

QUADEX

Manhole Rehabilitation and Restoration

see more at
QUADEXonline.com
Eco Friendly Utility Infrastructure Restoration Solutions



1. Manhole before being washed.



2. Manhole after being sprayed with Aluminaliner.



3. Manhole after being sprayed with Structure Guard.



QUADEX STRUCTURE GUARD EPOXY

Corrosion Resistant Protective Coating

DESCRIPTION

Quadex Structure Guard is a 100% solids high build epoxy coating system. Quadex Structure Guard is specifically engineered to provide long term protection for manholes, pump stations, treatment plants, or any wastewater infrastructure components that is subjected to extremely high levels of hydrogen sulfide induced corrosion. Quadex Structure Guard can also be used as an interior or exterior pipe lining or coating.

RECOMMENDED FOR

- Sewer Pipes and Manholes
- Concrete Tanks
- Elevator Pits
- Cisterns
- Basements
- Concrete & Masonry Walls

FEATURES & BENEFITS

- 100% Solids, No VOC's
- Can be sprayed applied at 125 mills in a single pass
- Excellent immersion resistance

PERFORMANCE DATA

- Compressive Strength ASTM D638 - >15,000 psi
- Flexural Strength ASTM D790 - >11,000 psi
- Tensile Strength ASTM D638 - > 5,600 psi
- Bond Strength (Pull-Off Adhesion):
ASTM D 4541 - > 2,700 psi
- Elongation – 4.8%
- Color: Light Green

QUADEX ALUMINALINER

A Calcium Aluminate Sewer Rehabilitation Mortar

Quadex Aluminaliner is a factory blended, one component, fiber reinforced, fused calcium aluminate cement mortar, enhanced with a monocrySTALLINE quartz aggregate. This mortar is specifically designed to provide ultimate protection against hydrogen sulfide gas induced corrosion, add structural integrity and stop the infiltration of groundwater in sewer structures. This unique formulation allows for a monolithic one-pass application up to three inches in thickness by low pressure spraying.

Vertical and overhead repairs to concrete or masonry sewer structures such as manholes, wetwells, pipe and treatment plant structures where corrosion is a problem.

- Quality controlled one-component blend for uniform results.
- High early and ultimate compressive, flexural and bond strengths.
- Resistant to sulfide attack.
- Excellent freeze-thaw and abrasion resistance.
- Extremely low permeability.

Compressive Strength PSI (ASTM C109)
28 day >9,000 psi

Flexural Strength PSI (ASTM C293)
28 day >1,600 psi

Bond Strength (ASTM C882)
28 day >2,500 psi

QUADEX DYNASTONE

An Acid Resistant Sewer Rehabilitation Mortar

Quadex Dynastone is a factory blended, one component, fiber reinforced, cement and pozzolan mortar, enhanced with a monocrySTALLINE quartz aggregate. Dynastone is specifically designed to provide corrosion resistant protection in a sulfuric acid environment, add structural integrity and stop the infiltration of groundwater in sewer structures. This unique formulation allows for a monolithic one-pass application up to three inches in thickness by low pressure spraying or centrifugally spinning.

Vertical and overhead repairs to concrete or masonry sewer structures such as manholes, wet wells, pipe and treatment plant structures where acid induced corrosion is a problem.

- Quality controlled one-component blend for uniform results
- High early and ultimate compressive, flexural and bond strengths
- Resistant to acid attack in sulfuric pH of one solution
- Extremely low permeability

Compressive Strength PSI (ASTM C109)
28 day >7,000 psi

Flexural Strength PSI (ASTM C580)
28 day >750 psi

Bond Strength (ASTM C882)
28 day >2,000 psi

QUADEX QM-1s RESTORE

Factory Blended, One Component, High Strength Cement Based Mortar

Quadex QM-1s Restore is a factory blended, one component, high strength cement based, polypropylene fiber reinforced, shrinkage compensated mortar enhanced with a monocrySTALLINE quartz aggregate. It is specifically designed for placement by low pressure spraying of mortar for the repair of concrete and masonry structures. This unique formulation allows for a monolithic one-pass application up to three inches in thickness by low pressure spraying.

