VORTEX

ADVANCED REPAIR MATERIALS

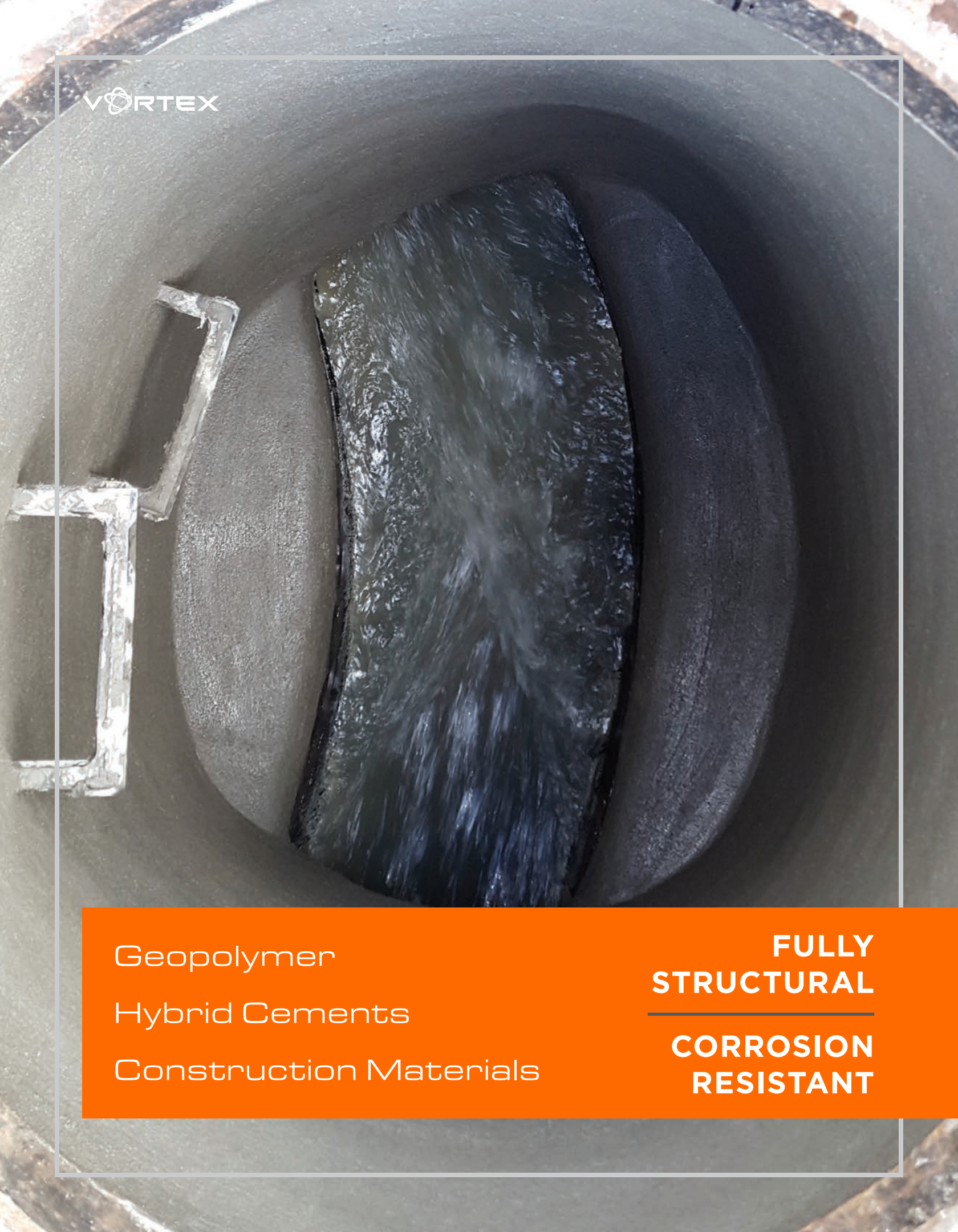
- GEOPOLYMER MORTAR
- HYBRID CEMENTS
- CONSTRUCTION MATERIALS
- EPOXY COATINGS
- FLEXIBLE MASTICS & HYBRID EPOXIES
- INFLOW & INFILTRATION
- PREVENTION
- APPLICATION EQUIPMENT
- PORTABLE REPAIR MATERIALS

QUADEX® A VORTEX COMPANY | REPAIR MATERIALS

Advanced Repair Materials For Aging Infrastructure

Our Quadex® Division designs, formulates and manufactures high performance structural and protective coating, patching and repair materials for the water, wastewater and industrial marketplace. From our geopolymer mortar, hybrid cements and patching materials to 100% solids epoxies, hybrid polymeric and polyurethane grouts, Quadex provides a repair material solution for practically every pipe, manhole and structure problem.

