

## QM-1s Restore<sup>®</sup>

### TYPICAL PERFORMANCE CHARACTERISTICS

- **Compressive Strength 28 Day** (ASTM C39)  
>9,000 psi
- **Flexural Strength (ASTM C293)**  
>1,000 psi
- **Bond Strength (ASTM C882)**  
>1,500 psi
- **Freeze-Thaw (ASTM C666)**  
No visible damage after 300 cycles
- **Permeability (ASTM C1202)**  
350 Coulombs
- **Density**  
132 +/- 5 PCF
- **Shrinkage (ASTM C596)**  
0% @ 28 days

## Portland-Based Structural Liner Mortar

### DESCRIPTION

QM-1s Restore<sup>®</sup> is a Portland cement based, single component, high strength, fiber reinforced, shrinkage compensated cement mortar enhanced with a monocrytalline quartz aggregate. QM-1s Restore was designed to structurally repair deteriorated metal, concrete and masonry structures. QM-1s Restore delivers a monolithic one pass vertical surface application up to three inches in thickness by low pressure spraying or centrifugally casting.

### RECOMMENDED FOR

Vertical and overhead repairs to concrete or masonry sewer manholes, wetwells, metal pipes, water treatment facilities, tunnels, navigation locks, and dams.

### FEATURES AND BENEFITS

- **Quality controlled, one-component blend for uniform results**
- **High early and ultimate compressive, flexural and bond strengths**
- **Resistant to sulfate attack**
- **Low permeability**

### PACKAGING

QM-1s Restore is supplied in 20 kg | 44.09 gal poly-lined bags.

### YIELD

One 20 kg (44.09 lb.) bag of Quadex<sup>®</sup> QM-1s Restore<sup>®</sup> mortar yields approximately 0.010 m<sup>3</sup> (0.375 ft<sup>3</sup>) and will cover 0.42 m<sup>2</sup> (4.50 ft<sup>2</sup>) at a 25.4 mm (1.0-inch) thickness. Allowance for waste must be made and will reduce coverage accordingly.

#### APPLICATION INFORMATION

Prepare surface to be patched by removing unsound concrete, dirt, dust, oil and other debris using high pressure (min 241.3 bar | 3,500 psi) water blasting. Then rinse with potable water to remove all remaining dirt, sand and loose debris. This will provide a clean, damp surface to facilitate bond.

Use approximately 2.64 to 3.78 liters (.70 to 1.0 gallons) of potable water per 27.2 kg. | 60 lb. bag of QM-1s Restore\*. First add water to mixer, start the mixer and add QM-1s Restore until mortar is completely mixed. Surface should be Saturated Surface Dry (SSD) just prior to material application. Any standing water must be removed.

Apply QM-1s Restore by low pressure spraying on vertical or overhead surfaces to a monolithic thickness of 12.7 to 76.2mm | 1/2 to 3-inches in one pass, trowel to smooth surface.

QM-1s Restore can be top coated with Structure Guard or Structure Guard-QS after 24 hours to perform as a composite system.

#### CURING

Cure in accordance with current ACI and manufacturer recommendations.

#### WARRANTY

**Quadex, LLC warrants its products to be free of defects in material and workmanship.** Unless superseded by project specifications and terms agreed upon in writing between installer and Quadex prior to bid, if within one year from purchase, any Quadex, LLC product is proven defective, the company will replace said product or refund its purchase price at its sole discretion. The company's obligation shall be limited solely to such replacement or refund. There are no other warranties by Quadex, LLC, expressed or implied. There is no warranty if Quadex products are used contrary to Quadex, LLC's written directions.

#### PRECAUTIONS

Avoid eye contact or prolonged contact with skin. Wash thoroughly after use. Persons using QM-1s Restore should wear necessary PPE consisting at minimum of eye protection, dust mask and rubber gloves. Read all product labels and technical literature.

#### MATERIAL COMPATIBILITY

Structure Guard-QS can be used in a composite system with Quadex Mortar Materials.