



GeoTree[®] Geopolymer Materials





GeoTree Solutions Offers a Leading Range of Geopolymer Materials.

GeoTree Solutions is a global leader in the development, manufacturing, and commercial application of geopolymer materials. Our best-in-class products are used in a wide variety of applications to repair and rehabilitate Civil, Industrial, Commercial, and Underground infrastructure.

In 2011, GeoTree Solutions developed and introduced the first geopolymer mortar material specifically designed for trenchless wastewater rehabilitation: GeoSpray® geopolymer mortar. The development of geopolymers for large-scale industry-applicable systems required the creation of a “just add water” mixture that avoided the necessity of alkaline solutions used to create the proper reaction conditions. This contractor-friendly breakthrough paved the way for the rapid adoption of the more environmentally responsible class of materials that exhibit superior physical performance to ordinary Portland cement.

More than 100 million pounds of GeoTree geopolymer mortar have been applied successfully around the world in hundreds of unique projects.

The Range



GeoSpray geopolymer is the flagship of GeoTree's geopolymer product line. The fiber reinforced mortar is specifically designed for structural rehabilitation of large diameter pipes commonly used in stormwater and sanitary sewer construction. The GeoSpray material has superior physical performance properties compared to other spray applied liner systems. The unique GeoSpray mortar chemistry provides superior flexural and compressive strength, as well as ultra-low porosity and high self-bonding which eliminates cold joints. GeoSpray geopolymer can be applied using a range of techniques such as pouring, troweling, spraying, or centrifugal/spin casting.



GeoSpray HCE geopolymer is the next tier in material performance. Formulated to be highly resistant to microbial-induced-corrosion (MIC) while easily and consistently sprayable, GeoSpray HCE geopolymer has all the proven benefits and physical properties of GeoSpray. GeoSpray HCE exceeds the requirements for DIN 19753 XWW4 for corrosion protection. GeoSpray HCE is ideally suited for sanitary sewers, manholes, and related structures.



GeoSpray 61 geopolymer is formulated for the rehabilitation of pipes and tanks in drinking water applications and meets the requirements of NSF/ANSI/CAN 61 & 372. This material is certified for pipes with an inner diameter of six (6) inches or greater, and for tanks larger than 300 gallons.



GT Invert Repair Mortar is a fiber-reinforced geopolymer material designed as a flowable fill and grout for civil structures. This ultralow porosity material is made from natural mineral polymers and industrial waste streams. GT Invert Repair Mortar can be pumped long distances, has an extended working time, and quickly sets to superior physical properties.



GeoPlug® water-stop is a rapid setting water infiltration patch. GeoPlug powder immediately stops leaks and is a temporary repair to stop active flow of water until a structural repair can be completed.



GeoStrong® Repair Mortar is a one-component, non-shrink, fast-setting geopolymer mortar intended for repairing horizontal, vertical, and overhead concrete surfaces. A corrosion-resistant cementitious powder, GeoStrong is used on grade, above, or below grade to fix defects like spalled concrete in Civil Infrastructure and Industrial applications.



GeoRoc® geopolymer is a MSHA tested, strength enhancing mine sealant formulated for surface reinforcement and weathering protection of soils, rock, and coal strata. The inorganic polymeric system has a Class A Flamespread (ASTM E162) and adheres strongly to cement surfaces.

Comparison Table

Conveyance / Location / Application	Full rehabilitation material	Invert / Floor	Patching material
Storm water (culverts, manhole, catch basins, spill apron, CSO)	GeoSpray	GT Invert	GeoSpray
Sanitary / Wastewater / Stormwater (manholes / sewers / CSO) with low pH	GeoSpray HCE	GT Invert	GeoSpray HCE
Potable water (aqueducts / pipelines, tunnels, tanks)	GeoSpray 61	GT Invert	GeoSpray 61
Tunnels	GeoSpray/GeoStrong	GT Invert	GeoSpray/GeoStrong
Mining Applications (structure, lining, MHSA fire rated)	GeoRoc	GT Invert	GeoRoc
Vertical Concrete Structures	GeoStrong	GT Invert	GeoStrong
Cast in Place / Precast Structures / Box Culverts	GeoSpray	GT Invert	GeoSpray/GeoStrong
Vehicular / Pedestrian underpass	GeoStrong	GT Invert	GeoStrong
Wear/Abrasion Surface	GeoSpray	GT Invert	GeoSpray/GeoStrong

