



Quad-Flow

BY VORTEX

TYPICAL PERFORMANCE CHARACTERISTICS

Identification Criteria

- **Fresh mortar - bulk density**
2247 kg/m³
DIN EN 1015-6
- **Hardened mortar - bulk density**
2285 kg/m³ (28 day)
DIN EN 1015-10
- **Consistency 5 mins. after end of mixing**
> 550 mm
DIN EN 13395-2 (Flow-test channel)
- **Maximum particle size**
≤ 4 mm
Test as per DIN EN 1015-1
- **Processability at wmin**
≥ 550
DIN EN 13395-2 (Flow-test channel)
- **Processability at time**
≤ 100 mm
DIN EN 13395-2 (Flow-test channel)
- **De-mixing at wmax**
no bleeding

Performance Criteria

- **Compressive strength**
≥ 50 MPa (28 day)
DIN EN 196-1
≥ 25 MPa (1day)
DIN EN 196-1
- **Flexural strength**
7 MPa (28 day)
DIN EN 196-1
- **Sedimentation stability**
No significant variation in distribution
Stabile (passed)
DAFStb guideline SVB
- **Resistance to freeze/ thaw cycling**
1500 g/m² mean value after 28 cycles
BAW technical sheet, CDF test
- **Expansion**
>0.1%
DIN EN 445:2008-01 Vertical Tube
- **Shrinkage**
≤ 1.5% (es,m.91)
≤ 2.0% (es,i.91)
DAFStb Cast Concrete and Grout
- **Sulphate resistance**
≤ 0.8 mm/m
DIN EN 19573 Appendix C
- **Resistance to chemical attack**
≤ 1.05 mm (dt,ph4)
XWW3

Invert Rehabilitation Mortar

DESCRIPTION

Quad-Flow is designed to provide high strength, quick setting invert rehabilitation mortar to work in unison with the Quadex family of repair products to form an abrasion-resistant repair while increasing the structural integrity of deteriorated pipe and culvert inverts. Quad-Flow has been developed to provide a flowable repair material, capable of being pumped into a host pipe to fill voids and repair damaged inverts with a quick setting, high strength mortar, reforming and reshaping damaged or missing inverts. The quick setting characteristics of the material allow crews to continue their work rehabilitating the host infrastructure mere hours after introduction of Quad-Flow.

RECOMMENDED FOR

Restoring storm and sanitary sewer culvert inverts:

- **As stand along repair method**
- **A part of repair prior to applying a Quadex cementitious or polymeric lining solution**

FEATURES AND BENEFITS

- **Quality controlled, one-component blend for uniform results.**
- **High strength, abrasion and corrosion resistant material.**
- **Fast initial set times allowing further repair activities to follow immediately behind invert rehabilitation.**
- **Economically available in 1,000 lb. | 450 kg. bulk bags.**



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.



PROCEDURE

Prepare void to be filled by removing unsound concrete, dirt, dust, oil and other debris using high pressure (3,500 psi | 241.3 bar) water blasting and manual/mechanical removal.

Use approximately 13 to 14 gallons | 49.21 to 53.0 liters of potable water per 1,000 lb. | 453.59 kg. bag of Quad-Flow. First add water to mixer, start mixer and add Quad-Flow until mortar is completely mixed.

PACKAGING

Quad-Flow is supplied in 1,000 lb. | 453.59 kg. bulk bag.

YIELD

One 1,000 lb. | 453.59 kg. bag of Quad-Flow will yield approximately 7.42 cu. ft. | 0.21 cu. m.

CURING

Cure in accordance with manufacturer's recommendations.

PRECAUTIONS

Avoid eye contact or prolonged contact with skin. Wash thoroughly after use. Persons using Quad-Flow should wear necessary eye protection, dusk mask and rubber gloves. Read all product labels and technical literature.