

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.
- Almost no noticeable odor, 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 intended for dormant cracks, dormant contraction joints, spall repair and more. 10 Minute Concrete Mender™ is designed to restore the concrete back to original design parameters. Underlying causes of cracking or deterioration should be addressed

before making repairs. It must be applied to concrete free of surface moisture, dirt or contaminants.

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.
Tensile Strength, ASTM D638-14	3385 psi
Bond Strength, ASTM 882-99	1984 psi
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
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 <small>All data approximate.</small>
Application Temperature Range	-25°F to 100°F <small>See Tech Service for cold temperature application.</small>

PREPERATION

Concrete must be clean, dry and free of dirt and contaminants. 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 repair area. Screed off excess and allow to cure.

CURING AND FINISHING

Cure time is 20-30 minutes at 70°F. Repairs can be ground smooth, polished or coated after one hour.



Roadware Incorporated
381 Bridgepoint Way
South Saint Paul, MN 55075
800-522-7623
www.roadware.us

Visit our web site at www.roadware.us



ROADWARE INCORPORATED

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 than 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: Use the Roadware Easy Injection System with cartridge mixer 1006-STR. Preparation: Determine the expected depth of the voids in the concrete. Roadware easy injection works best for voids one inch deep or greater. Drill a pattern of 3/8 inch diameter holes into delaminated area approximately 1/4 inch deeper than the void in the concrete. Remove drill dust with an OSHA approved vacuum that will contain silica dust. A hole pattern can be established based on the size of the delaminated area and the void in the concrete. Best practice is to start with a 6-inch grid of holes, make the repairs and test for results after the Concrete Mender cures for 2-3 hours. Additional holes between the original holes may be necessary. Install Concrete Mender using the 1006-STR mixer. Apply product to several holes at a time alternating between holes, allowing the material to set as you go. Filled holes may be finished by adding small amount of sand or left to cure flush with the surface. In some cases, sounding the concrete with a metal chain or bar may not give an accurate representation of an effective repair. Concrete Mender's structural bonding and high tensile strength will create a pinning effect within the concrete even if the voids are not 100% filled.

ROADWARE CONCRETE MENDER LOW ODOR (VOC FREE)

PRODUCT DESCRIPTION

Roadware Concrete Mender Low Odor is a low viscosity two-part hybrid polyurethane that combines with sand to form a tough instant polymer concrete. This formula is designed for penetrating into the host concrete creating high bond strengths, reinforcement of the repair area as well as permanent repairs. Roadware Concrete Mender Low Odor 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.
- Repairing concrete surface imperfections prior to coating.
- Repairing cracks and spalls prior to coating.
- Freezer thresholds and floor repairs.

FEATURES

- Very low viscosity allows deep penetration into concrete.
- Can be cartridge applied or bucket mixed..
- When combined with manufactured sand, Concrete Mender Low Odor will form a tough 4100 psi polymer concrete with similar properties to existing concrete that will stay pliable over time.
- Safe to use. Materials react quickly with almost no odor.
- Self-leveling or may be combined with sand and worked with a trowel. Stays workable longer than similar materials.
- Sets in 10-15 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 20 minutes from application.
- Almost no noticeable odor, can be used in a wide range of indoor areas.

LIMITATIONS

Roadware Concrete Mender Low Odor 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 contaminants.

TECHNICAL INFORMATION (approximate)

Color	Amber Clear
Compressive Strength, ASTM D695	4000 psi
Tensile Strength, ASTM D638	4100 psi
Elongation ASTM D638	5%
Hardness	70D
Viscosity	150cps
V.O.C. (Mixed)	Zero
Cure Time (Tac Free)	10-15 minutes at 21°C.
Packaging	60300K 600ml Cartridge 60475K One quart bulk kit 60020K 2-Gallon Kit
Application Temperature Range	0°F to 95°F, -18°C to 35°C

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

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 repair area. Screed off excess and allow to cure.

CURING AND FINISHING

Cure time is 10-15 minutes at 21°C Repairs can be ground smooth, polished or coated after 6 hours.



Roadware Incorporated
381 Bridgepoint Way
South Saint Paul, MN 55075
800-522-7623
www.roadware.us

Visit our web site at www.roadware.us



**ROADWARE
 INCORPORATED**

ROADWARE MatchCrete™ Clear

PRODUCT DESCRIPTION

Roadware MatchCrete™ Clear (MCC) is a two component aliphatic polyurethane for repairing cracks, spalls, and joints in concrete subject to UV exposure from sunlight. This material is clear in appearance when applied and cured. Colored sand and pigments may be added to create color stable repairs that match most any decorative or shade of concrete surface. MCC will not significantly change color with exposure to sunlight over time.

USES

- Repairing exterior or interior concrete.
- Repairing colored, stamped, or decorative concrete.
- Repairing polished concrete.
- Repairing exposed aggregate concrete
- Repairing any concrete surface where appearance is critical such as retail entryways, doorways and pool decks.

FEATURES

- Sets in 20 – 40 minutes. Fully cures in a few hours.
- Remains clear, reflects surrounding colors.
- User may add colored sand, pigment, or concrete dust to match existing concrete.
- May be honed smooth in about 30 - 60 minutes at 70°F.
- May be needle tip applied from 50ml cartridge only.
- Will accept heavy traffic.
- Will not become brittle over time.