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

- Quality controlled one-component blend for uniform results
- High early and ultimate compressive, flexural and bond strengths
- Resistant to sulfate attack
- Extremely low permeability
- Sprayable
- Enhanced with finely graded NSG aggregate

Compressive Strength PSI (ASTM C109)
28 day >9,000 psi

Flexural Strength PSI (ASTM C293)
28 day >1,250 psi

Bond Strength (ASTM C882)
28 day >2,500 psi

QUADEX HYPERFORM

Rapid Setting High Early Strength Patching Material

Quadex Hyperform is a one component, rapid-setting, high early strength patching material designed for repairing vertical and horizontal concrete and masonry structures.

- Filling large voids in manhole walls.
- Reconstructing inverts.
- Catch basin and concrete.
- Pipe Repair

- Rapid-setting
- High Early and ultimate strengths
- Non-shrinking
- No calcium chloride
- Ready to use - just add water
- Excellent resistance to freeze-thaw

Compressive Strength PSI (ASTM C109)
30 minutes >1,200 psi
1 hour >2,500 psi
1 day >4,000 psi

Bond Strength (ASTM C882)
28 day >3,000 psi

QUADEX QUAD-PLUG

Fast Setting Cementitious Waterstop

Quadex Quad-Plug is a blend of special cements and admixtures which are designed to instantly stop running water or seepage in all types of concrete and masonry structures

- Sewer Pipes and Manholes
- Concrete Tanks
- Elevator Pits
- Cisterns
- Basements
- Concrete & Masonry Walls

- Stops running water immediately
- Non-Shrink, expands as it sets
- Contains no calcium chloride
- Non-Metallic
- Sulfate resistant
- Easily applied
- No Mixing

Compressive Strength PSI (ASTM C109)
30 min >1,850 psi

Bond Strength (ASTM C321)
28 day >80 psi

Founded in 1991, QUADEX, INC. manufactures a complete line of cementitious products to restore the structural integrity of manholes, wetwells, pumping stations and other related wastewater structures.

QUADEX lining products provide a permanent seal against corrosion, infiltration and exfiltration, and have an installation life of 10 to 50 years in wastewater applications. Formulated and designed by QUADEX, INC. with the most advanced technology available, our products surpass all other products offered to the industry with regard to structural and flexural strength, permeability, application thickness and workability.

To ensure the performance of each product, QUADEX, INC. verifies the results of all in-house studies through extensive independent laboratory ASTM procedures.

QUADEX, INC. has established itself as a leader in this specialized field, unequalled in the Wastewater Rehabilitation Industry.



QUADEX
SEWER REHABILITATION PRODUCTS

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SprayMaster™

SpinMaster™

EpoxyMaster™

The Quadex SprayMaster™ is a completely self-contained cementitious manhole liner installation system. The SprayMaster™ system comes fully rigged with all of the components needed to facilitate low-velocity spray application of the cementitious manhole liner materials.

The use of the SprayMaster™ unit can be complimented with the addition of the robotic SpinMaster™ centrifugal manhole lining system. The robotic apparatus allows for centrifugal spin application of the cementitious manhole liner material without man-entry into the manhole during the material application phase. The SpinMaster™ System is highly effective in deep ranging manholes.

The Quadex EpoxyMaster™ is an engineered, state of the art epoxy coating spray application system. This fully self contained system integrates all of the components necessary to pump, meter, mix and facilitate high volume spray application of virtually any high-build epoxy coating product. All system components are housed in a uniquely designed, multi-compartment, enclosed tri-axle trailer unit for ease of mobilization.

Water Meter

A Fill-Rite water metering system to insure precise water cement ratio's during the mixing of the materials.

