TECHNICAL DATA SHEET

ROADWARE 10 MINUTE CONCRETE MENDER™

PRODUCT DESCRIPTION

Roadware 10 Minute Concrete Mender™ is a high-penetration two-part structural polyurethane that combines with sand to form a tough instant polymer concrete. This nearly water thin formula is designed for Microdoweling™ deep into the host concrete creating extremely high bond strengths, reinforcement of the repair area as well as permanent repairs.

Roadware 10 Minute Concrete Mender™ produces polymer concrete repairs that absorb the shock and transfers the load of heavy traffic without cracking or dis-bonding. It is highly chemically resistant and can be applied in a wide range of temperatures. It is excellent for industrial floor repairs subject to forklift traffic and harsh conditions.

USES

- Repairing cracks, where future movement is not anticipated.
- Restoring integrity to distressed concrete.
- Repairing spalls and pop-outs in concrete.
- Securing bolts, equipment, or railings into concrete.
- Vertical repairs when combined with specified sand.
- Repairing concrete surface imperfections prior to coating.
- Repairing cracks and spalls prior to coating.
- Repairing polished concrete.
- Re-bonding delaminated floors.
- Horizontal and vertical crack injection.
- Polishing pit grout.
- Freezer thresholds and floor repairs.

FEATURES

- Ultra low viscosity allows deep penetration into concrete.
- Can be cartridge applied or bucket mixed.
- When combined with manufactured sand, Concrete Mender™ will form a tough 4500 psi polymer concrete with similar properties to existing concrete that will stay pliable over time.
- Safe to use. Materials react quickly.
- Self-leveling or may be combined with sand and worked with a trowel. Stays workable longer than similar materials.
- Completely cures in 10 minutes after application at 70° F. Will also cure rapidly in subzero environments.

BENEFITS

- Long lasting repairs that accommodate harsh physical environments.
- Easy preparation, a wire brush is all that is needed in some cases.
- No downtime, repairs are fully ready for traffic in approximately 10 minutes from application.
- Can be used in a wide range of indoor areas.

LIMITATIONS

Roadware 10 Minute Concrete Mender™ is designed for use on interior or exterior concrete surfaces. It is not intended for repairing areas of movement such as exterior cracks and joints subject to regular freeze-thaw cycling. It must be applied to concrete free of surface moisture, dirt or contaminates.

TECHNICAL INFORMATION

Colors	Grey, Natural Off-white Standard. Special order- yellow, Red, or custom.
Compressive Strength, ASTM D695-15	3883-6681 psi depending on sand load. (27-26 MPa)
Tensile Strength, ASTM D638-14	3385 psi (23.33 MPa)
Bond Strength, ASTM 882-99	1984 psi (13.6 MPa)
Elongation ASTM D638-14	7% Modulus 150.7 ksi
Hardness	72D
Surface Tension (Wilhelmy Plate)	0.026 N/m
Solids	98%
Viscosity	Approximately 8 cps
V.O.C. (Mixed)	5.5 g/l
MIN-MAX crack repar	0.020 Inches or less MIN with EZ Injection / Unlimited Max
Cure Time (Tac Free)	Approximately 10 minutes at 72° F (Gel 6-7 min.)
Packaging	80150 - 50 ml Cartridge 80300 - 600 ml Cartridge 80020 - 2-Gallon Kit 80050 - 10-Gallon Kit
Application Temperature Range	All data approximate. -30°F to 100°F See Tech Service for cold temperature application.

PREPERATION

Concrete must be clean, dry and free of dirt and contaminates. Use mechanical methods to remove loose concrete and profile hard trowled surfaces. Use surface applied heat to remove ice or frost if present.

MIXING

Cartridge: Static mixing 600ml or 50ml twin cartridge.
Bulk: Mix at a 1:1 ratio in a bucket by hand for 30 seconds. Start with a one quart total batch. Add up to two quarts of 40-30 grit or larger dry manufactured sand or quartz and blend well.

APPLICATION

Cartridge: Apply a thin layer of material into the crack, joint or spall. Add 1/4" of manufactured sand or quartz. Apply additional material to saturate the sand. Work in layers filling the repair area to just above grade. Trowel as necessary.
Bulk: Apply mixed material directly to the repar area. Screed off excess and allow to cure.

CURING AND FINISHING

Cure time is 10 minutes at 70°F. Repairs can be ground smooth, polished or coated after one hour.

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MIXING

Cartridges: 10 Minute Concrete Mender is a two-component material and must be thoroughly mixed at a ratio of 1 part "A" to 1 part "B" by volume. Mixing and metering of 10 Minute Concrete Mender is achieved with self-mixing cartridges provided by Roadware, Inc. Material is ejected from prepackaged cartridges through a supplied static mixing nozzle with a dual component caulking gun such as the Roadware 5300 Application Tool, Mixed material is applied directly into the repair area immediately after mixing.

