

PileMedic® UW Grout

Description

PileMedic® UW Grout is a pumpable underwater cement-based non-shrink grout for use in underwater repair such as pile restoration. PileMedic® UW Grout is designed for underwater use in tidal zones in applications requiring a non-shrink, non-metallic, wash out resistant grout in thickness from ½" up to several inches. PileMedic® UW Grout is specially formulated for minimal wash-out and is salt-water resistant.

Uses

- Recommended for underwater grouting of bridge columns, concrete pilings, and dam repairs where a "wash-out" resistant, free flowing or pumpable non-shrink grout is required.
- Use for encapsulation repair and restoration for concrete, timber, and steel in dry and wet environments.

Features/Benefits

- Applications requiring grout to be pumped.
- Contains high quality, well graded aggregates for high strength and workability
- Sulfate resistant
- Positive expansion for maximum durability and adhesion
- Extended work time to ensure sufficient time for placement
- Free of bleeding, segregation, wash out or settlement

Specifications/Compliances

- Corps of Engineers Specifications: CRD-C 621
- ASTM C 1107
- USDA Accepted

Packaging/Yield

Available in 50 lb. bags & 3000 lb. Super Sacks
One 50 lb. bag yields approximately 0.45 ft³

Surface Preparation

Substrate must be clean and sound. All loose material must be removed. Substrates which are permanently immersed should be sand blasted or cleaned with a high-pressure water jet. Non-immersed or intermittently immersed substrates can also be prepared using these techniques. Depending on the circumstances, scabbling or brush hammering may be appropriate. In view of the fluid nature of PileMedic® UW Grout, all formwork must be grout-tight. This can be achieved using foam rubber sealing strips at the edges.

Technical Data

Shelf Life	1 year in original unopened container
Storage Conditions	40°F-95°F (5°C-35°C)
Material Conditions Prior to Use	65°F-85°F (18°C-29°C)
Liquid Mix Ratio	2:1 by volume
Initial Set Time @ 72°F (ASTM C 191)	1 hour - Plastic 3 hours - Flowable 5 hours - Fluid
Final Set Time @ 72°F (ASTM C 191)	3 hours - Plastic 5 hours - Flowable 7 hours - Fluid
Flowability CRD C-227 - Plastic	124-145%
Flexural Strength (ASTM C 190) 28-Day Cure	1,200 psi (8.3 MPa) Flowable
Tensile Strength (ASTM C 190) 28-Day Cure	550 psi (3.8 MPa) Plastic
Typical Water Requirements	Plastic: 6 pints per 50 lb. Flowable: 6.5 pints per 50 lb. Fluid: 8.5 pints per 50 lb.

Age	Compressive Strength (ASTM C 109)		
	Plastic	Flowable	Fluid
1 day	5,400 psi (37.2 MPa)	4,600 psi (31.7 MPa)	3,300 psi (22.7 MPa)
7 days	7,550 psi (52.0 MPa)	6,400 psi (44.1 MPa)	5,700 psi (39.3 MPa)
28 days	11,000 psi (75.8 MPa)	9,200 psi (63.4 MPa)	8,200 psi (56.5 MPa)

Note: the data shown is based on controlled laboratory testing. Reasonable variation from test results shown can be expected. Field and laboratory testing should be controlled on the basis of the desired placing consistency, rather than strictly on water content.

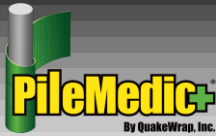
The Infrastructure Innovators

QuakeWrap.com

QuakeWrap, Inc.
6840 S. Tucson Blvd.
Tucson, AZ 85756

Toll Free (866) QUAKEWRAP [782-5397]

QuakeWrap, Inc. warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. QUAKEWRAP, INC. SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.



PileMedic[®] UW Grout

Mixing

The quantity of water required to achieve a flowable consistency must be accurately measured for each mix. Start with 6 pints and add additional water to bring the consistency to a fluid yet cohesive mix. Do not exceed 8.5 pints of water. Each 50-lb. bag requires approximately 6.5 – 8.5 pints of water. A mechanically powered grout mixer must be used. Ensure that the machine capacity and the number of workers are adequate to enable grouting to be carried out as a continuous operation.

Place the specified amount of water in the mixer. Slowly add the contents of PileMedic[®] UW Grout bag, mixing continuously. When all the contents are added, mix continuously for a minimum of 3 minutes making sure that a smooth, uniform mix is obtained. Pass the mixed grout through a #4 sieve to remove any lumps prior to placing. Important – The need to observe the accurate gauging of water addition and the stated mixing time should be stressed to all operatives and, wherever possible, included in specifications.

Application

PileMedic[®] UW Grout may be placed in thickness up to 4' in one pour when placed above water. When placed under water, the heat sink effect in this environment permits thickness up to 7' to be placed. For thicker sections, up to 10' above water and 20' under water, it is necessary to fill out PileMedic[®] UW Grout using a clean, rounded and well graded aggregate. The quantity of aggregate added should not exceed 1 part aggregate to 1 part PileMedic[®] UW Grout by weight. For such mixes a concrete mixer must be used. Unrestrained surface areas should be kept to a minimum. Excessively large volumes should require a thermal analysis to determine any limitations on pour size.

Shelf Life & Storage

PileMedic[®] UW Grout should be stored in a cool, dry interior area. At no time should stored material be exposed to high moisture, rain, or snow conditions. When stored in the original tightly closed container, the shelf life is one year from the date of manufacture.

Limitations

Apply only when the surface and ambient temperature are 45-50°F (7-10°C) and rising. See Cold Weather Application guidelines, per ACI, for applications in temperatures less than 50°F (10°C). Applications made during temperatures greater than 85°F (29°C) should follow Hot Weather Application guidelines, per ACI. Do not add more water than specified. Not recommended for placing below 35°F. Do not re-temper. Do not vibrate. Do not use any additives including accelerators, water reducers, or air entraining agents. Do not over water. This can cause bleeding or separation. Do not retemper. Do not add cement, sand or admixtures. Do not mix more than can be used in twenty minutes.

Cleanup

Collect with absorbent material, flush with water. Dispose waste in accordance with local disposal regulation. Uncured materials can be removed with approved solvent. Cured materials can only be removed mechanically.

First Aid

Appropriate personal protective equipment (PPE) should be worn at all times when handling this product. Consult SDS for more information.

Certificate of Compliance

Safety Data Sheet (SDS) will be supplied upon request and is included with each shipment.

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