



## HMI REPAIR MORTAR BLACK DATA SHEET

### DESCRIPTION:

Light weight, single component, cement/ fiber based, **black oxide tinted**, medium setting asphalt patch. Versatility includes horizontal overlay repairs; that can be placed with a specialized roller (optimal method) or conventional placement tools. Can be placed on asphalt or concrete following procedural guidelines.

### APPLICATIONS:

Driveways, roadways, as a structural underlayment or finished textured asphalt overlay. ALL applications requiring a durable, abrasion resistant and high strength asphalt repair. The proprietary dual fiber blend provides outstanding flexural, compressive and splitting tensile performance. All surface contaminants shall be removed, prior to the application of primers for proper adhesion and lasting repairs.

### FEATURES/BENEFITS

- . Versatility for Multiple Applications
- . Trowel or gauge rolled
- . Single component
- . Unequalled flexural and tensile strength
- . Shrinkage compensated
- . Minimizes Reflective Surface Cracking
- . Strong resistance to abrasion, freeze-thaw cycles, and deicing salts.

### TECHNICAL INFORMATION Material Properties @ 80F (26C)

### ASTM Certified Lab testing

#### Set Times ASTM C 266

Initial set.....approx. 15 to 25 min.  
Final set .....approx. 60 to 80 min.

#### Flexural Strength psi ASTM C348

10 day ..... 1873 PSI  
28 day ..... 2144PSI

#### Compressive Strength psi ASTM C109

3 hour ..... 4290 PSI  
1 day ..... 5375 PSI  
7 day ..... 6026 PSI  
28 day ..... 7000 PSI

#### Slant Shear Strength psi ASTM C1059

1 day Slurry ..... 1057 PSI  
7 day Slurry ..... 1295 PSI  
1 day Epoxy ..... 1743 PSI  
7 day Epoxy ..... 1745 PSI

#### Length change of hardened cement mortar ASTM C 157

0.08% shrinkage at 28 day lab tested.

#### Split Tensile Strength psi ASTM C496

10 day ..... 1015 PSI

## SHELF LIFE

1 year in original, unopened package and protected from moisture.

## PACKAGING

45 lb. (20.4 kg) plastic lined bag.

## COVERAGE/YIELD

45 lb. (20.4 kg) bag of HMI Repair Black 45 will yield approximately **0.37 ft<sup>3</sup>** (0.010m<sup>3</sup>) of material.

## Dry Unit Weight

106 lbs. per cubic foot.

## DIRECTIONS FOR USE:

**Surface Preparation:** Repair surfaces must be sound, clean and free from contaminants.

Mechanical preparation options:

- 1) Mechanical grind the concrete surface using metal bonded tooling (16 grit or 35 grit) using walk behind floor grinders with vacuum systems. Hand held 7" grinders with shrouds, vacuum & metal coarse wheel.
- 2) Scarifying will remove approximately 1/8" of asphalt or concrete at each pass. It may be necessary to go this route for heavier removal or a more aggressive preparation.
- 3) Power wash repair area after mechanical preparation and before applying primer bonding system.

## Priming

**Primer Slurry/ Bond Coat** is a blend of 1 bag of HMI Repair Mortar Black with 2 gallons of undiluted HMI Repair Mortar Primer to produce a thin slurry consistency. Work slurry into repair area with a stiff masonry brush, paying attention to the corners, sides. Place the HMI Repair Mortar Black mixed with water before the Slurry/Bond Coat becomes tack-free. Application rate for the slurry bond coat is approximately 50 sq. ft per mixture depending on the roughness/porosity of the repair substrate.

**High Modulus Bonding Epoxy** is a two -component, 100% solids, moisture insensitive, high strength epoxy binder. (*Highly Recommended for Industrial and DOT applications.*)

## Mixing:

Fill a sufficient size bucket with all the mix water, then add ½ of the mortar and thoroughly mix, add the remainder of mix, and continue mixing. Mix thoroughly until the mortar has a consistent mixture, scrape the sides of the mixing bucket with a trowel to ensure that all the dry material gets mixed thoroughly.

Mix for another 30-60 seconds once the sides of the bucket has been scraped off. Total mixing water shall be in the range **150 oz – 180 oz per 45 lb.** For optimal mixing, use a dual paddle hand-held mixer such as the **BNR6402K** or barrel style concrete mixer. This provides the best fiber dispersion with lump free consistency. Mix time will depend on the type of mixer and volume of material

## Application:

Can be placed with a specialized 18" or 9" roller (Best Practice) or traditional placement tools. Gauged rollers, roller frames and textured rollers are available for applying the HMI Repair BLACK 45 at a consistent thickness. Magic trowels are available for achieving a smooth finish easily without tearing the surface.

Product can be screeded, troweled, broomed, along with decorative roller or stamped finish.

**USE HMI Finishing aid instead of water for each step of the finishing process.**

## Curing:

**For optimal performance Moisture Cure the HMI Repair Mortar Black for a minimum of 2 hours. Apply HMI RM SEALER as per instructions to continue the curing process and to provide the ultimate protection for the repair or overlay.**

## Clean-Up:

All tools and mixing equipment shall be immediately cleaned with water.

## Precautions / Limitations

For optimal performance MOISTURE CURE HMI Repair BLACK 45 for a minimum of 2 hours.

Apply HMI RM SEALER after moisture curing.

If low humidity and high wind is predicted wind breaks, sunscreens and HMI Finishing Aid evaporation retarder maybe needed to minimize potential shrinkage cracking.

Have adequate manpower to place, finish and cure overlay.

Avoid the hottest part of the day to place and finish.

Do not add more water than recommended.

**Do Not Extend the mix with Aggregates.**

Do not over-work or over- trowel the spall repair or overlay.

**Follow ACI Hot Weather Concreting 305R-99 procedures.**

Do not apply HMI Repair Mortar Black to frozen surfaces, or at temperatures below 35 F (1.7 C).use.

### Dust Control

Small Vacuum



Large Vacuum



Air Scrubber



Chipping Hammer



### Removal

Spade, Chisel,

Waffle & Point Bits



## SURFACE PROFILE CREATION

Floor Grinder



Hand Grinders



Scarifier



ShotBlaster



Hydro Blaster



## Clean

Pressure Washer



TurboNozzle



Blower



## Patch

5-Gallon



Brushes



Trowels



## Placement

Loop Rollers  
& Gauges



Adjustable  
Roller Frame



Aluminum  
Screed



Trowels



## MIXING Station

Gloves



5-Gallon Buckets



Plastic



MuckBucket



MuckBucket  
Cart



Thermometer  
Gun



Measuring  
Container



Double Head  
Mixer



Barrel Mixer



Utility



Margin Trowel



DustMask