Bulk: Due to the rapid setting nature of the product, pot-mixing of the components is not recommended for crack and joint repairs less than 3/4" in width. 10 Minute Concrete Mender supplied in 10 gallon kits may be bucket mixed in quart batches and applied immediately to the repair area. Combined one pint of Part A with one pint of Part B. Mix with a drill mixer or hand mixing stick for 30 seconds or until well blended. Add 2 quarts of manufactured sand and mix for an additional 10 seconds. Pour the entire batch into the repair area immediately. SEE BULK MIXING INSTRUCTIONS INCLUDED WITH MATERIAL. 10 Minute Concrete Mender may be dispensed through a one-to-one ratio pump specifically designed to handle extremely low viscosity materials while maintaining exact ratios. The system must not allow the two components to combine until they reach the point of delivery. Contact Roadware for information on acceptable pumping equipment. All pumping equipment must be approved by Roadware, Inc. prior to application

APPLICATION

Surface Cracks (all depths and widths): Assemble cartridge according to directions. Remember to use the flow restrictor included with each cartridge set. Holding the application gun upward, place cartridge set into gun. Gently squeeze trigger to bleed-off air and start material flowing into mixers. Point mixer into waste container and squeeze trigger to start mixing process. DO NOT POINT MIXER UPWARD AFTER MATERIAL IS FLOWING. This may cause material to flow back into the tubes and cause clogging.

Cracks: Pre-wet repair area with mixed Concrete Mender without sand. Fill with 30-40 grit manufactured sand and additional material to grade. Be sure to saturate all of the sand completely. Additional sand may be added to the repair as necessary. Saturated sand may be moved into place with a margin trowel or scraper. Work with one small section at a time. Do not stop flowing material for a period of more than 2 minutes. If material sets inside mixer, remove cartridge from gun and replace mixer. Fill all repair areas to grade. When material cures (turns gray) in about 10 minutes, remove excess material with a sharp scraper for a smooth and flat finish. Finished repairs may be "cleaned up" by sanding or buffing within a few hours of application.

Spalls: Pre-wet repair area with mixed 10 Minute Concrete Mender without sand. Fill with no more that one-inch of 30-40 grit manufactured silica sand and additional material. Add additional layers to grade if needed. Be sure to saturate all of the sand completely. Additional sand may be added to the repair as necessary. Saturated sand may be moved into place with a small squeegee or scraper. Work with one small section at a time. Do not stop flowing material for a period of more than 2 minutes. If material sets inside mixer, remove cartridge from gun and replace mixer. A trowel or scraper may be used to move saturated sand into place and to create a level surface. If required, surface friction may be maintained by adding additional manufactured to the surface as the material cures. Allow to cure (approximately 10 minutes). Finished repairs may be "cleaned up" by sanding or buffing within a few hours of application.

Delaminations: To address delaminations in concrete, use the Roadware Easy Injection System with cartridge mixer 1006-STR.

Preparation: First, determine the expected depth of the voids in the concrete. The Roadware Easy Injection works best for voids that are one inch deep or greater. Drill a pattern of 3/8-inch diameter holes into the delaminated area, making the holes approximately ¼ inch deeper than the void in the concrete. It's important to remove any drill dust using an OSHA-approved vacuum that can contain silica dust.

Establish a hole pattern based on the size of the delaminated area and the void in the concrete. A best practice is to start with a 6-inch grid of holes, make the repairs, and then test the results after the Concrete Mender has cured for 2-3 hours. You may need to add extra holes between the original ones if necessary.

When installing the Concrete Mender with the 1006-STR mixer, apply the product to several holes at a time, alternating between them as you work, and allowing the material to set. Filled holes can either be finished with a small amount of sand or left to cure flush with the surface.

In some cases, using a metal chain or bar to sound the concrete may not provide an accurate assessment of an effective repair. The structural bonding and high tensile strength of Concrete Mender create a pinning effect within the concrete, even if the voids are not completely filled.

Enclosed Areas: Repairs made in high-moisture conditions can produce a stronger odor during curing. Before applying Concrete Mender, ensure the repair area, sand, and aggregates are dry. Exercise caution when using Concrete Mender in coolers, freezers, odor sensitive areas, or any enclosed spaces with low ventilation. Additionally, repairs should not be performed in areas of active food preparation, or in close proximity to odor-sensitive products, materials, or merchandise.

LIMITED WARRANTY: This product is warranted to be of good quality when used according to the manufacturer's directions. It is not warranted for any other use or purpose. If proved to be defective, liability is limited to replacement of defective material, or refund of the purchase price of the material, at the option of Roadware Incorporated. Improper mixing, incorrect application or other factors beyond the control of the manufacturer or its dealers may produce unsatisfactory results and cannot be held to be the manufacturer's or its dealer's responsibility. There are no other warranties, either expressed or implied. Roadware Incorporated will not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of this product.