Engineered

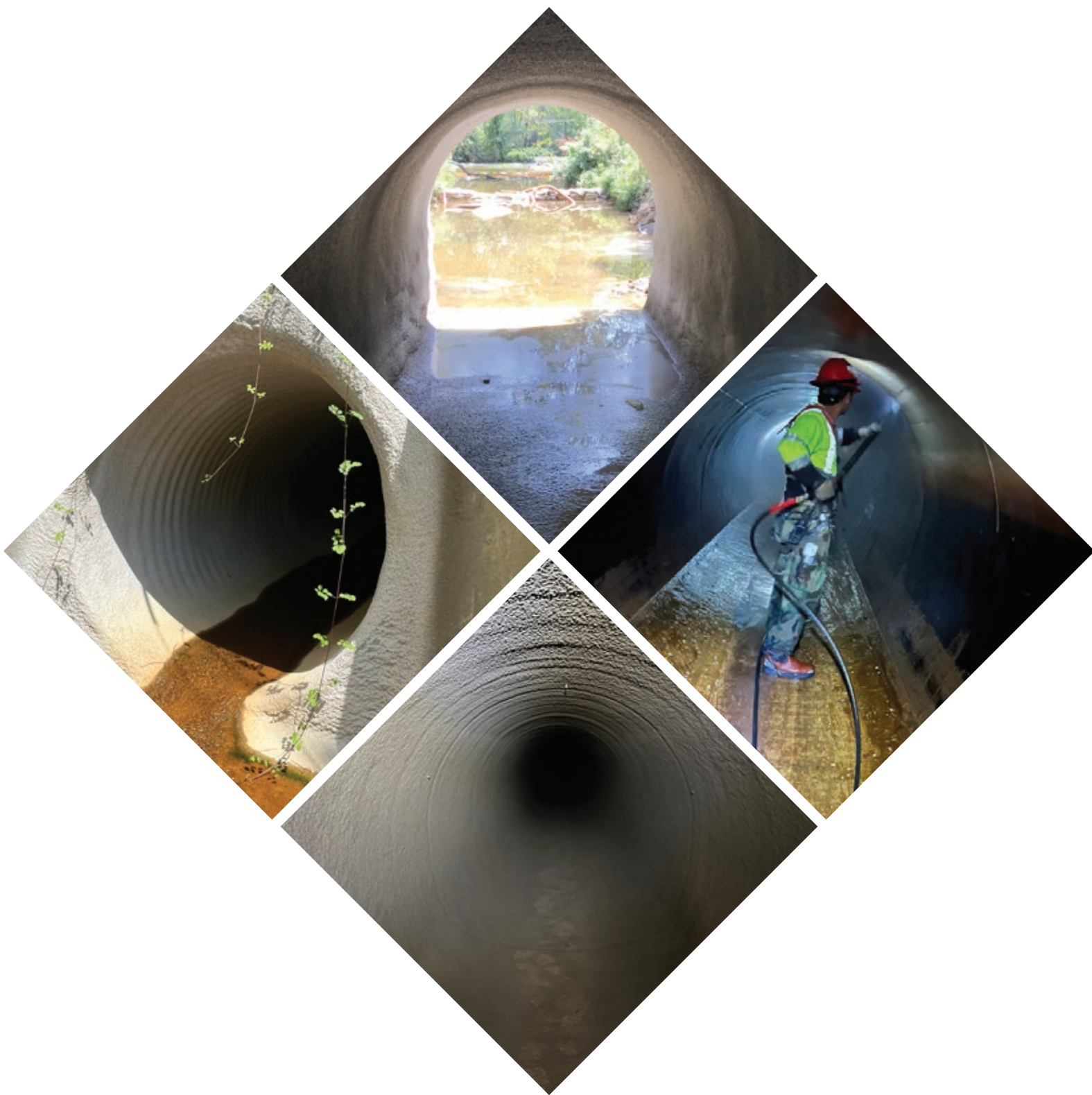
- Highest flexural strength repair mortar > 1500 psi at 28 days (ASTM C78)
- High early and ultimate strength
- Unique chemistry promotes self-bonding - Eliminating cold joints between applications
- Inherently resistant to H₂S corrosion mechanisms
- Adapts to any shape including: bends, curves and angles
- Most extensive third-party testing in the industry
- WRc Approved structural lining system

Cost Efficient

- Typically lower installed lifecycle cost compared with alternative rehabilitation methods including: CIPP, slipline and spiral wound
- The larger the diameter the bigger the cost savings
- Minimal installation footprint
- Quick return to service with lower by-pass costs
- Flexible by-pass options tuned to your project needs
- Eliminate excavation with equipment that fits through 20-inch manholes

Safe & Sustainable

- Styrene free with no leachable toxins
- NSF/ANSI/CAN 61 & 372
- WRAS certification for potable water
- Third-party evaluation from EPA and other independent laboratories
- Reduces greenhouse gas emissions over Portland cement





www.GeoTreeSolutions.com
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