



6.04 XPERT HF GROUT

High Flow Epoxy Grout

PRODUCT DESCRIPTION

XPERT HF Grout is a three-component epoxy grout comprised of a 100% solids epoxy resin blend and a proprietary aggregate blend designed to produce exceptional flow, high strength and chemical resistance. It is formulated to withstand dynamic loading, high bearing and is easier to place in narrow configurations and under large base plates.

USES

- Placements requiring high vibration and temperature resistance, extreme thermal variations or maximum bearing support.
- Under large or wide base plates, in narrow tolerance spaces including anchor bolts.
- Dynamic loading conditions such as centrifuges, milling machines and presses.

ADVANTAGES

- High strength yet fast curing for minimum downtime
- Exceptional resistance to temperature fluctuations
- Excellent flexural, tensile and shear strengths
- Withstands prolonged elevated temperatures
- Abrasion resistance exceeds that of concrete

ESTIMATING GUIDE

- Part A Resin 1.775 / 3.550 Kg
- Part B Hardener 0.625 / 1.250 Kg
- Part C Aggregate 5.600 / 11.20
- Yield 2.1 ft.3 0.059 m3
- Part A Resin is packaged in a 6-gallon (22.7 L) pail.
- Part B Hardener in a 1-gallon (3.78 L) Can.
- Part C aggregate is contained in four 50-pound (22.7 Kg) bags.

LIMITATIONS

- Don't add water to any of the components.
- Don't use over frost or frozen concrete
- Don't use concrete less than 28 days old
- Don't place grout if ambient or substrate temperature is below 60F (15.6C).
- Excessively hot temperatures increase initial flow but reduce pot life significantly

TYPICAL PROPERTIES

The following data was acquired under laboratory conditions and was performed on seven-day old samples.

CATEGORY	PARAMETERS
Color-mixed	Gray
Pot Life at 77F° (25°C)	One hour
Viscosity mixed grout	Fluid
Compressive Strength (ASTM C-109)	13000 Psi, 89.37 Mpa
Shear Strength	3000 Psi, 20.62 Mpa
Flexural Strength (ASTM D-790)	2900 Psi, 19.94 Mpa
Tensile Strength (ASTM C-109)	2300 Psi, 15.81 Mpa
Water Absorption (ASTM C-276)	0.025%
Linear Shrinkage (ASTM D-531)	0.00051 in/in
Linear Thermal Expansion	72F°-210F° (22°-99°C) 3.5 x 10 ⁻⁵ in/in/°F
Bond to Concrete	Exceeds tensile and shear strengths of normal weight concrete
Chemical Resistance	Excellent

STORAGE

Store unmixed components in tightly closed containers, away from direct sunlight or sources of heat. Shelf life of properly stored, unmixed material is one year from date of manufacture.

CAUTIONS

Corrosive Liquid, Corrosive to eyes. Causes skin irritation, sensitization or chemical burns. Respiratory tract irritant. Use with adequate ventilation. Wear protective gloves and safety glasses or goggles.

DIRECTIONS OF USE

Surface Preparation: Proper surface preparation is the most critical step in successful epoxy grout placements. Concrete must be a minimum of 28 days old. All concrete substrates must be clean and free of all dust, dirt, oils, grease, form release agents, curing or sealing compounds and any other contaminants that could adversely affect bond. For optimum bonding characteristics, roughen concrete substrate to obtain a 1/8"-1/4" (0.3-0.6 cm) profile. Anchor bolt holes and block outs should be roughened with a wire brush or rotary brush hammer. All metal, plates and bolts to be grouted must be cleaned to bright, shiny surface. All machine oils, mill scale, grease, paints or other contaminants must be removed.

Form Construction: Forms and head boxes should be constructed following the recommendations outlined in ACI 351.1R, 6.5 Formwork. All joints must be made liquid tight, use of a silicone caulk or sealant is permitted. For ease in stripping forms, coat inside surfaces with a paste wax or line tightly with polyethylene sheeting. Place clean, oil free, thin metal or stiff plastic strapping under the base plate to facilitate grout movement.

Mixing: XPERT HF Grout components to approximate room temperature, 70F (21C) prior to mixing. XPERT HF Grout must be mixed mechanically. A paddle type mortar mixer with rubber tipped is recommended. Pour the Part A Resin into the mixing drum. Add all of the Part B Hardener and blend for 1 minute. Add the aggregate and continue blending for another 2-3 minutes. Mix well until all aggregate is wet out and uniformly coated with epoxy. Begin placing immediately. If using a low-speed drill equipped with a jiffler blade for mixing, a separate, 10 gallon or larger mixing container is required. Container must be clean and dry prior to beginning resin blending. Mix the Part A and Part B for 1 minute. Gradually add aggregate to blended resins and mix for 2-3 minutes.

Placement: Optimum temperature of substrate and base plates is approximately 70F (21C). If ambient or base temperatures below 60F (15.6C) or above 90F (47C), do not apply grout. All surfaces to be grouted must be dry. Fill anchor bolt holes from the base to the top. Insert bolt with easy turning motion to assure even displacement of epoxy. Immobilize bolts in proper alignment until epoxy begins to harden. Block-outs should be filled in the same manner. Grouts under machine bases and plates should be placed from one side only and allowed to flow to the opposite side. This procedure reduces the possibilities of creating air pockets and voids. Strapping aids in this process. Place grout at a minimum thickness of 1/2 inch (1.25 cm) and no more than 4 inches (10 cm) in a single lift when placed in a large mass. Do not vibrate grout.

Curing: XPERT HF Grout is self-curing.