

K A U F M A N

PRODUCT
INFORMATION

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K Pro HP Grout

Description

K Pro HP Grout is a ready-for-use, high performance grouting and chocking material, composed of special epoxy resins, high strength hardeners, catalysts and special aggregates. All the ingredients necessary for a high quality, very high early and final compressive strength, and dimensionally stable grout are all pre-measured and packaged in one unit. No longer do workers have to figure out volumetric or weight ratios for combining many liquid and dry materials that would tax mathematicians. Because all necessary ingredients are packaged in convenient pre-measured units, nothing is left to chance. Laboratory controlled proportions can be achieved in the field. In addition, K Pro HP Grout is unique in that when the proper aggregates are added, they produce a flowable, self leveling grout mix that can go into formed areas and completely surround and encase the anchoring devices for better bonding and greater loads. Due to the great flowability of this product, rodding, vibrating and other measures necessary to get the grout into cramped spaces are made much easier. Even troweling of the finished product is unnecessary.

K Pro HP Grout is better than metallic and cementitious grouts, because it is 100% solids; HP Grout is both non-shrinking and non-expansive for better load bearing characteristics. Its rigid hold-tight ability allows it to resist loads, vibrations and other stresses set up by machines. Because there is little heat buildup, K Pro HP Grout can be placed up to 16" deep without shrinkage and cracking.

Uses

Use whenever a high performance, very strong, dimensionally stable, chemical resistant grout is desired. Use where loads, shocks, impacts and operational stresses are routine. K Pro HP Grout offers excellent chemical resistance. It may be used as a grout for precision alignment under dynamic load conditions, for vibration dampening filler for rotating equipment, support of chemical tanks, vessels and rotating equipment as well as anchoring bolts, reinforcing bars and dowels into concrete, rock, masonry. Use for compressors, crane rails, diesel generators, gas turbines, gear cases, engines and storage tanks.

Comparison To Cementitious Grouts

Higher compression strength
Higher tensile strength
Higher shear
Higher shock resistance
Reduced shrinkage
Higher chemical resistance
Faster strength gain
No curing necessary. Place up to 18" in one continuous pour

Specifications

ASTM C-881, Types I, II, IV & V, Grade 1, Class C
AASHTO M-235, Types I & II, Grade 1, Class C
When all ingredients are combined, they become a Grade 3 epoxy material.

Physical Properties

Compressive Yield Strength	32,000 psi @ 7 days
Compressive Strength (ASTM C-579 B)	12,100 psi @ 1 day 14,400 psi @ 2 days 17,000 psi @ 7 days
Bond Strength (ASTM C-882)	1,900 psi.
HDT	127 °F
Tensile Strength & Elongation (ASTM C-307)	6,300 psi @ 7 days
Flexural Strength (ASTM C-580)	3-6% 14,000 psi @ 7 days
Shrinkage (ASTM C-827)	0.002 max
Coefficient of Linear Expansion (ASTM C-531)	14.6 x 10 ⁻⁶ in./in. °F
Adhesion to Concrete (ASTM C-882)	Exceeds concrete
Working Life	45 min @ 70°F
Depth of Pour Limitation	18"
Cured Density	130 lbs./ft ³
Flash Point	220° F
Dielectric Strength	140 volts/mil.
Modulus of Elasticity	7.4x10 ⁵ psi @ 28 days

(The test data above reflects results achieved based upon controlled laboratory conditions, and variations may occur when used in the field.)

Packaging/ Yield

Self Contained SL Kit – ¼ gl. liquid and 32.2# K Pro HP Grout Aggregate.
Yields approximately .30 ft³ (518 in³) packaged in 5 gal. pail.

If a self-contained kit is not desired, use one 3 gal. kit of K Pro HP Grout Liquid with either 3 or 4.5 40# bags of K Pro HP Grout Aggregate

3 bags of K Pro HP Grout Aggregate will produce a completely self-leveling grout, yielding approximately 1.2 ft³.

4.5 bags K Pro HP Grout Aggregate will produce a stiff consistency grout, yielding approximately 1.6 ft³.