1-855-WHYDIG1 | sales@vortexcompanies.com | www.vortexcompanies.com



VORTEX

Geopolymer

Hybrid Cements

Construction Materials

FULLY STRUCTURAL

CORROSION RESISTANT

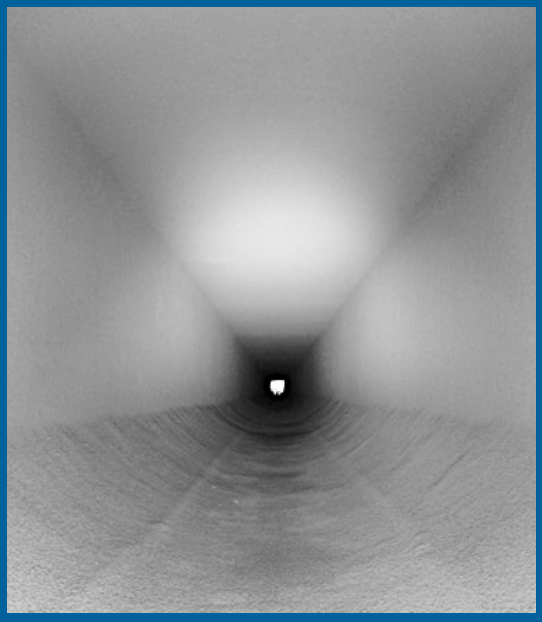
Geopolymer Hybrid Cements Construction Materials

From large diameter structures such as failing sewer pipes above 36″, storm culverts and tunnels to corroded concrete and brick manholes, **choose from our geopolymer and hybrid cements** to address these issues and much more. If it's a fully structural, corrosion resistant rehabilitation solution you are looking for, **our complete line** of geopolymer and hybrid cement morters for patching and lining are the answer.

Contact your **Quadex® Repair Materials** representative today to learn more about how to specify the right material for your infrastructure rehabilitation challenge.

FEATURES & BENEFITS

- Complete Rehabilitation
- Restores Structural Integrity
- Prevents Corrosion
- Fills Voids
- Stops Leaks
- Quick Return-To-Service



GeoKrete®

GEOPOLYMER MORTAR

GeoKrete is a fully structural corrosion resistant geopolymer mortar. It is comprised of aluminosilicate powder with an alkaline activator to form a monolithic mineral polymer with ceramic properties. It cures through a process of polycondensation and possesses proven, high early and long-term compressive strength. Recommended for leaking, corroded or compromised tunnels, pipe, manholes and wet wells.

Aluminaliner®

CALCIUM ALUMINATE MORTAR

AluminaLiner is a factory blended, one component, fiber reinforced, fused calcium aluminate cement mortar, enhanced with mono crystalline quartz aggregate. It is designed for moderate corrosion protection while simultaneously rebuilding structural integrity and eliminating ground water infiltration. This unique formulation allows for a monolithic one-pass application up to 3" in thickness.

QM-1s Restore®

HIGH STRENGTH CEMENT BASED MORTAR

QM-1s Restore is a Portland cement based, single component, high strength, fiber reinforced, shrinkage compensated cement mortar enhanced with a monocrystalline quartz aggregate. It was designed to structurally repair deteriorated metal, concrete and masonry structures. QM-1s Restore delivers a monolithic one pass vertical surface application up to 3" in thickness by low pressure spraying or centrifugal casting.

Hyperform®

HIGH STRENGTH PATCHING MATERIAL

Hyperform is a one component, rapid-setting, high early strength patching material designed for repairing vertical and horizontal concrete and masonry structures. With invert lining, flow can be released with 25-30 minutes post mixing. Hyperform is recommended for filling large voids in manhole walls, reconstructing inverts, catch basin and concrete repair, and pipe repair.

