

PRODUCT DESCRIPTION

Coating & Binding Technology's Epoxy Machine Grout is a low exothermic epoxy system for machinery grouting. EMG-19/3K Epoxy Grout is a two component, 100% solids, solvent-free system formulated to provide high-strength and superior creep resistance combined with the highest effective bearing area. EMG-19/3K is often used to replace steel soleplates or rails and is used as an epoxy foundation capping material that is resistant to high operating temperatures.

SUGGESTED USES

The uniqueness and universality of the EMG-19/3K chemistry facilitates high stress applications in such industries such as wind turbine, gas transmission, refining, chemical processing, pulp and paper, steel rail, marine and other machine base plate grouting applications in the heavy industrial equipment industries. It may be used for new equipment installations or for quick re- grouting and may also be used for installing anchors and dowels.

HIGHLIGHTS

- High early and excellent strengths for fast turn around
- Excellent flowability with high bearing area for even load distribution
- Excellent creep resistance
- Exceptional strengths including flexural and tensile
- High degree of chemical resistance
- Grout with insignificant shrinkage and ease of precision application
- Thermal stability during application
- Easy soap and water clean up
- Pre-measured kits for ease of use
- Vibration dampening

PRODUCT DETAILS

Solids:	100% NVM
Thinning:	Not required
Working Time:	45 minutes
Full Cure:	5 – 7 days
Color:	Light Gray
Shelf Life:	1 year stored in unopened containers at storage temperature of 75°F
Short-term Storage Temperature:	50°F – 90°F
Temperature Warning:	<u>Do not</u> store at temperatures below 40°F for longer than 5-7 days

Kit Size	Part Name	Package Size	Part Number
1.72 Cubic Feet	Epoxy Grout Part A	Four Gallons	EMG19 / 3K
	Epoxy Grout Part B	One Quart	
	Epoxy Grout Part C	4 Bags	

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Properties	Results	ASTM Test
Compression Strength, psi (1 day cure @ 73.0°F, Load Rate II - 0.23 in/min)	19027 psi avg.	ASTM C579B
Compression Strength, psi (3 days cure @ 73.0°F, Load Rate II - 0.23 in/min)	20844 psi avg.	ASTM C579B
Compression Strength, psi (7 days cure @ 73.0°F, Load Rate II - 0.23 in/min)	21439 psi avg.	ASTM C579B
Compression Strength, psi (30 days cure @ 73.0°F, Load Rate II - 0.23 in/min)	22572 psi avg.	ASTM C579B
Flexural Strength, psi (7 days cure @ 73°F)	6787 psi avg.	ASTM C580
Flexural Modulus of Elasticity, psi (7 days cure @ 73°F)	2247715 psi avg.	ASTM C580
Ultimate Tensile Strength, psi (0.2 in/min, 7 days cure @ 73.0°F)	3549 psi avg.	ASTM C307
Thermal Compatibility, (5 Cycles, 0.5 in. thickness, manufacturer sand mix)	PASS	ASTM C884
Water Absorption, % (7 days cure @ 73.0°F) (2 hour boil)	0.018% avg.	ASTM C413
Pot Life, minutes (415 mL @ 75.0°F)	~90 minutes	ASTM D2471
Coefficient of Thermal Expansion, in/(in °F) (210°F equilibration)	28.8 x 10 ⁻⁶ in/(in °F) avg.	ASTM C531
Effective Bearing Area	>95%	C1339

Pour at a temperature of 75°F with a depth of up to 5 inches with proper allowance for expansion and curing

Each component of the PRODUCT was mixed and conditioned separately at 73°F ± 2°F. For test samples, they were mixed according to the manufacturer's instructions at 73°F ± 2°F.

SURFACE PREPARATION

- Prior to application of EMG-19/3K Epoxy Grout, concrete must be dimensionally stable to customers' requirements and have reached the design strength.
- The surface must be free of all contamination using mechanical means; thus creating a surface profile of exposed sound aggregate.
- All metal surfaces to come in contact with 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.

