

CERTI-VEX® GROUT #500

HIGH PERFORMANCE CONSTRUCTION GROUT

MEETING ASTM C 1107 & CRD-621

NON-SHRINKING • NON-STAINING • NON-RUSTING • NON-GAS FORMING

DESCRIPTION

CERTI-VEX GROUT #500 is a general purpose, non-shrink, non-ferrous grout that is easily mixed for grouting at any consistency; dry pack, plastic or pourable. It contains no iron particles, chlorides or gypsum and will not corrode, shrink, rust or ravel even under consistently moist conditions. When mixed according to instructions, it produces a high compressive strength due to a technology that reduces the water cement ratio. Ideal for use on the following:

- Heavy equipment and machinery bases
- Structural columns
- Pump and equipment bases
- Re-pointing mortar joints
- Power line stanchions
- Pre-cast tee joints
- Structural cracks
- Bearing Plates
- Rail posts, seating bolts
- Post-tensioned cables
- Patching

BENEFITS

- Easy to use. Just add water.
- High density-increases bond to metal, wood and other materials.
- Requires no special treatment on open ends or edges, no capping or cutbacks.
- Density increases wearability and permeability; withstands heat and thermal shock.
- Water tight, resists freeze/thaw, water conditions and salt penetration.
- Resists a variety of oils and chemicals.
- Contains no free lime, will not produce efflorescence.

PLACEMENT

- Follow the recommendations of The Manual of Concrete Practice of the American Concrete Institute for the placement and curing of concrete.
- Use chains, rods or tamping devices to compact grout, taking care to remove all air voids.
- For optimum results air temperature should be near 72° F.
- Pour grout quickly and continuously, striking off exposed areas.
- Finished Certi-Vex Grout 500 should be cured 72 hours for base plate applications and heavy loads.

APPLICATION

- Remove all dirt, oil, grease or contaminants from the surface to be grouted.
- Metals which will come in contact with grout must be de-rusted or freed of paints, oils and greases.
- To avoid entrapment of air, provide air relief openings where required.
- Prior to placement of the grout, thoroughly soak or dampen all concrete areas to be grouted, then remove excess water from voids and holes.
- Add Certi-Vex Grout 500 to water. For uniform mix, use paddle or drum type mechanical mortar mixers.
- Do not mix for more than 5 minutes.
- Place grout immediately after mixing.
- Do not mix more grout than can be placed within the allotted work time.
- The temperature of the grout, the atmosphere and the configuration of the area to be grouted, can each or in combination affect the time during which grout can be successfully worked.
- To be safe, complete grouting within 20 minutes of the addition of water to the batch.

SPECIAL NOTES

- Temperatures between 50 and 80° F (10 and 27° C) have no effect on the grouting procedure.
- Maximum usable working time at 72°F-3 hours.
- Maximum usable working time 90°F-2-1/2 hours.
- When temperatures fall below 50° F (10° C) around the area to be grouted, the mixing water and the dry grout should be warmed to not more than 80° F (27° C). Use ACI-306, "Standard Practice for Cold Weather Concreting" as a guide.
- When temperatures greater than 80° F (27° C) prevail, the grout and mixing water should be cooled as per ACI-305, "Standard Practice for Hot Weather Concreting".
- Do not add accelerators to Certi-Vex Grout 500.
- Grouted surfaces that are exposed to the atmosphere should be treated with a clear curing compound, such as **Certi-Vex® AC 1315** to prevent rapid drying and shrinkage cracking.
- If damp curing is applied, keep the grout moist for at least 24 hours.
- Proper application of Vexcon material is the responsibility of the installer or user. Telephone consultation and/or field visits by Vexcon personnel are for the sole purpose of making technical recommendations only, and not for providing quality control or supervision on location.

FORMING

- For machinery bases and column base plates, follow standard forming procedures which permit complete and proper placement of fluid grout, including the use of a head form.
- All support elements should be anchored to prevent movement.
- Do not remove supports until the grout has sufficiently hardened.
- Wood surfaces which absorb moisture should be pretreated with form release agents.
- When grouting edges of concrete which are less than 1 inch (25 mm) thick, cut back to form a uniform butt.

