

# CIPADITE® E-700 GROUT HI-FLOW

*High Performance Epoxy Structural Grout*

## DESCRIPTION

CIPADITE® E-700 GROUT HI-FLOW 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 HI-FLOW 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-700 GROUT HI-FLOW 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-700 GROUT HI-FLOW to adhere strongly to properly prepared concrete and steel surfaces.

### Excellent Flow:

CIPADITE® E-700 GROUT HI-FLOW 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-700 GROUT HI-FLOW is resistant to oil, synthetic lubricants, water and most common chemicals including diluted acids and alkalis

### Grout Thickness:

Minimum of 12.5mm (1/2") to 100mm (4") thickness

## PROPERTIES

Compressive Strengths (ASTM C579B modified) at 23°C (73°F)	
1 day.....	86 MPa (12,500 psi)
3 days.....	93 MPa (13,500 psi)
7 days.....	96.5 MPa (14,000 psi)
28 days.....	106.5 MPa (15,500 psi)
Coefficient of Thermal Expansion 2.2 X 10 <sup>-5</sup> in/in/°F (ASTM C531) 23°C to 99°C (73°F to 210°F)	
Linear Shrinkage (ASTM C531) @ 7 days .....-0.01%	
Flexural Strength .....	31 MPa (4,532 psi) (ASTM C580) @ 7 days
Modulus of Elasticity .....	2.3 x 10 <sup>6</sup> psi (ASTM C580) @ 7 days
Shear Bond Strength .....	32.5 MPa (4,716 psi) (ASTM C882) @ 7 days
Tensile Strength.....	10.25 MPa (1,488 psi) (ASTM C307) @ 7 days
Creep (ASTM C1181)	
2.76 MPa @ 60°C (400 psi @ 140° F)	2.7 x 10 <sup>-3</sup> in/in
4.14 MPa @ 60°C (600 psi @ 140° F)	3.4 x 10 <sup>-3</sup> in/in
Peak exotherm.....	42° C (108.9° F) (ASTM D2471)

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 0.07m<sup>3</sup> (2.5ft<sup>3</sup>) 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. 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-700 GROUT HI-FLOW:

- if substrate and ambient temperature are below 10°C (50°F) during application.
- if the surface on which it is 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

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 five 23.5 kg (51.8 lbs) bags of aggregate will yield approximately 70.8L (0.07 m<sup>3</sup>) or (2.5ft<sup>3</sup>) of grout.

### **PACKAGING**

CIPADITE® E-700 GROUT HI-FLOW is supplied in 0.07m<sup>3</sup> (2.5 ft<sup>3</sup>) unit.

17.82L (4.7 US gal) of Part A Resin 20.1kg (44.4lbs) net weight.

4.21L (1.1 US gal) of Part B Hardener 4.1kg (9 lbs) net weight

5 x 23.5Kg (51.8lb) Aggregate – 117.5kg (259 lbs) net weight

### **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 # 110,111 & 112

## 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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