



DIAMITE ANCHORING GROUT

High-Strength Epoxy Anchoring Compound

1. Product Description

a. **Basic Use:** Diamite Anchoring Grout is a fast-setting epoxy grout designed to provide tremendous anchoring power in a short period of time for anchor bolts, embedments and dowels. Formulated to be pourable, it flows easily around bolts and into tough to access cavities. Shutdown times or stressing in as little as 3 hours is achievable.

b. **Features/Benefits:**

- Extremely high-early strengths for minimum shutdown time.
- Can be used at ambient temperatures as low as 30°F (-1°C).
- Gives permanent embedment in 3 hours.
- Bonds tenaciously to blockouts and drilled holes.
- Good for grouting of bolts with annular clearances of 1/4 in. (6 mm) to 2 in. (50 mm).

c. **Typical Applications:** Machine bolts, column anchor bolts, dowels, thin clearance baseplates, shear keys.

d. **Limitations:** Do not use at service temperatures over 150°F (66°C). Grouted concrete surfaces must be clean and dry.

e. **Composition:** Diamite Anchoring Grout is a three-part system composed of a resin, a hardener, and an aggregate/powder blend.

f. **Color/Appearance:** Concrete gray with a shiny surface.

2. Packaging

Diamite Anchoring Grout is available in a prepackaged kit contained in a 5-gal. (18.9 liter) pail. Each unit weights approximately 49 lbs. (22.2 Kg). Shipping weight is 53 lbs. (24.0 Kg).

3. Estimating/Yield

Each 49-lb. (22.2 Kg) unit has the following proportions:

Part A, resin:	0.67 gal. (2.5 liter)
Part B, hardener:	0.33 gal. (1.3 liter)
Part C, aggregate:	40 lbs. (18 Kg)
Yield:	0.40 cu. ft. (0.011 cu. m)

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Estimating Chart

<i>Bolt Size</i>	<i>Hole Size</i>	<i>Hole Depth</i>	<i>Grouted Bolts/Unit</i>
1/2" (12.7 mm)	1" (25 mm)	8" (200 mm)	37 bolts
3/4" (19.0 mm)	1-1/4" (32 mm)	12" (300 mm)	18 bolts
1" (25.4 mm)	1-1/2" (38 mm)	18" (450 mm)	10 bolts
1-1/2" (38.1 mm)	2" (50 mm)	24" (600 mm)	5 bolts

4. Technical Data

a. **Compressive Strength:** ASTM C 109, 2 in. (50 mm) cubes at 72°F (22°C).

<i>Age</i>	<i>Strength</i>
3 hours	3,500 psi (24 MPa)
12 hours	10,000 psi (69 MPa)
1 day	11,000 psi (76 MPa)
3 days	12,000 psi (83 MPa)
7 days	13,000 psi (90 MPa)
28 days	14,000 psi (97 MPa)

b. **Flexural Strength:** ASTM C 348, 28 days; 3,900 psi (27 MPa).

c. **Bond Strength:** ASTM C 882, 28 days; 2,600 psi (18 MPa).

d. **Modulus of Elasticity:** ASTM C 469; 2.5 X 10⁶ psi (1.7 X 10⁴ MPa).

e. **Working Time:** 20 minutes.

f. **Coefficient of Thermal Expansion:** ASTM C 531; 18.1 X 10⁻⁶ in/in/°F (32 X 10⁻⁶ mm/mm/°C).

g. **Chemical Resistance:**

- **Sulfuric Acid, 15%:** *Excellent*
- **Hydrochloric Acid, 15%:** *Excellent*
- **Caustic Soda, 15%:** *Excellent*
- **MEK:** *Poor*
- **Xylene:** *Good*
- **Acetic Acid:** *Poor*
- **Hydraulic Fluid:** *Excellent*
- **Salt Solutions:** *Excellent*

5. Directions for Use

a. **Preparation:** All concrete surfaces must be clean and rough. Drilled holes should be textured by reaming with a stiff wire brush on a drill to scar the surface. Chip, scabble, or bushhammer all concrete surfaces where access permits, such as shear keys. Concrete must be sound and dry before placing grout.

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b. **Bonding:** No separate bonding agent is required. The base concrete should be dry when Diamite Anchoring Grout is placed.

c. **Bolts and Embedments:** All elements to be anchored should be free of any oil or rust. Clean steel accordingly to remove these bondbreakers.

d. **Ambient Conditions:** Temperatures will dramatically affect the working time and cure time of Diamite Anchoring Grout. A cold environment will delay set time and extend working time. A warm environment will hasten the curing rate, but cut down on working time. Keep all materials as close to 70°F (21°C) as possible. The workability of the grout will be decreased at lower temperatures. The maximum temperature range for application is 30°F (-1°C) to 90°F (32°C). Contact Metalcrete Industries for recommendations outside this range.

e. **Forming:** Bolt holes and most embedment applications do not need forming. Where forms are needed, build strong, water-tight forms with waxed surfaces for easy stripping.

f. **Mixing:** Use a drill and Metco Jiffy mixing blade to mix Diamite Anchoring Grout. Pre-mix the Part A and Part B separately to assure uniformity for 30 seconds each. Then pour the hardener, Part B, into the resin, Part A, and blend for 2 to 3 minutes. Pour the mixed liquids into a pail and add the Part C, aggregate. Mix until all aggregate and powder are thoroughly coated with epoxy, usually about 2 minutes.

g. **Placing:** Pour grout directly into anchor bolt holes or blockouts or use a funnel to direct flow of grout. Bolts and embedments should have a minimum 1/4 in. (6 mm) annular space. Stationary bolts should be rod-ded lightly to remove any entrapped air. Dowels or rods may be forced into a partially filled hole and turned to assure embedment and contact. Avoid spilling grout

on surrounding foundation.

h. **Curing:** Cure rate will depend on temperatures of embedment and surrounding concrete. No special procedures are required.

i. **Clean-Up:** Waterzall Concentrate and water or DL Solvent may be used for cleaning tools and equipment.

j. **Maintenance:** In extremely aggressive chemical environments, check grout for chemical attack every 6 months.

6. Availability

Diamite Anchoring Grout is normally available immediately from your local distributor or it will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

Diamite Anchoring Grout is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when applied by competent applicators.

8. Technical Service

Metalcrete technical service representatives are available to provide on-site assistance with a minimum three day notice.



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