Mortar Mixing System

A 45-gallon capacity, vertical shaft, horizontal blade mixer for high shearing and expedient mixing of the cementitious materials.

Air Compressor

A 20 CFM / 90-PSI air compressor and reservoir to provide compressed air for spray atomization of the cementitious materials.

Diesel Engine

A 29 H.P. electric start diesel engine power plant that hydraulically drives all components on the trailer.

Fuel Cell

20-gallon capacity fuel cell uniquely engineered within the steel framework of the engine mount assembly. Low profile tank and easy access fill cap provides for ease of refueling.

Winch Control

Hand held push button remote control provides for simple "in & out" operation of the winch mechanism for uniform raising and lowering the SpinMaster™ apparatus within the manhole.

Tripod

Working tripod comes complete with cast aluminum head and feet, and extendable square tubular aluminum legs adjustable to 7-foot in height. The aluminum construction provides for ease of portability from one site to another. (Note: *Not intended for use with man-entry.*)

Electric Winch

Heavy duty, single drum, reversible electric winch with high strength aluminum gear housing. Winch is rated for "continuous on" usage, and comes complete with a 1/8-inch cable.

Plaster Hose

A 25-foot section of durable yet flexible 1-inch material transfer hose with pressure rating of 300-psi. Comes complete with one male and one female 1-inch cam-lock quick coupling.

SpinMaster™

An electric powered centrifugal spin cast mortar application system. Comes complete with fully sealed 2 H.P. electric motor, 1-inch cam-lock quick coupling for attachment to the material hose, removable spinner plate for ease of cleaning, and dual carry handles mounted to spinner housing.

Operator Control Center

An ergonomically positioned operator control center with simple lever type variable speed forward and reverse controls for all mixing and pumping components.

Material Pump

A three stage, progressive cavity, material pump and material holding hopper for use in pumping of the materials to the spray nozzle.

Material Hose/Spray Nozzle

A compact design low-velocity cementitious wet spray nozzle that atomizes the mortar material into a spray pattern for application to the manhole walls. Comes complete with a 25-foot section of 1-inch rout hose with accompanying 3/8-inch airline for use in material delivery to the nozzle.

Pressure Washer

An optional 3500-PSI portable pressure washer for use in manhole surface preparation and equipment clean-up.

Water Transfer Pump

A 40-PSI hydraulically powered water transfer pump to provide continuous delivery of water to all components.

Trailer

A heavy-duty dual axle trailer with twin 7,500 lb. rated axles. A 250-gallon poly-lined water tank engineered within the framework of the trailer to provide a low center of gravity for handling safety.



Material Platform

(Also shown above) The Center mount material platform provides transport capability for one pallet of material. Platform is equidistantly centered on the trailer axles to provide uniform load distribution during towing, and strategically positioned behind the operator station to minimize the amount of physical material handling by the mixer operator.



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EpoxyMaster™ Trailer Front Component Room



Compressor

A 20-HP, high efficiency, continuous supply rotary screw type air compressor (100-PSI, 80 CFM).

Control Panel

Easily accessible command center for power plant provides control over all engine functions.

EpoxyMaster™ Trailer Front Component Room



Diesel Engine

Separately housed liquid cooled diesel engine provides power for electrical generator system while allowing for a quiet work environment within the operator's room.

EpoxyMaster™ Trailer Front Component Room



Compressor Tank

A 100 gallon capacity air reservoir complete with pressure gauge and relief valve.

Pressure Washer

5000-psi high pressure washer for surface cleaning/substrate preparation.

Work Bench

Strategically positioned, multi-purpose work surface complete with compact heavy duty workshop vice and multi-drawer storage container.

Material Barrels (A & B)

Storage and transport capacity for plural component (Part A & B) resin barrels.

Heated Resin Tanks (2)

Twin 15 gallon rapid heating "material on demand" resin tanks with continuous auto replenish supply from component material barrels.