Chemical Resistance- 7 day immersion Up to the following concentrations

100% Alcohols, Various
40% Citric Acid
10% Hydrochloric Acid
20% Nitric Acid
50% Phosphoric Acid
100% Sodium Chloride
50% Sodium Hydroxide
100% Sea Water
100% Tri Sodium Phosphate

100% Xylene
100% Gasoline
100% Chlorine Water

Directions

Surface Preparation

Metal surfaces to be in contact with K Pro HP Grout should be dry and free of grease, paint or rust. Sandblast to a bright metal surface. Concrete on which the grout will bear should have attained its full designed strength and shrinkage before grouting. All concrete surfaces that are to come into contact with K Pro HP Grout should be chipped approximately 1" in depth or until the large aggregate is exposed to remove laitance and provide a rough surface for good bonding and shear strength. If the concrete is oil soaked, chip until no oil or contaminants are visible. Cover all shims, leveling screws, wedges and blocks, which are to be removed after grouting with wax prior to pouring.

Forming: Make all forms liquid tight to prevent seepage. Use a putty or caulking compound to seal all forms. If any parts of forms, or other areas, are not to be bonded to K Pro HP Grout, then treat with 3 coats of paste, auto wax or polyethylene to prevent adhesion. Long or deep pours should contain number 4 or 5 rebars on approximately 12-18" centers parallel to the equipment to reduce stress cracking. The rebars should be placed approximately 2" below the Grout surface and if the rebar is tiered, the bottom rebar should be located 2" above the foundation surface. Very deep pours can be done in several lifts of approximately 12-16" each.

For bolt grouting, hole diameters, 1/4" to 1/2" greater than the bolt diameter are normally employed. Under 3000 psi concrete, 15 times bolt diameter is recommended for depth. Hole spacing is also important to avoid stress interaction caused by holes placed too closely or near the edge.

Mixing: Condition all ingredients to 70°F or more. Open cans and pour the contents of both containers into larger container. Stir both components together thoroughly. Pour all of this liquid onto the 3-4.5 bags of K Pro HP Grout Aggregate in a mixing container or mortar mixer. Mix aggregate and liquid epoxy together until uniformly blended, approximately 3 minutes with paddle or low speed drill (400-600 rpm) until grout is uniform in color and consistency. Do not vary the ratio of resin and hardener or add solvent or water to change the consistency. For free-flowing, self-leveling grout, use only 3 bags. If a stiffer mix is desired, add an additional 1.5 bags of K Pro HP Grout Aggregate. Place K Pro HP Grout as soon as thoroughly mixed. Time will reduce the flowability somewhat.

Placement: Substrate must be at least 50°F and rising. Grout should be placed from only one side to avoid air entrapment. Rod or vibrate the material to achieve complete filling and consolidation is not necessary when only 3 bags are used, but are necessary with 4.5 bags. When placing under pads, maintain a head to insure intimate contact between grout and plate. A smooth finish can be achieved by steel troweling if 4.5 bags are used, but is not necessary when using only 3 bags. Clean all

equipment with SurePoxy Thinner before material hardens.

Curing

The following chart is a guide for determining final cure times. The temperatures shown are of the baseplate and foundation, not ambient temperatures.

Temp. °F	Cure Time, Hours
90	12
80	24
70	36
60	48
50	72

Notes

Do not thin. Store above 60°F. Cold temperatures slow strength gain and high temperatures speed strength gain. K Pro HP Grout is not designed for applications requiring resistance to continuous temperatures over 130°F. Do not use radiant heating. This warms the grouts upper surface more than below. The grout surface therefore cures in a thermally expanded state and after dissipation of heat, produces stress that tends to make the grout "curl up", results in cracks in the foundation corners just below the grout line. For best results, fabricate temporary shelters around the equipment to be grouted and pre-warm the equipment and foundation. Try and prevent the grouting being performed in direct sunlight during hot days. Either erect a shade or perform this operation during the cooler part of the day or night. K Pro K Pro HP Grout has excellent flow characteristics and generally does not need assistance, but flow can be assisted using rods, trowels or other pushing tools. Do not vibrate as this will induce excessive air entrapment and result in a poor bearing area upon curing. Head pressure is the preferred way to assist flow. Construct a head box or funnel 1-2 feet deep to place the grout in hard to reach places. Never allow the level of grout to fall beneath that of the base plate, because this will result in trapped air and voids. This product is intended for horizontal applications only. Please read Material Safety Data before using. Please refer to the *General Epoxy Instructions* for complete details on proper application during cold and hot weather.