Quad-Plug®

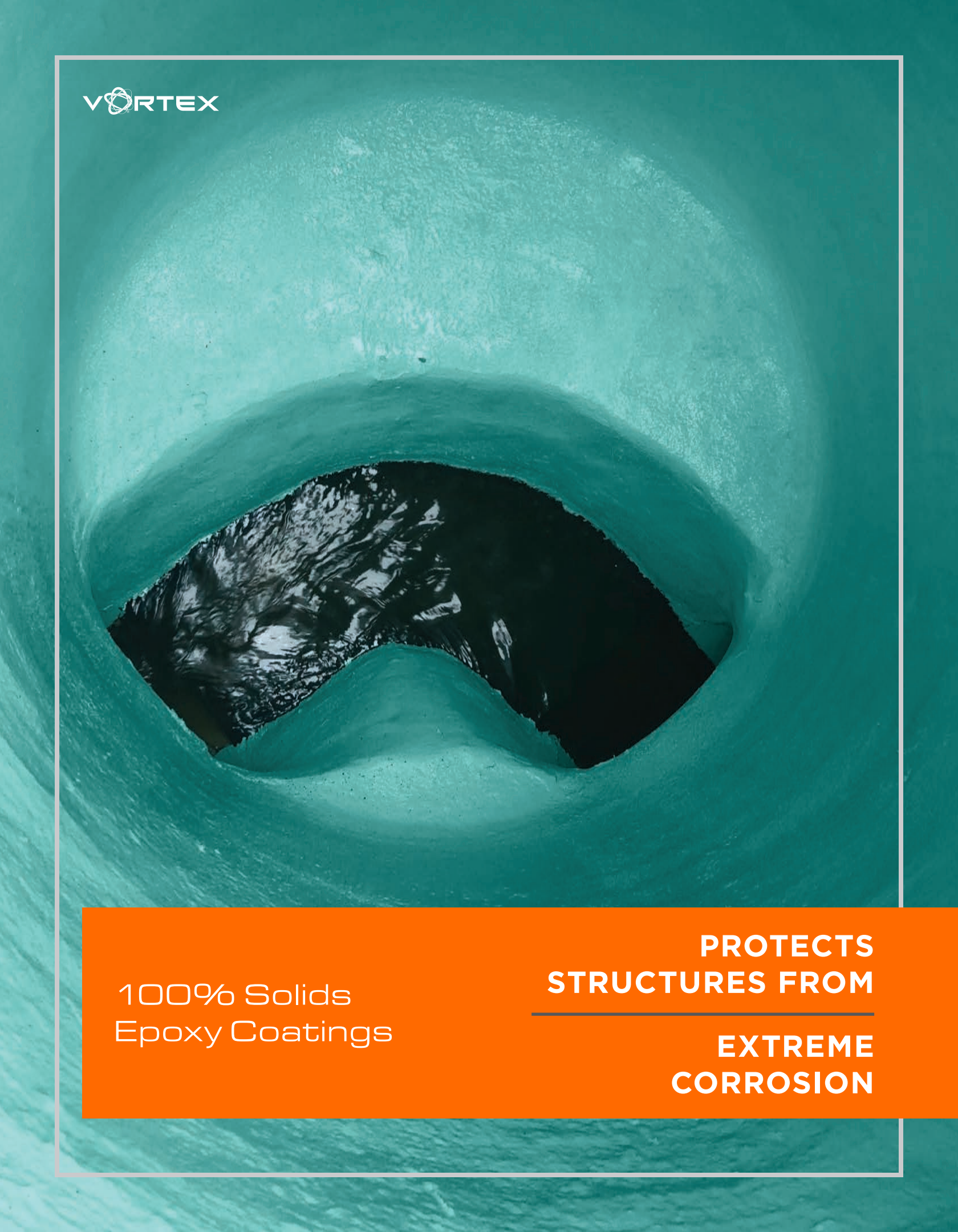
HYDRAULIC CEMENT

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. It is recommended for sewer pipes and manholes, concrete tanks, elevator pits, cisterns, basements, concrete and masonry walls. Some benefits of Quad-Plug include: stops running water immediately, non-shrinking and expands as it sets.

Quad-Flow

HIGH STRENGTH INVERT REHABILITATION MORTAR

Quadex Quad-Flow is a high strength, quick setting invert rehabilitation mortar. It was developed to work in unison with Quadex construction materials to form an abrasion resistant repair while increasing the structural integrity of damaged pipe and culvert inverts. The quick setting characteristics of Quad-Flow minimize downtime and allows crews to continue working just a few hours after its application.


VORTEX
100% Solids
Epoxy Coatings
PROTECTS
STRUCTURES FROM
EXTREME
CORROSION

100% Solids Epoxy Coatings

The Quadex® family of 100% solids epoxies are developed and produced in-house to ensure the epoxy coating you choose not only **performs well, but applies quickly, easily and consistently**. Check out the entire line to address your infrastructure located in extreme corrosion environment or where exceptional elongation and adhesion properties are demanded.

Contact your **Quadex Repair Materials** representative today to learn more about the features, benefits and recommended uses for our 100% solids epoxies.

FEATURES & BENEFITS

- High Build, Single Coat Application
- Exceptional Corrosion Resistance
- Extreme Abrasion Resistance
- Quick Return-To-Service

Structure Guard®

HIGH BUILD EPOXY COATING

Structure Guard is a 100% solids, high-build epoxy coating formulated to provide long-term corrosion protection and structural enhancement for manholes, pump stations, treatment plants or any wastewater infrastructure subject to high levels of corrosion and/or abrasion to include both municipal and industrial applications. Structure Guard sets fast for a quick return-to-service in the most aggressive and turbulent environments. It finishes smooth to enhance flow and is utilized as an interior or exterior pipe lining. Structure Guard can be hand, spray or spin applied with approved plural component spray equipment. It is recommended for: sewer pipes and manholes, pump stations, concrete or masonry vaults and tanks, treatment plant headworks and diversion structures, and steel pipes and tanks.

Structure Guard has passed the strict Greenbook testing process and is approved for use by the City of Los Angeles Department of Public Works (select Lining & Coating).

Structure Guard® - Water

POTABLE WATER EPOXY COATING

Structure Guard – Water is an NSF-61 certified, corrosion resistant, 100% solids epoxy coating. It is commonly used on pipe as small as 4" diameter and tanks 50 gallons and larger. With a 25-minute pot life and extended re-coat time, it is well suited for application on longer pipelines and large water tanks. Typical application uses for Structure Guard - Water include: concrete and steel potable water tanks, potable water pipelines, raw water tanks, raw water pipelines, and fiberglass potable water tanks. It can be plural component sprayed or trowel applied. Some features and benefits of using Structure Guard - Water are: long pot life, extended recoat time, low viscosity, smooth finish, and 100% solids/no VOCs. Physical Properties include: Pot Life — 25 minutes, Cure Time — 4 hours at 70°F.

