KAUFMAN

PRODUCT INFORMATION

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K Pro UW EPL Grout

Description

K Pro UW EPL Grout is a three-component, 100% solids, extended pot-life, and moisture-insensitive marine epoxy grout system. K Pro UW EPL Grout includes our specialty low-dust aggregate, K Pro UW Grout Aggregate, to significantly reduce worker exposure to dust. In addition, K Pro UW Grout Aggregate is formulated to enhance pumpability. K Pro UW EPL Grout is not limited to pumping applications, as it can also be poured or used in tremie applications. The extended pot-life of K Pro UW EPL Grout makes jobsite applications easier and more manageable in hotter climates when temperatures rise over 90ºF.

No fillers, non-reactive diluents, or solvents are used in K Pro UW EPL Grout. Additionally, K Pro UW EPL Grout may be used in fresh, salt, or brackish water, and will bond effectively to wood, concrete, steel, and fiberglass.

Uses

K Pro UW EPL Grout is ideal for the restoration of structural pile members in underwater applications as an epoxy grout to fill the annular space between pile jackets and pilings. Extremely

Unfilled Product Physical Information				
Mix Ratio	2:1 by Volume			
Shelf Life	2 Years			
VOC Content	0 Grams/Liter			
Tensile Elongation (ASTM D-638)	8-10%			
Bond Strength (ASTM C-882) 2 Days Moist Cure 14 Days Moist Cure 14 Days Air Cured	 1,500 psi. 2,500 psi. 2,300 psi.			
Water Absorption (ASTM D-570)	0.07% at 24 Hours			
	72ºF		**95ºF**	
Viscosity, (ASTM D-2556)	950-1,000 cps.at 72ºF		400-450 cps @ 90ºF	
Gel Time (ASTM C-881)	145-155 Minutes		85-95 Minutes	
Compressive Strength,7 days (ASTM D-695)	4,600 psi.		8,600 psi.	
Tensile Strength, 7 Days (ASTM D-638)	2,100 psi.		3,700 psi.	
Aggregate Filled Test Properties				
Test Methods	**High Flow Mix Ratio Test Results**		**Standard Mix Ratio Test Results**	
	72ºF	**95ºF**	**72ºF**	**95ºF**
Compressive Strength, (ASTM C-579 Proc. B) 1 Day 2 Days 3 Days 7 Days 14 Days	 3,500 psi. 6,000 psi. 10,000 psi. 11,250 psi.	 3,200 psi. 6,500 psi. 8,100 psi. 10,150 psi. 10,900 psi.	 3,100 psi. 6,000 psi. 10,000 psi. 11,600 psi.	 3,500 psi. 5,900 psi. 7,500 psi. 9,450 psi. 10,000 psi.
Flexural Strength, 7 Days (ASTM C-580)	4,900 psi.	5,700 psi.	4,100 psi.	4,800 psi.
Tensile Strength (ASTM C-307)	2,500 psi.	2,600 psi.	2,000 psi.	2,300
Adhesion (ASTM D-4541) Fiberglass PVC Steel Marine Wood	 1,100 psi. 1,400 psi. 2,000 psi. 1,800 psi.			
Adhesion to Concrete (ASTM D-7234)	500 psi.			
Density, High Flow Mix Ratio (ASTM C-905)	121 lbs./ft^3			
Density, Standard Mix Ratio (ASTM C-905)	128 lbs./ft^3			

Directions

Surface Preparation

Piling surfaces must be clean and sound. Remove all grease, oil, wax, curing compound, sealers, laitance, loose concrete or wood, rust, marine growth, and other foreign matter that would function as a bond-breaker. Water-blasting and/or a wire brush are the preferred methods of preparation to provide an open textured profile. A concrete surface profile (CSP) as per ICRI Guideline 310.2R of 6-9 must be achieved for proper bonding adhesion to concrete. Steel surfaces must be prepared by water-jetting or other mechanical means required to achieve SSPC-SP 12/NACE 5 WJ-4. Wood surfaces may best be prepared by high-pressure water blasting to achieve a sound surface free of contaminants. All areas that have excessive section loss, whether it is concrete, steel, or wood, should be repaired or replaced.

Proportioning/Mixing

The volumetric ratio of K Pro UW EPL Grout is 2:1 (A:B) for the epoxy to hardener. To mix, proportion two parts A and 1 part B into a clean pail. Mix thoroughly for 2-3 minutes with a paddle on a low speed (400-600 rpm) drill until blend is a uniform color. Take care to avoid entrapping air in the mixed material. Slowly add K Pro UW Aggregate to produce either a flowable or a stiff consistency epoxy grout. Mix all three components for 2-3 minutes or until uniformly blended.

K Pro UW EPL Grout may be pumped. The annular space between the pile jacket and piling must be a minimum of ½". Install pumping ports at 90° from the tongue and groove joint, alternating sides. The first port should be at least 9-12" from the bottom. Place subsequent ports at a maximum of 5 feet vertical spacing, while alternating sides. Always pump from the lowest port and move upwards. Never exceed 10 feet pumping distance between ports. All submerged forms should be inspected prior to epoxy mortar application to prevent leaks or failures and should be checked during placement.

K Pro UW EPL Grout may be poured or used in tremie applications; however, it is imperative that the hose be placed at the bottom of the form. The tremie hose shall be retracted as the annular space fills.

When either pumping, pouring, or the tremie method of application, the water will be displaced out the top of the form. Continue to fill the annular space until undiluted epoxy grout overflows from the sleeve. Once the epoxy mortar has cured adequately, top off with epoxy mortar, and finish as desired.

Underwater product placement should only be attempted by experienced diving contractors. *Read Safety Data Sheet before using* K Pro UW EPL Grout. Please refer to the *General Epoxy Instructions* for complete details on proper application during cold and hot weather. Take care always to prevent spills.

Packaging/Yield

High Flow Epoxy Grout: One 3-gallon unit of epoxy and hardener when mixed with two bags of aggregate will yield 1.05 ft^3 of flowable epoxy grout.

Standard Flow Epoxy Grout: One 3-gallon unit of epoxy and hardener when mixed with three bags of aggregate will yield 1.38 ft^3 of a stiff consistency epoxy grout.

Technical Information

Test results were achieved under laboratory conditions. Statistical variations will occur based upon mixing methods, temperature & humidity, test methodology, site conditions, curing conditions, application methods, and equipment.

Storage Conditions

Store dry at 40-95°F. Condition material to 65-85°F before using.

Precautions

Do not thin K Pro UW EPL Grout. The contractor shall use the test method prescribed ACI 503R to determine that the preparation produced a surface capable of providing tensile bond strength greater than 250 psi. If stored below 40°F, some settling, and lumping may appear. Do not use it in ambient temperatures below 45 degrees Fahrenheit.