

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 surround and encase the anchoring devices for better bonding and greater loads. Due to the great flow ability 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.

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
- Deep Pour Placement –Up to 16" in one pour
- Two Mix Ratios: Flowable & Stiff

Specifications

ASTM C-881, Types I, II, IV & V, Grade 1, Class C
AASHTO M-235, Types I,II,IV & V, Grade 1,Class C

When all ingredients are combined, they become a Grade 3 Epoxy material.

Packaging/ Yield

Self-Contained SL Kit – ¾ gal. 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.

Physical Properties

Compressive Strength (ASTM C-579 B)	11,090 psi. @ 1 Day 13,220 psi. @ 2 Days
Bond Strength (ASTM C-882)	1,250 psi. @ 2 Days 2,150 psi. @ 14 Days
Effective Bearing Area	95%
HDT (ASTM D-648)	127°F
Tensile Strength & Elong. (ASTM C-307)	7,400 psi. @ 7 Days 3.5%
Flexural Strength (ASTM C-580)	4,000 psi. @ 7 Days
Flexural Strength (ASTM C-790)	14,000 psi. @ 14 Days
Shrinkage (ASTM C-827)	0.002 max
Coefficient of Linear Expansion (ASTM C-531)	14.6 x 10 ⁻⁶ in./in. °F
Gel Time D	35 min @ 70°F
Depth of Pour Limitation	16"
Cured Density	130 lbs./ft ³

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

Chemical Resistance- 7 Day Immersion Up to the Following Concentrations:

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

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 encounter 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 3,000 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 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 Safety Data Sheet before using. Please refer to the *General Epoxy Instructions* for complete details on proper application during cold and hot weather.

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.

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