EP17-GROUT

HIGH-STRENGTH, HIGH-PERFORMANCE EPOXY GROUT

DESCRIPTION

EP17-GROUT is a three-component, 100% solids, high-strength, high-performance, epoxy machine grout. It is characterized by high early strength, low dust, high bearing area, negligible shrinkage and creep, and excellent flowability.

APPLICATIONS

- Wind Farm
- Gas Transmission
- Chemical Processing and Refining
- Pulp and Paper
- Steel Rail
- Marine

ADVANTAGES

- Compressive strength of 17,000 psi
- High early strength
- High effective bearing area
- Low exotherm cure for deep pour capability
- High oil and chemical resistance
- Excellent flowability
- Precision grouting with negligible shrinkage and creep
- Pre-measured units
- Low toxicity
- Easy soap and water clean up
- Designed for dynamic and static loading

COMPLIANCES

- ZERO VOC
- Made in America

PACKAGING

0.5 cu. ft. unit

- Component A: (1) gallon can (partial fill)
- Component B: (1) gallon can (partial fill)
- Component C: (1) 58 lb. bag

2.0 cu. ft. unit

- Component A: (1) 5-gallon pail (partial fill)
- Component B: (1) 1-gallon can
- Component C: (4) 58 lb. bags

Appearance of Components: A - Gray, B - Amber
Shelf Life: 2 years in original unopened containers
Storage: 50 °F to 95 °F in dry and dark conditions
Temperature Considerations: IMPORTANT! Epoxy resins are temperature sensitive and care should be taken to condition all components (including Component C-Aggregate) between 65 °F to 85 °F for a minimum of 24 hours prior to mixing and placement. Temperatures colder than stated range increase viscosity of resins and inhibit mixing and flow of materials. Temperatures warmer than stated range decrease viscosity of resins, hasten the cure and reduce the working time. Mixing and curing at less than ideal temperatures <60 °F or >95 °F will require special considerations.

CURE TIME

	Average Cure Time Properties* (° F)					
Cure Temp (F)	55	65	75	85	95	105
Working Time	2 hr	1 hr	45 min	30 min	20 min	15 min
Initial Cure (hr)	48	42	36	30	24	20
Compressive Strength (psi)	13,500	14,000	16,100	16,800	17,200	17,600

*Results may vary due to environmental factors such as temperature, moisture and type of substrate.

INSTALLATION

Surface Preparation: Concrete shall have reached its design strength and surface shall be free of standing water (a saturated surface dry condition, although not necessary, is acceptable). All surface contamination must be removed by mechanical means, creating a surface profile of exposed sound aggregate that will provide a strong bond surface for the EP17-GROUT. All metal surfaces to come in contact with the grout should be sandblasted to white metal finish and wiped clean with solvent. Items not intended to bond to grout, such as leveling screws, wedges and bolts must be protected with wax, caulk, duct tape or similar.

Form Preparation: Epoxy grouts require heavy-duty forms. A sheet of 3/4" plywood or similar and proper bracing should be used to hold the force of the weight of the grout (140 lbs. per cu. ft.). Forms should be coated with a minimum of two coats of an industrial grade paste wax (or similar) to facilitate removal of forms after cure. It is recommended that forms have 45° angle chamfer at all vertical corners. Caulk, putty, or similar sealant should be

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used to render the forms "watertight". Forms should be at least ½" above bottom of base to allow for a hydraulic head to facilitate the placement of EP17-GROUT. Expansion joints are recommended in some applications. Contact an E-Chem representative for recommendations regarding expansion joints for specific application(s).

Mixing:
EP17-GROUT is shipped in pre-measured 0.5 cu. ft. or 2.0 cu. ft. units. Mix these products ONLY in complete units. DO NOT THIN or add any solvents prior to mixing. Pigment in A component may settle during storage, note color should be light gray while mixing. Use mixer to scrape bottom of pail during mix, as this will bring settled pigment into mix.

0.5 cu. ft. kit: Pour Component B (Hardener) into A (Resin) can and mix thoroughly for 3 minutes with a Jiffy mixer on a low-speed (300 rpm) drill motor until a uniform consistency is achieved. NOTE: Keep mixer at bottom of pail to avoid introducing air. After liquid components are mixed, transfer all liquid into pail and slowly add Component C (Aggregate). Mix on low speed until all aggregate is wetted out, stop mixer. DO NOT OVER MIX!

2.0 cu. ft. kit: Pour Component B (Hardener) into A (Resin) pail and mix thoroughly for 3 minutes with a Jiffy Mixer on a low-speed (300 rpm) drill motor until a uniform consistency is achieved. NOTE: Keep mixer at bottom of pail to avoid introducing air. Pour liquids into mortar mixer, making sure to remove all resins from sides and bottom of pail with spatula or similar tool. Introduce first bag of Component C (Aggregate) prior to starting mixer. Start mixer and slowly add the remaining three bags of aggregate. Mix on low speed until all aggregate is wetted out, stop mixer. DO NOT OVER MIX!

