a two-component, 100% solids, structural polyurethane/polyurea hybrid. When cured, **Rapid Refloor** is a rigid structural polymer with a Shore D Hardness of 70-75.

Basic Use:

Rapid Refloor was developed to repair random cracks and surface spalls/popouts and other surface defects in industrial concrete floors that are subject to wheeled traffic. **Rapid Refloor** is designed for use in industrial or retail concrete floors where final building temperatures are 32°F (0°C) to +120°F (49°C).

4. Limitations

Rapid Refloor is a structural repair product and should not be used as a floor joint filler.

Rapid Refloor 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 is not designed for use in temperatures below 32°F (0°C).

Rapid Refloor overfill may leave a light stain/shadow on some concrete surfaces.

Rapid Refloor may exhibit a moisture reaction on damp or wet surfaces; repair area should be clean and dry.



5. Advantages

- ▶ Permanent, durable structural concrete repair in minutes.
- ▶ Ready for traffic in 15 - 30 minutes.
- ▶ Can be ground flush with floor in 25 minutes.
- ▶ **Rapid Refloor's** low-viscosity allows for penetration into cracks as narrow as 1/64" (.016" or .40 mm).
- ▶ Unlike many low-viscosity structural repair products, **Rapid Refloor** is virtually odorless.
- ▶ **Rapid Refloor** is non-hazardous and can be shipped overnight by air carrier.

6. Packaging

Rapid Refloor is available in 600 ml (300x300) dual cartridges or 250 ml "universal" cartridges. All cartridge kits include a static mixer.

7. Technical Properties

Viscosity Profile

Part A.....	120 cps
Part B.....	70 cps
Mixed.....	100 cps

Reaction Profile

(100 grams, 74°F/23°C Sample)

Gel Time, minutes.....	1-1.25
Tack-Free Time, minutes.....	5-8
Traffic Ready, minutes.....	15-30

Typical Physical Properties

Shore D Hardness.....	70-75
Compressive Strength (ASTM D-638), psi....	4000
Tensile Strength (ASTM D412), psi.....	5500
Elongation (ASTM D412), %.....	6.0-8.0
Die C Tear Strength (ASTM D624), pli.....	400
Mix Ratio by Volume.....	1:1
Odor.....	Odorless
Shrinkage.....	Negligible

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Customer Service - (800) 223-MM80 - Technical Assistance

E-Mail: info@metzgermcguire.com • Web Site: www.metzgermcguire.com

8. Color

Standard color is Standard Gray. **Rapid Refloor** is also available in multiple **ColorFast** Colors and in custom colors by special order.

9. Applicable Specifications

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

10. Use in USDA/FDA Regulated Facilities

Rapid Refloor is acceptable for use in floors subject to USDA and FDA inspection and regulation.

11. Use in USGBC LEED® Projects

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

12. Technical Assistance

Complete technical support and literature are available through authorized distributors or by contacting our New Hampshire headquarters at 800-223-6680.

13. Availability

Rapid Refloor is available through authorized construction supply distributors or through our NH headquarters.

14. Installation

Rapid Refloor is designed to be mixed using a universal or dual-cartridge kit with appropriate gun or by hand in very small amounts. Material should be preconditioned to 70°-80°F (21°-27°C) prior to use for best results. **Rapid Refloor** 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 using dual-component cartridges:

Prepare cartridge for dispensing with static mixer and flow restrictor (if included) per kit instructions. Material should be dispensed at a moderate pace using steady pressure. Keep a waste container (disposable cup) handy to dispense **Rapid Refloor** liquid at start of application or if dispensing is delayed for more than 30 seconds (to avoid cured material in mixer tip).

15. Use with Concrete and Grinding/Polishing Operations

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

When sequencing product installation as part of a concrete grinding/polishing process, install prior to your last metal or transitional tooling step. Use the least aggressive tooling which successfully removes the product and avoids opening more air holes/voids in the floor surface. See Technical Bulletin T21 for additional information.

15. Use with Concrete and Grinding/Polishing Operations (continued)

Best results are obtained by first grinding off or knocking down any excessive overfill with a cup grinder and medium grit finishing pad (e.g. *Gator Grit* or *Norton Rapid Strip*) which will not mar the concrete surface. It is further recommended that grinding operations be delayed for 20 minutes or more after initial **Rapid Refloor** placement (at 70°F/21°C).

16. 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** cures into a hard solid (approximately 25 minutes) grind off any excess flush with surface using a cup grinder with medium grit pad or hand grinding stone.

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**.

Random Cracks

Cracks up to 1/8" (3 mm) in width should be cleaned using a soft wire wheel or brush and wiped with solvent to remove dirt or oils prior to filling with neat **Rapid Refloor**. Fill/overfill crack with neat **Rapid Refloor** and grind off any high spots after cure.

For cracks wider than 1/8" (3 mm) or 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.

17. Safety

Rapid Refloor is for industrial use only. Use only in well ventilated areas. Practice all normal jobsite safety precautions (clear work area, etc). Thoroughly review SDS for additional information prior to use.

18. Warranty

Metzger/McGuire Co. solely and expressly warrants that Rapid Refloor 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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