FORMS REQUIRED

Create a heavy-duty form using steel, wood, or other sturdy material and proper bracing to hold the grout with force of approximately 140 pounds per cubic foot. Coat each form using a minimum of two coats of an industrial grade paste wax to enable removal of forms after cure. Forms need to have 45° angle chamfer strips at all vertical corners and horizontal grout grade elevation in order to reduce sharp corners and edges. For circular forming systems, sharp edges may be shaved/ground down per the desires of installer. Use sealants, caulk, putty or other material to prevent leaks.

MIXING

- Precondition all components to 75°F (24°C) for 24 hours before using
- The materials are all premeasured
- Pour all of Component B into Component A bucket and mix thoroughly for 3 minutes with a Jiffy mixer on a low-speed (300 rpm) drill motor taking care to keep mixing apparatus submerged to prevent introduction of air into the liquid. Mix until material is a uniform consistency.
- Pour well mixed A & B liquid into mortar mixer (making sure to remove all resins from sides and bottom of pail with a spatula or similar tool) and slowly add aggregate (Part C) until the mixture achieves the uniform color of the aggregate. To avoid air entrapment, add one bag at a time and mix until aggregate is thoroughly coated. DO NOT OVER MIX.

APPLICATION

Fill anchor bolt holes and block-outs first. For flat baseplates, pour from one side to prevent air entrapment. When grouting plates, pour grout into the headbox and allow to flow under the plate.

THICKNESS

EMG-19/3K Epoxy Grout has a thickness range of 1" to 4". Thicker sections can be constructed with EMG-19/3K Epoxy Grout if proper layering techniques are used. Please contact Coating and Binding Technology for additional application instructions. Long pours should be divided into sections not exceeding 6' in length. Longer, thicker, or thinner pours are possible, but Coating & Binding Technology should be consulted before deciding upon them.

TEMPERATURE CONSIDERATIONS

During cold weather below 55°F (13°C), the foundation should be enclosed and maintained above 55°F. Wind towers or machinery may be cooler at time of pour as long as foundations are within temperature range and ambient conditions are maintained, you can proceed. The cure time of the grout will be longer during cold weather. The ambient air temperature in grouted area must be kept warm above 75°F (24°C) until the grout has cured completely. Conversely, in hot weather, do not mix and pour in extreme heat or direct sunlight. Work time will be reduced. Please consult manufacturer in temperatures above 95°F.

At the completion of the curing cycle the temperature shall be lowered slowly, no more than 40°F (4.5°C) in 48 hours to avoid the possibility of damage due to sudden contraction.

CLEAN UP

Clean mixing equipment using dry aggregate, soap, and water in mixing drum for a few minutes. For materials that have started to set, use Xylol, or other approved solvents. Clean hands with abrasive hand soap.

WARRANTY

CBT warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of CBT. If any product fails to meet this warranty, the liability of CBT will be limited to replacement of any non-conforming material if written notice containing full details of the non-conformity is given to CBT within (1) one year of delivery of materials. CBT may in its discretion refund the price received by CBT in lieu of replacing the material. CBT does not authorize anyone on its behalf to make any written or oral statements which in any way alter CBT's warranty or installation and storage information or instructions in its product literature or on its packaging labels. CBT reserves the right to inspect the non-conforming material prior to replacement. CBT MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES AND DISCLAIMS THE SAME, INCLUDING, WITHOUT LIMITATION, FAILURE OF THE PRODUCT DUE TO ACTS OF GOD, FLOODING, EXTREME OR ABNORMAL TEMPERATURES, HUMIDITY AND MOSITURE, STRUCTURAL CONDITIONS, SITE PREPARATION AND CONDITIONS, ACCIDENTS, DAMAGE CAUSED BY INSTALLATION OF MACHINERY, EQUIPMENT OR FIXTURES WITHOUT ADEQUATE FLOOR PROTECTION OR WITHOUT ADEQUATE TIME FOR CURING, FAILURE TO COMPLY WITH CONDITIONS OF USAGE, VANDALISM, NEGLIGENCE OR INTENTIONAL ACTS OF THIRD PARTIES OR OTHER CASUALTIES.