Structure Guard®-QS

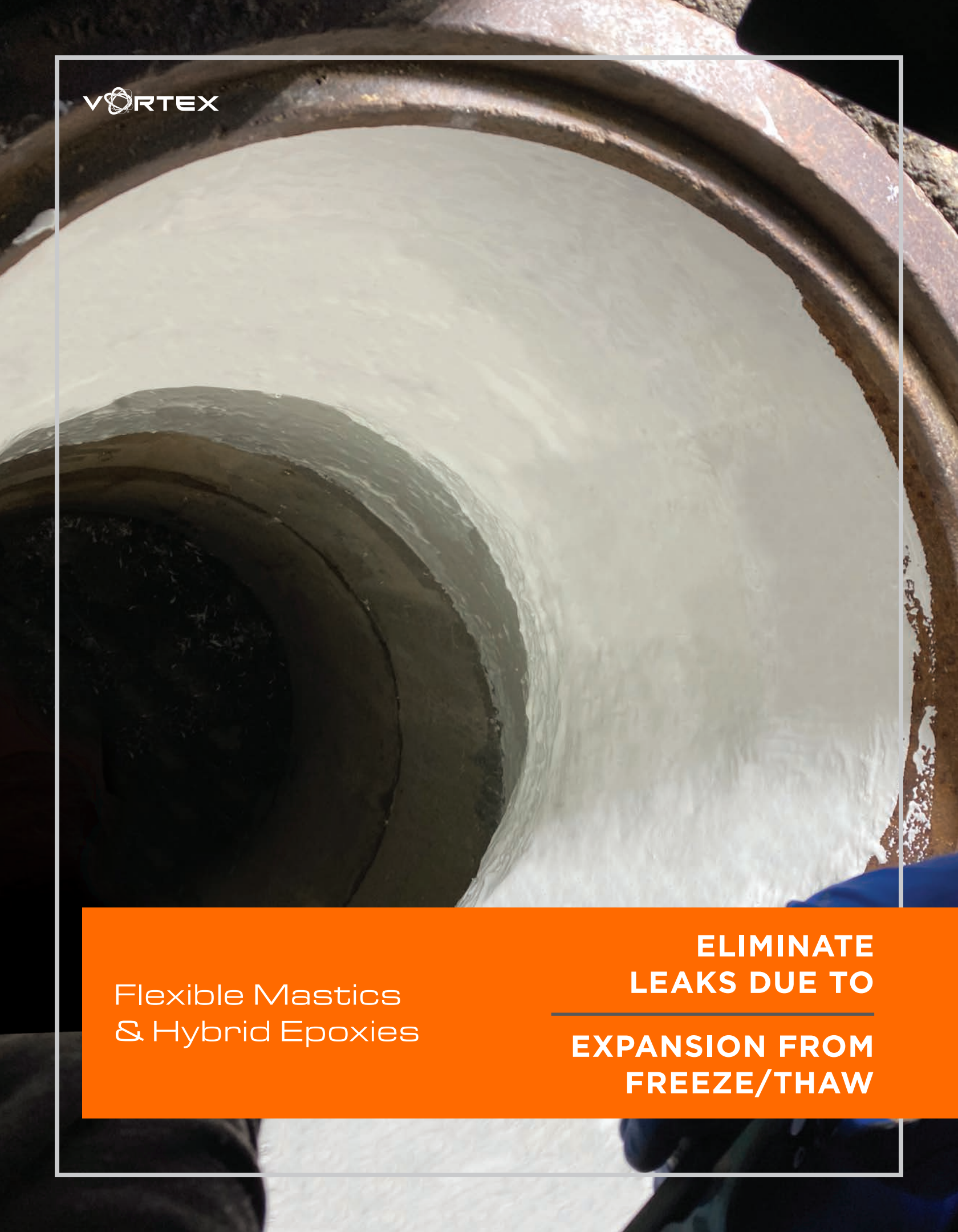
QUICK SPRAY EPOXY PROTECTIVE COATING

Structure Guard-QS sets fast for a quick return-to-service in the most aggressive and turbulent environments. It is a 100% solids, high-build epoxy coating formulated for application on manholes, pump stations, treatment plants or any wastewater infrastructure subject to high levels of corrosion and/or abrasion. It finishes smooth to enhance flow and is utilized as an interior or exterior pipe lining. It contains no VOCs, is corrosion resistant, and can be spray applied up to 125 mils in a single pass. Some features and benefits of Structure Guard-QS are: 100% solids, and excellent corrosion and abrasion resistance. A few of its critical Physical Properties performance results include: Re-coat Window — 12 hours, Immersion (aqueous) Service — 8 hours, Initial Cure Time — 12 hours, Full Cure Time — 24 hours.

Flex Guard®

FLEXIBLE HYBRID EPOXY COATING

Flex Guard is a 100% solids flexible urethane/epoxy hybrid. The extreme flexibility of Flex Guard makes it the best solution for the most extreme conditions. A 100-150% elongation it is effective where other coatings fail. Flex Guard exhibits excellent adhesion to steel and concrete; providing superior protection for tanks that typically experience freeze/thaw and temperature fluctuation. Flex Guard is designed for spray or trowel applications and is engineered and formulated for concrete, brick and steel structures. Benefits of Flex Guard include: no VOCs, quick drying, can be applied in areas of high humidity, and is unaffected by freeze/thaw. Flex Guard has excellent corrosion and abrasion resistance. Key Physical Properties include: Re-coat Window — 24 hours, Full Chemical Cure — 7 days.



