



GEOKRETE® GEOPOLYMER TECHNICAL DATA SHEET

Rev. 04-2018



A VORTEX COMPANY

REPAIR MATERIALS

Typical Performance Characteristics

- Compressive Strength (ASTM C39)
28-days >8,000 psi
- Flexural Strength (ASTM C78)
28-days >800 psi
- Bond Strength (ASTM C882)
28-days >3,000 psi
- Modulus of Elasticity (ASTM C469)
28-days = 5.49×10^6 psi
- Chemical Resistance (ASTM C267)
0% mass loss in 8 week
sulfuric acid @ PH 1.0 immersion
- Chloride Ion Penetration Resistance
(ASTM C1202)
28-Day < 250 Coulombs (very low)
- Split Tensile Strength (ASTM C496)
28-days >900 psi
- Shrinkage (ASTM C1090)
28-days $\leq 0.02\%$
- Freeze Thaw (ASTM C666)
No visible damage after 300 cycles
- Abrasion Resistance (ASTM C1138)
6 Cycles at 28 Day - loss <1.0%

STRUCTURAL REHABILITATION MORTAR

DESCRIPTION

Quadex™ GeoKrete® geopolymer is designed to provide corrosion resistant protection in a high hydrogen sulfide environment, increase structural integrity and eliminate the infiltration of groundwater in deteriorated structures. GeoKrete is a factory blended, one component, fiber reinforced geopolymer mortar synthesized from pozzolanic materials of industrial byproducts, enhanced with monocryalline quartz aggregate. The GeoKrete geopolymer reaction mechanism is polymerization which yields superior physical properties and chemical resistance. It can be applied in one pass up to several inches thick on horizontal or vertical surfaces by low pressure spraying or spin cast application process.

RECOMMENDED FOR

Structural restoration of large diameter pipe, both storm and sewer, consisting of metal, concrete, stone, masonry and others. Other structures such as manholes, wet-wells, and treatment plants also benefit from the superior strength and corrosion resistance properties of this advanced geopolymer.

FEATURES AND BENEFITS

- Quality controlled, one-component blend for uniform results.
- High early and ultimate compressive, flexural and bond strengths.
- Resistant to acid attack in wastewater streams with pH as low as 1.0 and temperature as high as 170°F for industrial effluent.
- Extremely low permeability.

PACKAGING

GeoKrete geopolymer is supplied in 60 lb. (27 kg.) poly-lined bags or 1,000 lb. (454kg) super sacks.

YIELD

One 60-lb. bag of GeoKrete geopolymer will yield approximately 0.45 cu. ft. and will cover 10.9 sq. ft. at a 1/2 inch thickness.

PROCEDURE

Prepare surface to be patched by removing unsound concrete, dirt, dust, oil and other debris using high pressure (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 allow for a good bond.

Use approximately 0.4 to 0.5 gallons of potable water per 60 lb. bag of GeoKrete geopolymer. First add water to mixer, start the mixer and add GeoKrete geopolymer until mortar is completely mixed. Once all geopolymer material and water has been added to mixer, it needs to mix for approximately 5 minutes prior to being dumped into material hopper.

Apply GeoKrete geopolymer by low pressure spraying or the spin cast application process on horizontal or vertical surfaces to a monolithic thickness of 1/2 or more inches.

CURING

Cure in accordance with manufacturer's recommendations.

WARRANTY

Quadex warrants its products to be free of defects in material and workmanship. Quadex will replace any product proved to be defective when applied in accordance with manufacturer's instructions. Quadex's obligation shall be limited solely to such replacement. There are no other warranties by Quadex, expressed or implied.

PRECAUTIONS

Avoid eye contact or prolonged contact with skin. Wash thoroughly after use. Persons using Quadex GeoKrete geopolymer should wear necessary eye protection, dust mask and rubber gloves. Read all product labels and technical literature.