BENEFITS

- Better looking appearance.
- Satisfied property owners.
- Reduced down time.
- Less call backs. Repairs will not change color over time.
- Labor Saving

LIMITATIONS

Roadware MatchCrete™ Clear is designed for use on interior or exterior concrete surfaces. It is not intended for repairing areas of movement such as expansion joints where movement is expected. It must be applied to concrete free of surface moisture, dirt or contaminates.

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.

TECHNICAL INFORMATION

Tensile Strength at break (ASTM D-638-10)	1523 psi (10.5 Mpa)
Tensile Strength at yield (ASTM D-638-10)	1437 psi (9.9 Mpa)
Hardness	60D
Bond Strength	Excellent
Elongation at break (ASTM D-638-10)	58.3%
Elongation to yield in tension (ASTM D-638-10)	7.47%
Modulus of Elasticity (ASTM D638-10)	55.8 ksi (384.7 Mpa)
Viscosity (Brookfield)	Side A 280 cps Side B 100 cps
Cure time 72° F (22C)	Tac-Free 45 minutes Full Cure 24 hr
VOC Mixed	Zero
Packaging	71150 - 50 ml Cartridge 71300 - 600 ml Cartridge 71020 - 2-Gallon Kit

All data approximate.

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 one quart of colored quartz sand if needed. Dry pigments, grouts, or polishing dust may be added for color.

APPLICATION

Cartridge: Apply self leveling material into the crack, joint or spall. Trowel as necessary.
Bulk: Apply mixed material directly to the repair area. Screenshot excess and allow to cure. Work in one quart batches or less.

CURING AND FINISHING

Cure time is 40-50 minutes at 70°F. Repairs can be ground smooth, polished or coated after one hour.

SAFETY

See SDS sheets and product instructions.



ROADWARE FLEXIBLE CEMENT II™

PRODUCT DESCRIPTION

Roadware Flexible Cement II is a two component hydrophobic hybrid polyurethane system for maintaining control joints, repairing cracks, and filling spalls in concrete. The hydrophobic properties of this material allow it to chase water molecules out of the way, preventing them from reacting with the curing process. This allows Flexible Cement II to perform well in areas of moisture such as ground slabs, freezers, and containment areas. Flexible Cement II is designed to work in both asphalt and concrete to provide a tough weather resistant seal and at the same time prevent further deterioration of repair area surfaces. It is capable of rebonding slabs, cracks and joints. This material may be used with specified aggregate to create mix-in-place polymer concrete that withstands thermal and shock movement.

USES

- Repairing cracks, 1/8" or larger that may be subject to limited deflection, movement, dynamic loading, thermal expansion or contraction.
- Filling and protecting control joints.
- Repairing spalls and pop-outs in exterior concrete.
- Forming and repairing bridge joint headers and nosings.
- Filling potholes in concrete.
- Waterproofing.
- Construction adhesive and Tackless Carpet Strips
- Electrical potting.

FEATURES

- Excellent bonding strength in a wide temperature range.
- Low moisture sensitivity.
- Excellent chemical resistance.
- Incredible bond strength.
- May be cartridge applied or bulk mixed and poured into place.
- Completely cures in 15 - 20 minutes after application for heavy traffic at 70° F. Will also cure rapidly in subzero environments.
- Remains flexible for the life of the repair.
- Safe to use. Materials react quickly, 100% solids and no VOC's.
- Self-leveling, excess material may be sliced off after curing.
- Bonds well to concrete, brick, tile, steel, asphalt, and wood.

BENEFITS

- Long lasting repairs that accommodate harsh physical environments and thermal movement.
- No downtime, repairs are fully ready for traffic in about 20 minutes from application.
- Odor free, can be used in a wide range of indoor areas.
- Easy application. All material is self-mixed with specially designed packaging or bulk application equipment.
- May be bucket mixed with our special application equipment.

LIMITATIONS

Roadware Flexible Cement II is designed for repairing low movement concrete surfaces. It is not intended to be used as a high movement expansion joint.

TECHNICAL INFORMATION (approximate)

Color	Grey
Compressive Sheer	1595 psi
Tensile Strength, ASTM D412	1726 psi
Elongation ASTM D412	180%
Service Movement	±20%
Hardness	70-80 Shore A
Viscosity	1200 cps
V.O.C. (Mixed)	Zero
Cure Time (Tac Free)	10-15 minutes at 21°C.
Packaging	91300-600ml Cart; 91020 - 2-Gallon Kit; 91050 10-Gallon Kit.
Application Temperature Range	-25°C to 100°C

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

Bulk: Pre-stir Side A and Side B before combining. Mix at a 1:1 ratio in a bucket by hand for 60 seconds. Start with a one quart total batch. Mix until a uniform color appears. Pour immediately into the repair area.

APPLICATION

Cartridge: Prepare cartridge as directed in the label. Using the Roadware 5300C 300x300ml caulking gun and included static mixer tip, Apply material directly to the repair area. Fill the the repair area to just above grade. Trowel as necessary. Bulk: Apply mixed material directly to the repair area. Screed off excess and allow to cure.

CURING AND FINISHING

Cure time is 10-20 minutes at 21°C Repairs can shaved flush after one hour.

See additional data sheets and product instructions before use.



Roadware Incorporated
381 Bridgepoint Way
South Saint Paul, MN 55075
800-522-7623
www.roadware.us

Visit our web site at www.roadware.us



ROADWARE INCORPORATED