VORTEX

Flexible Mastics
& Hybrid Epoxies

ELIMINATE LEAKS DUE TO EXPANSION FROM FREEZE/THAW

Flexible Mastics & Hybrid Epoxies

Cracks due to expansion and contraction caused by traffic loading and freeze/thaw conditions, **lead to leaks** that result in I&I and increased maintenance costs. The Quadex® line of flexible **leak stop materials** lead the industry in elongation and bonding performance. Ask for more details on our complete line.

FEATURES & BENEFITS

- Superior Elongation
- Excellent Adhesion & Bonding
- Easy to Apply
- Quick Setting

Structure Guard®-RS

RAPID SETTING EPOXY

Structure Guard-RS is a 100% solid, high-build epoxy coating formulated to provide long-term corrosion protection and structural enhancement for manholes, pump stations, treatment plants or any wastewater infrastructure subject to high levels of corrosion and/or abrasion. Structure Guard-RS sets fast for a quick return-to-service in the most aggressive and turbulent environments. It finishes smooth to enhance flow and is utilized as an interior or exterior pipe lining. It is also ideal for invert repairs.

Structure Guard®-FM

MICRO FIBER REINFORCED MASTIC

Structure Guard-FM is a 100% solids epoxy mastic used to protect new infrastructure and rehabilitate existing, damaged, infrastructure. Structure Guard-FM is best applied using a trowel or with the Quadex OneGun®. Typical applications for Structure Guard-FM include: manholes, wet wells, vault, septic tanks, steel substrates, floor and wall penetrations/cracks and simple spot repair. Structure Guard-FM is know for its bonding to nearly all substrates. It also requires no mixing, is fast curing and has a ¼" build capability with no sag.

Flex Guard®-FM

FLEXIBLE EPOXY MASTIC

Flex Guard-FM flexible fiber reinforced epoxy mastic is designed to be applied to metal and concrete substrates that experience movement. With a 100-150% elongation, it is ideal for freeze/thaw and structures that experience temperature fluctuation. For best results, apply with a putty knife or trowel, depending on the voids to be filled or covered. Flex Guard-FM is recommended for concrete and steel tanks, foundations, cracks, control joints, manufacturing plants and manhole chimneys.

