

KAUFMAN

PRODUCT
INFORMATION

KAUFMAN
PRODUCTS
INC.

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SureGrout UW

Description

SureGrout UW is a special version of our famous SureGrout structural grouting compound designed for underwater placement. It is a ready-to-use dry powder that requires only the addition of water to produce a non shrink grout which exhibits exceptional resistance to "washing-out" of the cement and fines or segregation when placed in stationary or moving fresh or salt water.

It is composed of special portland cements, washed and properly graded quartz aggregates plus other proprietary ingredients to allow the product to set underwater without excessive expansion or shrinkage. SureGrout UW also includes an amine-based corrosion inhibiting agent to help prevent corrosion on the rebar, threaded rod, or other metals embedded in the concrete. No metallic aggregates are used. It can be pumped with normal grout pumps.

Uses

Recommended for grouting to repair deteriorated underwater or tidal zone concrete structures without significant "wash-out" of the cement. Can also be used as patching or pointing cement for joints over 1/4" wide. Applications include bridge columns, concrete piling, and dams. Particularly effective when used with metal or fiberglass jackets, around the pilings, to fill the annular space completely.

Features

Non-Raveling	Non-Metallic
Non-Rusting	Water & Oil Resistant
Non-Corrosive	Pumpable
Precision Blended	Saltwater Resistant
Non-Bleeding	Non-Staining

Includes Migratory Corrosion Inhibiting Agent

Packaging

50 lb. moisture resistant bags yielding .45 ft³.
1,000 lb. super sacks yielding 9 ft³
3,000 lb. super sacks yielding 1 yd³.

Compliances

ASTM	C-109	CRD	C-227
	C-157		C-621
	C-827		C-61
	C-1107		

Shelf Life

One year in original,
unopened 50 lb. bags.

Storage Conditions Color

Store dry at 40-95°F.
Concrete Gray

Working Time at 72°F 45 minutes

Set Time (ASTM C-191)

Initial	3-4 hours
Final	5-6 hours

Compressive Strength Test Results (ASTM C-109)

1 Day	2,000 psi.
3 Days	4,000 psi.
7 Days	5,500 psi.
28 Days	6,000 psi.

Height Change Moist Cured (ASTM C-1090)

28 Days	+0.015%
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Early Age Height Change (ASTM C-827)

Maximum 4% Allowed	+0.10%
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Slant Shear Bond Strength, (ASTM C-882)

28 Days	3,200 psi.
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Splitting Tensile Strength (ASTM C-496)

28 Days	500-600 psi.
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Length Change (ASTM C-157)

In Air at 28 Days	-0.110%
In Water at 28 Days	+0.040%

Freeze Thaw Resistance (ASTM C-666 Procedure A)

Relative Dynamic Modulus	100%
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Modulus of Elasticity (ASTM C-469)

4,463,000 psi.

Directions

Surface Preparation

Substrate must be clean and sound and free of foreign matter. All loose and unstable material must be removed. Concrete: Prepare surfaces by high-pressure water blasting or other means to achieve ICRI CSP 6-9. Steel: Prepare to NACE 5 WJ-4/SSPC-SP 12.

Mixing

Mix 3.5 quarts water with each 50 lb. bag. A mechanically powered grout mixer must be used. Ensure that the machine and number of workers are adequate to properly conduct the grouting in a continuous manner. Add the powder to the water, in the mixer, and mix for a minimum of 5 minutes, making sure that a smooth, even mix is obtained.

For professional use only. Not for sale or use by the public.

LIMITED WARRANTY: We warrant our products to be of good quality and will replace material proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement, there are no warranties which extend beyond the description on the face hereof, and Kaufman Products, Inc. makes no warranty or guarantee, expressed or implied, including warranties of fitness or merchantability, respecting its products, and Kaufman Products, Inc. shall have no other liability with respect hereto. The user shall determine the suitability of the product or the intended use and assume all risks and liability in connection thereto. Our salespeople, distributors, and their salespeople have no authority to change the printed recommendations concerning the use of our products.

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Start by adding 90% of the mix water to the mixer, and then add the full amount of SureGrout UW. Add the remaining mix water to attain the desired flow characteristics.

Do not ever add plasticizers, accelerators, retarders, or any other ingredients besides potable water unless advised by Kaufman Products in writing. Do not re-temper. Mix water must be potable. For best results, condition SureGrout UW to 70°F.

SureGrout UW may be extended with 3/8" pea gravel up to 50% by weight. Aggregate must be clean, non-reactive, well-graded, have low absorption and high density in compliance with ASTM C-1260, C-227, and C-289. When extended, mix the aggregate and water together for 3-5 minutes, prior to adding SureGrout UW. Up to an additional pint of water may be needed to adjust for proper flow characteristics. Please read the technical document called Susceptibility of Kaufman Products to Alkali-Silica Reaction (ASR) Overview.

Placing

SureGrout UW may be tremied or pumped depending upon jobsite conditions. Use the mixed grout within 45 minutes.

Pumping Applications: Pump properly mixed SureGrout UW through a port established at the bottom of the form. Fill the annular space to the desired level, allowing the water to be displaced. Make certain to check for leaks prior to pumping.

Tremie Applications: Make certain the hose is positioned all the way at the bottom of the form. Fill the space to the desired level, allowing water to be displaced out the top of the form. Depending upon jobsite conditions and placement depths, the tremie hose may need to be retracted as the form fills to maintain proper flow characteristics. Do not raise the hose higher than the level of SureGrout UW. At the start of the operation, the grout flow should be restricted in order to avoid any water entrapment.

Do not place SureGrout UW in water temperatures below 40°F, or when the temperature is expected to drop below that during the first 24 hours after placement. Water temperatures should not exceed 90°F during placement.

The minimum application thickness is 1" neat, and 2" when extended. Maximum application thickness is 8" when extended.

When placed in the annular space between a pile jacket and piling, SureGrout UW may be placed neat and in lifts of up to twenty feet.

Hoses

Heavy duty grout hoses with an abrasion resistant lining should be used. Hoses should be equipped with internally expanded ends and quick disconnect fittings that eliminate pressure build-up. Hoses must have an internal diameter of a minimum of 1".

Curing

Normally not required when intermittently or totally submerged. However, when cast above water, all exposed surfaces should be thoroughly cured using a product that meets all aspects of ASTM C-309, Type 2, Class B, such as Thinfil 450.

Pumping

SureGrout UW can be pumped successfully using a ChemGrout Model Number CG-030 or higher, or similar brand.

Notes

Rate of strength gain is significantly affected by both air and surface temperatures. Keep exposed grout protected from temperatures below 40°F until a minimum compressive strength of 4,000 psi. is achieved. *Read the complete Safety Data Sheet prior to use.* Only certified & experienced diving contractors should attempt placement of

Specifications

All grouting shall be done with SureGrout UW as manufactured by Kaufman Products, Inc. Baltimore, Maryland. The grout shall be mixed according to directions furnished by the manufacturer and installed in accordance with their directions. Perform all grouting work in accordance with the recommendations of the American Concrete Institute for mixing and placement of concrete.

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