EP17-GROUT should be poured into forms at one location in order to allow a unidirectional flow. Use of a header box will ease the placement of the finished product. Strict adherence to temperature considerations will assist with placement. Check forms frequently for leaks. Plug leaks with a hydraulic cement or putty. EP17-GROUT will not self-seal.

Finishing: When forms are filled to desired elevation, exposed horizontal surfaces of EP17-GROUT may be finished with a surfactant such as C-CLEAN100 or approved solvent and a paintbrush or small hand trowel. Surfactant should be lightly sprayed or misted on surface. DO NOT PUDDLE on surface. This process can be repeated every 30 minutes until surfaces are firm.

After Cure: Sharp corners may need to be addressed. The use of an angle head grinder equipped with approved abrasive or diamond wheel is recommended. (Caution: cured edges of grout can be very sharp, use proper PPE when grinding and inspecting grout).

LIMITATIONS

- For professional use only
- Do not thin with solvents
- Do not mix partial kits
- Substrate temperature should be a minimum of 50 °F
- Consult E-Chem representative when mixing or placing outside of the temperature recommendations listed
- Maximum pour depth 6 inches

CLEAN UP

EP17-GROUT is low exotherm grout. The extended working time allows for easy soap & water cleanup of tools, mixers and work area while EP17-GROUT is in the plastic stage.
Equipment: For expedited cleanup, uncured material can be removed with C-CLEAN100 or approved solvent. Cured material can only be removed mechanically.
Material: Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations.

CAUTIONS

READ ENTIRE SDS PRIOR TO USING PRODUCT!

- Component A: Irritant
- Component B: Corrosive
- Product is a strong sensitizer. Use of safety goggles and chemical resistant gloves are recommended.
- Use in a well-ventilated area and avoid breathing vapors
- Use of NIOSH/MSHA organic vapor respirator is recommended if ventilation is inadequate.
- Avoid skin contact

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FIRST AID

EYE CONTACT: Flush immediately with water for at least 15 minutes. Contact physician immediately.
RESPIRATORY CONTACT: Remove person to fresh air.
SKIN CONTACT: Remove any contaminated clothing. Remove epoxy immediately with a dry cloth or paper towel. Solvents should not be used as they carry the irritant into the skin. Wash skin thoroughly with soap and water.
IF INGESTED: Do not induce vomiting. If swallowed give water to drink. Seek medical treatment immediately.
GENERAL: Remove contaminated soaked clothing immediately. In the event of persistent symptoms receive medical treatment.
CURED EPOXY RESINS ARE INNOCUOUS.

WARRANTY

This product is warranted and guaranteed to be of good quality. Manufacturer, as its sole and exclusive liability hereunder, will replace material if proved defective. This warranty and guarantee are expressly in lieu of all others, express or implied, including any implied warranty of merchantability or fitness for a particular purpose and may not be extended by representatives or any persons, written sales information, or drawing in any manner whatsoever. While the manufacturer recommends uses for the product based on tests believed reliable, no warranties, express or implied, or guarantees can be given as to particular methods of use or application, nor can performance be warranted, expressly or impliedly, or guaranteed under special conditions. Distributors, salespersons or company representatives are not authorized to extend or vary any warranties or guarantees beyond those outlined herein, nor may the manufacturers or seller's limitation of liability be waived or altered in any manner whatsoever. For additional information, please refer to the Terms and Conditions.

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PHYSICAL PROPERTIES[1,2,3]

Property	Standard	Units	Values
Gel Time	ASTM D2471	Minutes	40
Percent Solids	----	%	100
Volatile Organic Compounds (VOC)	----	g/L	0.00
Flexural Strength	ASTM C580	psi	5,400
Modulus of Elasticity			1,900,000
Bond Strength	ASTM C882		3,850
Compressive Modulus	ASTM C579		2,200,000
Compressive Strength (95 °F)			17,000
Compressive Creep (400 psi, 140 °F)	ASTM C1181	in./in.	<0.005
Tensile Strength	ASTM C307	psi	3,400
Tensile Modulus of Elasticity		----	2,000,000
Absorption	ASTM C413	%	0.065
Coefficient of Thermal Expansion	ASTM C531	in./in./F	$17x10^{-6}$
Thermal Compatibility	ASTM C884	Pass/Fail	Pass
Linear Shrinkage on Cure	ASTM C531	%	0.007
Peak Exotherm	ASTM 2471	°F	190
Fire Resistance	ASTM D635	----	Self-Extinguishing
Density	ASTM C905	lb/cu.ft.	134

1. Product testing results based on representative lot(s). Average results will vary according to the tolerances of the given property.
2. Full cure time is listed above to obtain the given properties for each product characteristic.
3. Results may vary due to environmental factors such as temperature, moisture and type of substrate.

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