Flex Guard®-LV

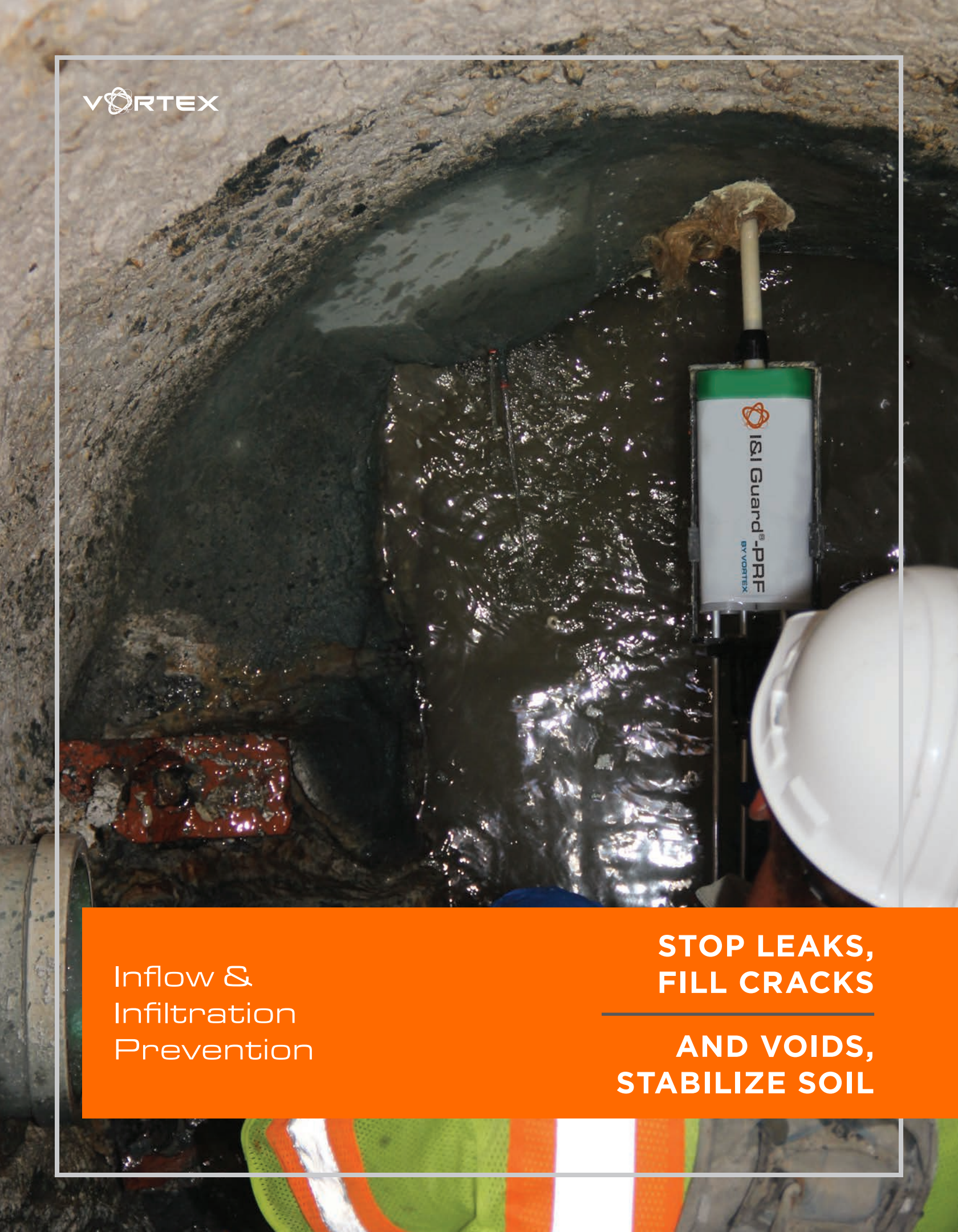
FLEXIBLE, INJECTABLE EPOXY RESIN

Flex Guard-LV is a low viscosity, flexible epoxy resin developed to be injected into cracks in concrete. With a 100-150% elongation it is ideal for freeze/thaw and structures that experience temperature fluctuation. Features and benefits of Flex Guard-LV include: low viscosity, flexible, fast cure, injectable and 100% solids. Typical uses for Flex Guard-LV are: concrete tanks, foundations, control joints, manufacturing plants and warehouses.

Chimney Guard™

DURABLE CHIMNEY SEAL

Chimney Guard is a one step, durable chimney seal made from a 100% solids Epoxy/Urethane hybrid. It is designed to provide a highly flexible and securely bonded seal prepared to address heavy traffic loading, extreme freeze/thaw and infiltration. It can be spray or trowel applied. Prior to application, base surface must be abraded to ensure proper adhesion and performance of Chimney Guard. Some advantages are: it is a high-build monolithic coating (100 mils per coat), and a one-step durable chimney seal.



VORTEX

Inflow &
Infiltration
Prevention

STOP LEAKS, FILL CRACKS

AND VOIDS, STABILIZE SOIL

Inflow & Infiltration Prevention

The family of I&I Guard® polyurethane foam grouts address a broad range of infrastructure problems including, inflow and infiltration, soil stabilization and the filling of major voids.

With leak stoppage being the **number one priority**, all I&I Guard grouts are designed with this specific performance in mind. These include fast-acting, two-part polyurethane grouts for high flow conditions, single component hydrophobic crack sealing grouts and our deeper penetrating, migration foam grouts to **fill voids and stabilize** soil around or below the structure.

DIFFERENT GROUTS, DIFFERENT CONDITIONS

- Fast Curing Foam Grouts For High Flow Leakage
- Single Component Foam Grouts For Leak Stoppage & Crack Sealing
- Migration Foam Grouts For Stabilization & Leak Stoppage
- Structural Two-Part Grouts

I&I Guard®-PRF

FAST CURING FOAM GROUT

Quadex I&I Guard-PRF is a quick response dual component hydrophobic polyurethane with a 1 - 3 second reaction time. It is designed to stop rapid water flow (up to 50 GPM) leaking from concrete or other underground structures. Since I&I Guard-PRF is hydrophobic, it will not shrink, contains no VOCs and requires no special breathing apparatus or other PPE. I&I Guard-PRF is a two-part polyurethane grout used to stop high flow infiltration. Easy injection method creating curtain of grout on the outside of underground structures. Super fast cure allows for immediate reduction in infiltration. Best when used in conjunction with Quadex Repair Materials rehabilitation systems. I&I Guard-PRF is recommended for water inflow and infiltration control in manholes, vaults and other concrete, brick or stone structures.

I&I Guard®-SCF

SINGLE COMPONENT FOAM GROUT

I&I Guard-SCF is a single component, pre-catalyzed hydrophobic polyurethane grout that is extremely versatile and used for a variety of infrastructure rehabilitation applications. Its effectiveness and flexibility make I&I Guard-SCF an ideal solution for leak stoppage and crack sealing. This elastomeric polyurethane grout serves as a infiltration stop and is a viable method of sealing moving and non-moving cracks in concrete structures, slabs, vaults, tanks, and pipes. Advantages of I&I Guard-SCF include: single component/no mixing, contains no volatile solvents, will not dilute in water, controlled reaction time, provides extensive coverage, non-shrinking, and quick return to service. Product applications include: sealing larger volume leaks through concrete cracks and fissures, filling voids and stabilizing soil or gravel.

I&I Guard®-MSF

MIGRATION FOAM GROUT

I&I Guard-MSF, is our premier soil stabilization foam. It is a low viscosity, high density, deep penetrating, polyurethane injection resin that stops infiltration and stabilizes soil; all the while expanding to create a solid, water-tight barrier. I&I Guard-MSF works best in low-flow situations. With a slower reaction time, it can migrate further into the void for a more effective seal. Typical uses include: voids between walls/floors/ceilings, expansion and barrel joints, cracked concrete, pipe intrusions and annular space. I&I Guard-MSF features include: very low viscosity for good penetration, contains no volatile solvents, will not dilute in water, controlled reaction time, provides extensive coverage, non-shrinking, encapsulates and strengthens loose soil, and contains no TDI.

