



THE EUCLID CHEMICAL COMPANY

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E³-G

EPOXY GROUT SYSTEM FOR EQUIPMENT BASES

E³-G is a high strength epoxy grout designed for grouting of machine and equipment bases of all types. Formulated to be used in both thin and thick sections, E³-G is suitable for grouting bases of numerous configurations. This formula gives excellent strengths and resistance to many corrosive chemicals. E³-G provides excellent bond to foundation and provides maximum bearing for long lasting grouting projects.

PRIMARY APPLICATIONS

- Pumps, compressors and fans
- Deep fill machine bases
- All high strength applications including crane rails
- Tanks, turbines and housings
- Large anchor bolts and keyways

FEATURES/BENEFITS

- Fast setting/quick return to service
- High chemical resistance
- Excellent bearing
- Excellent bond foundation to base plate
- Stable in deep or thick sections

PACKAGING/YIELD

E³-G is packaged in .5 ft³ (0.014 m³) kits and 2.0 ft³ (0.057 m³) units.

0.5 ft ³ (0.014 m ³)	2.0 ft ³ (0.057 m ³)
Resin, Part A:	
0.86 gal (3.3 liter)	3.43 gal (13.0 liter)
Hardener, Part B:	
0.11 gal (0.4 liter)	0.44 gal (1.67 liter)
Aggregate, filler Part C:	
60 lb (27.2 kg)	4/60 lb (27.2kg) bags

Resin, Part A:

Hardener, Part B:

Aggregate, filler Part C:

E³-G aggregate can be adjusted for flowability:

Aggregate Loading	Yield
4.00 bags	2.00 ft ³ (0.057 m ³)
3.75 bags	1.89 ft ³ (0.054 m ³)
3.50 bags	1.78 ft ³ (0.050 m ³)
3.25 bags	1.67 ft ³ (0.047 m ³)
3.00 bags	1.56 ft ³ (0.044 m ³)

TECHNICAL INFORMATION

Typical Engineering Data

The following results were developed under laboratory conditions.

Compressive Strength,

ASTM C-579 2" (50 mm) cubes @ 70°F (21°C)

Age	Strength
24 hours	8,000 psi (55 MPa)
3 days	10,800 psi (74 MPa)
7 days	11,900 psi (82 MPa)
28 days	13,000 psi (90 MPa)

Creep Data, ASTM C-1181

3 days	2.8 x 10 ⁻⁴ in./in. (2.8 x 10 ⁻⁴ mm/mm)
7 days	2.9 x 10 ⁻⁴ in./in. (2.9 x 10 ⁻⁴ mm/mm)
28 days	4.0 x 10 ⁻⁴ in./in. (4.0 x 10 ⁻⁴ mm/mm)

Coefficient of Thermal Expansion, ASTM C-531

2.6 x 10⁻⁵ in./in./°F (4.5 x 10⁻⁵ mm/mm/°C)

Bond to Concrete: Exceeds tensile and shear strength of concrete.

Impact Resistance: Greater than concrete.

Chemical Resistance: ASTM D-543, Excellent resistance to most chemicals. Specific recommendations available upon request.

Abrasion Resistance: Greater than concrete.

Flexural Strength, ASTM C-580

1 day	3,500 psi (24 MPa)
3 days	3,700 psi (25 MPa)
7 days	3,800 psi (26 MPa)
28 days	3,900 psi (27 MPa)

Modulus of Elasticity, ASTM C 580

1 day	0.95 x 10 ⁶ psi (6.5 x 10 ³ MPa)
28 days	1.24 x 10 ⁶ psi (8.5 x 10 ³ MPa)

Tensile Strength, ASTM C 307

1 day	2,000 psi (14 MPa)
28 days	2,040 psi (14 MPa)

Gel Time, ASTM D2471 @73°F(23°C): 172 minutes

Peak Exotherm, ASTM D2471

@ 73°F (23°C) 91°F (33°C) @ 320 minutes

Appearance

E³-G is a three part epoxy grout system which consists of a Part A (resin), Part B (hardener) and Part C (aggregate). After mixing and placing, the color is similar to that of concrete though the grout may always appear somewhat darker than the surrounding concrete.

Shelf Life: 2 years in original, unopened package.

COVERAGE

One 0.5 ft³ (0.014 m³) unit of E³-G will cover approximately 6 ft² (0.6 m²) when placed at an average depth of 1" (25 mm).

One 2.0 ft³ (0.057 m³) unit of E³-G will cover approximately 24 ft² (2.2 m²) when placed at an average depth of 1" (25 mm).

DIRECTIONS FOR USE

Surface Preparation-New concrete must be a minimum of 28 days old. The concrete must be clean and rough. All oil, dirt, debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a scabber, bushhammer, shotblast or other suitable equipment which will give a surface profile of a minimum 1/8" (3 mm) and expose the coarse aggregate of the concrete. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing.

Acid etching is acceptable only when mechanical preparation is impractical. It is recommended that only contractors experienced in the acid etching process use this means of surface preparation. The salts of the reaction must be thoroughly pressure washed away. Allow the concrete to completely dry. Note: Even with proper procedures, an acid etched surface may not provide as strong a bond as mechanical preparation procedures.

All concrete must possess an open surface texture with all curing compounds and sealers removed.

Form Preparation-Forms must be liquid tight to prevent leakage, and they should be strong and well braced. To facilitate stripping, the forms should be coated with two applications of paste wax or each piece wrapped with polyethylene.

Anchor Bolt Holes and Blockouts-Holes and blockouts should be cleaned of all dust, dirt and debris and allowed to dry. If the sides are smooth, roughen the hole with a stiff bristle wire brush or with a rotary brush hammer if access permits.

Mixing-Mix parts A & B (resin & hardener) for 2 minutes using a drill and mixing prop. For ease of mixing, add the Part B to the Part A (not the reverse). The epoxy

must be well mixed to ensure proper chemical reaction. After the epoxy has been mixed, add the Part C (aggregate) and mix for 2-3 minutes more until the aggregate is completely wetted out.

For large jobs, use a mortar mixer for mixing. Place immediately.

Placement-Pour into anchor bolt holes and blockouts through a funnel or directly if space permits. When grouting plates, pour grout into the headbox and allow to flow under the plate. Straps pre-placed under the plate will aid in working the grout across. Grout should be placed at a minimum of 1" (25 mm) thick and a maximum of 6" (152 mm) per lift when placed in a large mass.

Note: Bring all E³-G materials as well as foundation and baseplate as close to 70°F (21°C) as possible.

Cold temperatures will significantly reduce flow characteristics and will increase the difficulty of baseplate grouting.

Higher temperatures will increase initial flow but cut down on working time.

Curing-E³-G requires no special curing procedures.

Finish-If a smooth finish is desired, the surface of the grout may be brushed and troweled with a light application of EUCO SOLVENT.

CLEAN-UP

Tools and mixer may be cleaned with EUCO SOLVENT, xylol or ketone solvents.

PRECAUTIONS / LIMITATIONS

- Wear protective gloves and eye glasses when handling epoxies.
- Do not use over frozen concrete.
- Store material at room temperature before use.
- Grout should be placed at ambient temperatures of 40-90°F (4-32°C).
- Rate of strength gain is significantly affected at temperature extremes.



E3-G-11.04