

CIPADITE® E-500 GROUT

High Performance Epoxy Structural Grout

DESCRIPTION

CIPADITE® E-500 GROUT is a self-leveling, 100% solids epoxy grout with excellent strength and chemical resistant properties. It is a three component system consisting of epoxy resin, hardener and specially graded aggregate.

WHERE TO USE

Applications include grouting of bed plates for large compressors, power plant machinery, pulp and paper machinery, stamping machines, rock crushers, ball mills, scale breakers, engines, refinery equipment, rail-on-concrete, applications where high resistance to corrosion and chemical attack is imperative and applications where high impact and dynamic loads are service conditions. CIPADITE® E-500 GROUT is also suitable for grouting of structural column bases, bridge seats, steel floor grids, boiler setting, cranes, tanks, pressure vessels and wind turbines.

BENEFITS

High Mechanical Strength:

CIPADITE® E-500 GROUT is characterized by its rapid early strength development with high ultimate compressive strength. It is formulated to resist extreme vibration and high dynamic torque associated with such installations. Its outstanding adhesion properties allow CIPADITE® E-500 GROUT to adhere strongly to properly prepared concrete and steel surfaces.

Excellent Flow:

CIPADITE® E-500 GROUT has excellent flow and self-leveling properties for ease of application. This characteristic permits the grout to be placed in areas with poor access and minimizes the need for strapping during placement.

Chemical Resistance:

CIPADITE® E-500 GROUT is resistant to oil, synthetic lubricants, water and most common chemicals including diluted acids and alkalis

Grout Thickness:

Minimum 25mm (1") to 100mm (4") thickness.

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PROPERTIES

Compressive Strengths (ASTM C579B modified) at 10°C (50°F)	
1 day.....	33 MPa (4,788 psi)
3 days	84 MPa (12,188 psi)
7 days	90 MPa (13,059 psi)
28 days	103 MPa (14,945 psi)
Compressive Strengths (ASTM C579B modified) at 20°C (68°F)	
1 day.....	94 MPa (13,639 psi)
3 days	107 MPa (15,526 psi)
7 days	108 MPa (15,671 psi)
28 days	109 MPa (15,816 psi)
Compressive Strengths (ASTM C579B modified) at 30°C (86°F)	
1 day.....	107 MPa (15,525 psi)
3 days	111 MPa (16,106 psi)
7 days	114 MPa (16,541 psi)
28 days	114 MPa (16,541 psi)
Linear Coefficient of Thermal Expansion (ASTM C531)	
2.87 X 10 ⁻⁵ mm/mm/°C = 0.000016 in/in/°F	
Linear Shrinkage (ASTM C531), 7 days	
-0.0021	
Flexural Strength	
32 MPa (4,643 psi)	
(ASTM C580) 7 days	
Modulus of Elasticity	
20,000MPa (2,902,000 psi)	
(ASTM C580) 7 days	
Shear Bond Strength	
41 MPa (5,949 psi)	
(ASTM C882) 7 days	
Tensile Strength.....	
15 MPa (2,176 psi)	
(ASTM C307) 7 days	

The above information is representative of typical values obtained under laboratory conditions. Variations can be expected due to on site conditions and/or other testing methods.

APPLICATION

Surface Preparation - All concrete surfaces must be sound, dry, free of all oil, dirt, grease, laitance and other contaminants. Clean surface by mechanical means, such as sandblasting or chipping. Wood or metal forms may be used. Forms must be leak free. Contact surfaces of the forms must be coated with common paste wax or polyethylene film to prevent the grout from bonding. Isolate all anchor bolts with a non-bonding material if required.

Steel surfaces such as the underside of base plates or anchor bolts must be free of oil, grease and rust. To remove these contaminations, steel surfaces should be wire-brushed or blasted to a clean, bright metal finish.

MIXING AND PLACING

Condition all grout components (A, B, & C) to a minimum of 21°C (70°F) prior to mixing. For greater flow characteristics condition all components between 25°C (77°F) and 30°C (86°F). For the 0.028 m³ (1ft³) unit, add the hardener (Part 'B') to the base resin (Part 'A'). Mix the combined resin and hardener using a low speed heavy duty drill and mixing paddle for a minimum of two minutes. Pour the thoroughly mixed resin and hardener into a clean mortar mixer and add the aggregate while it is in motion. When using a mortar mixer, mix 3 x 0.028m³ (1ft³) units at a time. When mixing less than this, mix 0.028m³ (1ft³) at a time in a galvanized flat bottom 60 L (15.85 US gal.) pail. After all the aggregate is added mix an additional one to two minutes. For proper contact with the base plate allow grout to rise above the bottom of the plate approximately 3.175mm (1/8) the thickness of the plate. Pour the mixed grout into watertight forms using a head box to facilitate flow under the plate. Pour from one side only in order to prevent trapping air under the plate. Mixed material must be in place within 30 minutes.

LIMITATIONS

Do not install CIPADITE® E-500 GROUT:

- if substrate and ambient temperature are below 10°C (50°F) during application.
- if the surface on which it is to be applied is not dry during the application.
- if sudden temperature changes are expected during the curing
- avoid exposure to water for 24 hours after placement
- do not reduce the aggregate loading without CPD® approval

Consult your CPD® Technical Representative if the substrate and ambient temperatures are below 10°C (50°F) or above 32°C (89.6°F) and when the thickness of the grout placement exceeds 100mm (4").

YIELD

One unit of A & B complete with two 25 kg (55 lb) bags of aggregate will yield approximately 28L (1 ft³) or 0.028 m³ of grout.

PACKAGING

CIPADITE® E-500 GROUT is supplied in 0.028m³ (1ft³) unit.

5.9L (1.56 US gal) of Part A Resin 6.70kg (14.77 lbs) net weight

1.4L (0.37 US gal) of Part B Hardener 1.36kg (2.99 lbs) net weight

2 x 25Kg. (55lb.) Bags Aggregate – 50Kgs. (110 lbs) net weight

Note: 0.084m³ (3ft³) units are also available.

CLEAN UP

Clean up tools, mixers and spills with warm soapy water while the grout is still flowable. If the grout has developed a plastic consistency use CPD® Xylol for cleaning. CAUTION: CPD® Xylol is a flammable solvent. Read Safety Data Sheet prior to using.

STORAGE

Avoid storage at temperatures below 4.5°C (40°F). Although the resin is very resistant to freezing, it may partially crystallize if stored at low temperatures for an extended period of time. A heated dry warehouse is the recommended storage facility.

SHELF LIFE

Two years from date of manufacture if stored unopened in the original container under normal heated warehouse conditions.

SAFETY PRECAUTION

Consult Safety Data Sheet for specific instructions. SDS # 10, 13 and 27.

WARRANTY

The recommendations made and the information herein is based on our own and independent laboratory experience, and is believed to be accurate under controlled conditions. However, no warranty or guarantee of accuracy is made because we cannot cover every possible application of product nor anticipate every variation encountered in weather conditions, job-conditions, methods used and types of surfaces on which the product is applied. The users shall make their own tests to determine the suitability of such products for any particular purpose.

CPD® makes no warranties with respect to this product, expressed or implied, without limitation, the implied warranties of merchantability or fitness for a particular purpose.

CPD®'s liability shall be limited in all events to supplying sufficient product to re-treat and/or repair the specific area to which CPD® product has been applied. CPD® reserves the right to have the true cause of any difficulty determined by accepted test methods. CPD® shall have no other liability, including liability for incidental, consequential or resultant damages, however caused, whether due to breach of warranty, negligence, or strict liability.

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