I&I Guard®-SSF

STRUCTURAL TWO-PART GROUT

I&I Guard-SSF is a high density, high strength, structural two-part polyurethane grout. This closed cell polyurethane's low viscosity and hydro insensitive nature allows for permeation of voids, under-sealing concrete and stabilizing soil, while also mitigating inflow and infiltration. Typical uses include: soil stabilization, releveling concrete slabs, filling voids, sinkhole remediation, and other various types of geotechnical grouting. I&I Guard-SSF features include: low viscosity, no agitation necessary, high strength, hydro insenstive, quick return to service, environmentally safe, and contains no VOCs. Physical Properties of I&I Guard-SSF include: Reaction Time — 10 seconds, Full Rise Time — 60 seconds, Full Strength — 15 minutes.

Application Equipment

ADVANCED EQUIPMENT

FOR QUALITY APPLICATION

Application Equipment

Quadex® prides itself in **developing advanced application systems** to support its extensive line of geopolymer, hybrid cement and polymeric materials for infrastructure rehabilitation. From pipes, manholes, wet wells and tanks, to many other critical structures... **Quadex® has an equipment solution for you.**

MORTAR & POLYMERIC EQUIPMENT SOLUTIONS

- Mortar Rigs
- Epoxy Coating Rigs
- Precision Spinner Systems
- Portable Spray Systems

sprayMASTER®

MANHOLE REHABILITATION RIG

The sprayMASTER is a completely self-contained manhole mortar lining installation system. It comes fully equipped for the precise, low-velocity spray and/or spin-cast application of cementitious and geopolymer mortar manhole lining materials. The sprayMASTER is equipped with a 250-gallon poly lined water tank and a turbo diesel engine/hydraulic power plant.

spinMASTER™

CENTRIFUGAL-CAST MANHOLE LINER SYSTEM

The spinMASTER is a centrifugal-cast manhole liner system that speeds up the application process, and produces a consistently even coat. The spinMASTER power winch features “continuous on-time” design which eliminates normal motor breakdown (overheating). The winch can be assembled for either hand control or foot pedal operation to navigate the precision spray head up and down the vertical structure.

sprayMASTER® II

EPOXY COATING SYSTEM

The sprayMASTER II is a completely self-contained infrastructure renewal system. When this base system is combined with the powerful capabilities of Schwalm robotics, it becomes the most efficient coating, cleaning, inspection and cutting solution on the market. The sprayMASTER II is best used for manholes, pipes, culverts, tunnels, wet wells, junction boxes and non-round infrastructure.