CERTI-VEX GROUT 500: PERFORMANCE

Set Time ASTM C191		
Initial Set	120 minutes	
Final Set	160 minutes	
Composite		
Mixing Water	4.0 qts/50 lbs	
Method of Curing	ASTM C 1107	
Compressive Strength ASTM C109	psi	MPa
1 Day	4025	27.7
7 Days	7700	53.1
28 Days	10,250	70.7
Shrinkage/Expansion ASTM C 157		
28 Day Expansion	+0.05%	
Freeze-Thaw Resistance		
ASTM C 666	Excellent, Superior to Concrete	
Flexural Strength		
ASTM C 348	Resists Vibration	

WATER REQUIREMENTS

Consistency **Amount per 50 lb (22.7 kg) bag**

Dry Pack 3.5-4.0 quarts clean potable water

Plastic 4.75 quarts clean potable water

Flowable 5.0 quarts clean potable water

Fluid 5.5 quarts clean potable water

Add grout to water, not water to grout. In applications where the grout thickness is to be greater than 12" up to 50% clean, washed and dried 3/8" (9.5mm) pea gravel, based on the weight of the grout may be added. (25 lbs. of pea gravel to 50 lbs of Certi-Vex Grout 500).

YIELD

- Certi-Vex Grout 500 is packaged in 50 lb. bags to yield 0.44 cubic foot of grout when mixed to a plastic consistency.
- When mixed to a pourable consistency as per directions, one sack will yield approximately .40 cu.ft. of grout. 67.5 sacks = 1 cu. yd.
- One 50 lb bag extended with 25 lbs. of washed pea gravel (3/8") yields approximately 0.60ft³ at 4.5 quarts of water.

PACKAGING

Certi-Vex Grout 500 is available in 50-pound bags. Contact Vexcon directly to discuss your customized packaging requirements.

SPECIFICATIONS

Certi-Vex Grout 500 meets or exceeds the following specifications:

- ASTM-C-1107 Standard Specification for Packaged Dry Hydraulic Cement.
- CRD-C-621 Specifications For Non-Shrink Grout.
- CRD-C-614 Method Of Test For Time Of Settling Of Grout Mixtures.
- ASTM-C-109 Standard Test for Compressive Strength of Hydraulic Cement Mortars.
- ASTM-C-266 (CRD-C-222) Standard Test For Compressive Strength of Hydraulic Cement by Gilmore Needle.
- ASTM-C-232 (CRD-C-79) Standard Method of Test for Bleeding of Concrete.
- ASTM-C-157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete

HEALTH AND SAFETY

This product is a gray powdered solid. Continued inhalation of dust over a period of years without proper respirator and ventilation controls will cause silicosis and lung cancer. Use only with safety glasses, neoprene gloves, and protective clothing recommended.

Before using product, it is advisable to obtain a copy of the MSDS #CG101 from your distributor or by contacting Vexcon Chemicals.

CONTACT US @

Additional product information, technical assistance and customer services are available by contacting Vexcon Chemicals directly or our distributors.

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WARRANTY

Vexcon warrants that the goods supplied hereunder shall be of its standard quality and shall conform in all material respects to the sample which has been made available for testing by buyer prior to sale. As the EXCLUSIVE REMEDY for any breach of this Limited Warranty, Vexcon shall replace nonconforming goods or refund the purchase price. Since methods of use and application are beyond Vexcon's control, this Limited Warranty IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THOSE CONCERNING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS LIMITED WARRANTY IS ALSO IN LIEU OF ANY OTHER POSSIBLE LIABILITIES OF VEXCON, WHETHER ALLEGED TO ARISE BY AGREEMENT OR BY OPERATION OF LAW, RESPECTING THE SALE, APPLICATION, USE OR FUNCTION OF VEXCON'S PRODUCTS, INCLUDING BUT NOT LIMITED TO CLAIMS OR NEGLIGENCE, GROSS NEGLIGENCE, STRICT LIABILITY OR ANY OTHER TORT. IN NO EVENT SHALL VEXCON BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE, REAL OR PERSONAL, ATTRIBUTED TO ITS PRODUCTS, NOR FOR ANY EXCAVATION, REMOVAL, REAPPLICATION, DOWN TIMES, CLEANUP, LOSS OF USE, LOSS OF OPPORTUNITY, LOSS OF MARKET VALUE, LOSS OF RENTAL VALUE OR FOR ANY LOSS OF PROFITS OR OTHER SPECIAL, INCIDENTAL, RESULTING, CONSEQUENTIAL OR EXEMPLARY DAMAGES. No person is authorized by Vexcon to assume for it any other liability of any kind in connection with the sale or use of products manufactured and sold by it, and there are no oral agreements or warranties collateral to or affecting any sale or use. All of the foregoing arises under the substantive law of Pennsylvania without regard to principles of conflicts of laws.