trekMASTER™

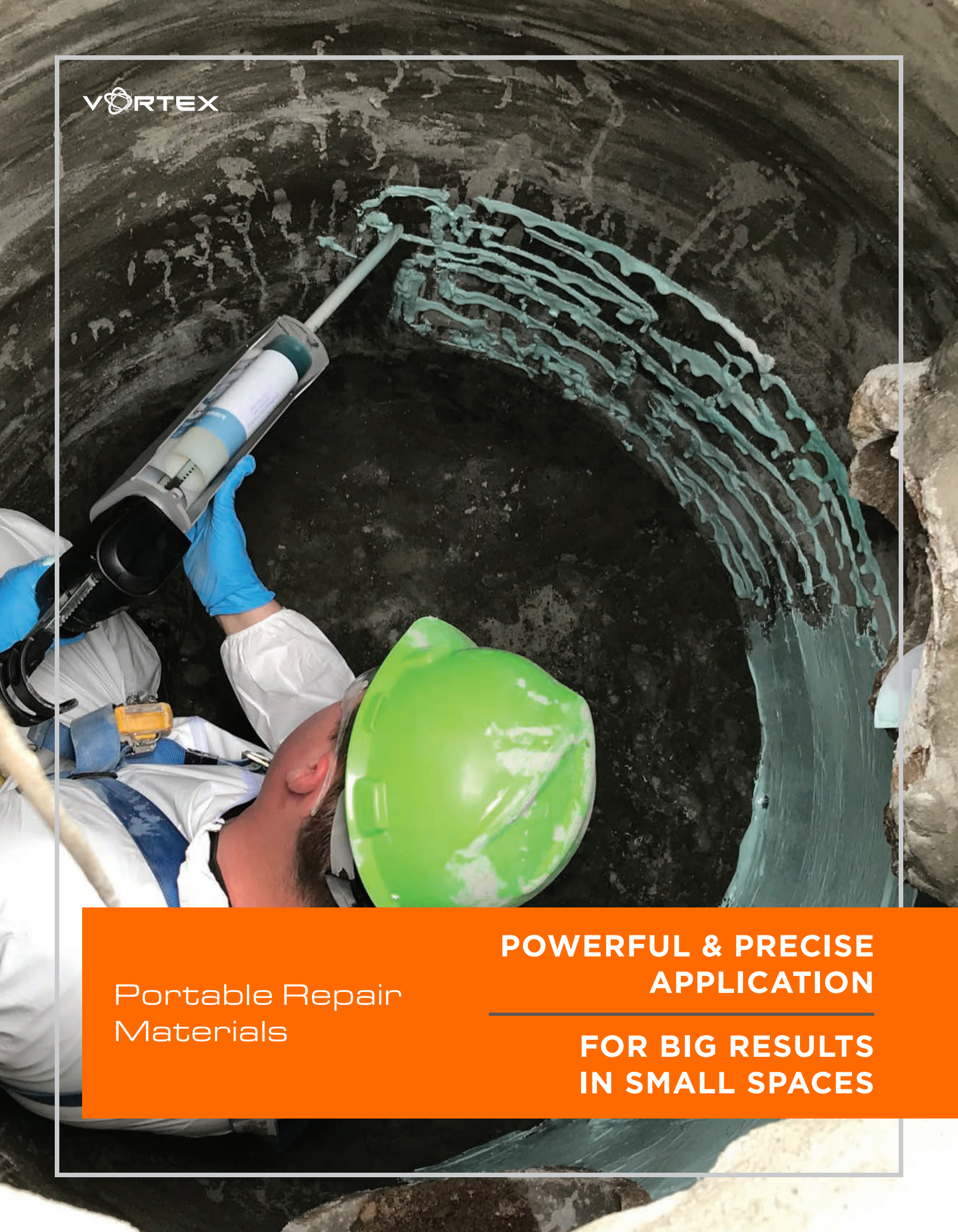
FOR EASEMENTS & LIMITED ACCESS AREAS

The trekMASTER is a remote-controlled track mounted mobile grout plant designed to continuously mix and pump non-shrink grout, repair mortars, and most flowable grouts. Customers have found this unit extremely useful and effective in areas where work is performed along easements or very narrow spaces. It is equipped with a 45-gallon mixing tank and a 20-gallon holding hopper.

Electric Airless Sprayer

SINGLE COMPONENT SPRAYER

The Graco® 390 PC Electric Airless Sprayer is lightweight and portable, at 30 lbs. this sprayer is easy to lift and carry. With a variable pressure adjustment, it also allows for repeatable setting while spraying light-to-heavier materials. The 390 PC comes with an extremely reliable pump and its Pump Replacement System is designed for fast and easy jobsite replacement.



VORTEX

Portable Repair Materials

POWERFUL & PRECISE APPLICATION

FOR BIG RESULTS IN SMALL SPACES

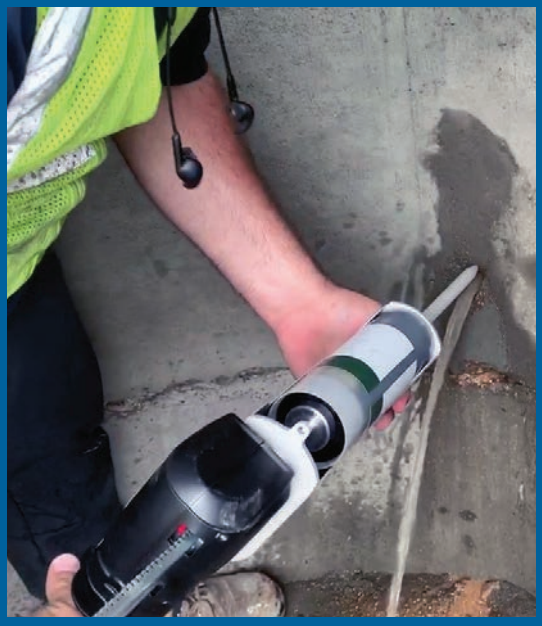
Portable Repair Materials

The OneGun® combines portability, power and convenience when it comes to the need for the **fast and efficient application** of epoxies, foam grouts and mastics to address corrosion, I&I, cracks and freeze/thaw conditions.

Now the OneGun comes in two sizes, standard and mini, making it even **easier to apply repair materials** in the tightest places and smallest structures. Add one to your tool box today.

OneGun® MATERIALS

- Structure Guard®-FM
- Structure Guard®-RS
- Flex Guard®-FM
- I&I Guard®-PRF
- I&I Guard®-SCF
- I&I Guard®-SSF



Quadex OneGun®

DUAL COMPONENT MATERIAL CARTRIDGE DISPENSER

This extremely powerful and ultra-portable, battery operated cartridge gun is the perfect solution for applying the Quadex line of specialty epoxies, grouts and mastics. OneGun is systematically designed to deploy the Quadex line of cartridged repair materials, whether in “1 to 1” or “2 to 1” ratios. OneGun’s 20 Volt Lithium-Ion Battery will deliver up to three hours of continuous power in the most extreme conditions. Benefits of using OneGun with Quadex patching and sealing products include:

- **One delivery method, multiple repair materials**
- **Battery operation eliminates cords and hoses from the work area**
- **Resealable cartridges eliminate material waste**
- **Durable design to exist in the toughest of environments**

Ask about our OneGun starter kits or visit www.shopTRENCHLESS.com to learn more.

Quadex OneGun®

Quadex OneGun® Mini

Grout Accessories

DRY OAKUM

Oakum is sold and shipped in 50-lb. coils in cardboard containers.Makes bullets when fully unwound, a 50-lb. coil will yield approximately 100 l.f. of ¾″ diameter rope. The very loose weave allows rapid absorption of Parson Perma Seal in addition to ease of separation for insertion in small crevices.

Too keep your project moving, always keep plenty of injection ports on hand.

INJECTION PORTS

- **A simple and reliable method of injection**
- **Specifically designed to accommodate jobsite conditions**
- **Capable of handling polyurethane and epoxy grouts**
- **Uses common hydraulic lubrication fittings**
- **Packaged with 100 ports and 100 zerk fittings per bag**

VORTEX

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QUADEX®
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REPAIR MATERIALS