



EUCLID CHEMICAL

Guide Specification

The Euclid Chemical Company
19215 Redwood Road
Cleveland, OH 44110-2799
Phone: 800-321-7628
Fax: 216-531-9399
www.euclidchemical.com

E³- DEEP POUR

{Note to Specifier: This add-in specification component specifies Euclid Chemical Company, E³-Deep Pour epoxy grout with dustless technology for reduced dust during mixing. E³-Deep Pour is a high strength epoxy grout for grouting machine and equipment bases of all types. Formulated to be used in deep placements, E³-Deep Pour is suitable for grouting bases of numerous configurations. E³-Deep Pour provides excellent strength, corrosion resistance, bond to machine bases and foundations, providing maximum bearing for long lasting grouting projects.}

{Note to Specifier: The paragraphs below are meant to be incorporated into Parts 1, 2 and 3 of a standard CSI 3 Part Format specification, project's General Structural Notes or directly onto the plans. They must be carefully reviewed by a qualified design professional and edited to meet the particular requirements of the project at hand, assure compliance with any governing building codes, and coordinate with other specification sections and drawings.}

PART 1: GENERAL

1.1 QUALITY REQUIREMENTS

- A. Manufacturer: ISO 9001 quality certified as primary manufacturer of specified products.

1.2 INFORMATIONAL SUBMITTALS

- A. Product List: List manufacturer name and product name for each product proposed for use as epoxy grout.
- B. Manufacturer Certificate: Indicating products listed on Contractor's Product List are compatible and suitable for the specified application.

PART 2: PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: Provide listed products of The Euclid Chemical Company, Cleveland, OH; www.euclidchemical.com.
- B. Manufacturer Single Source: Provide epoxy grout products from a single qualified manufacturer.

2.2 DEEP POUR EPOXY GROUT

- A. Deep Pour Epoxy Grout: Epoxy grout for deep pour applications with dustless technology for reduced dust during mixing and meeting American Petroleum Institute Standard 610, Appendix L for Baseplate and Soleplate Grouting.
 - 1. Basis of Design Product:
 - a. "E³-Deep Pour" by The Euclid Chemical Company
 - b. Compressive Strength, ASTM C579, 2 in. (5 cm) cubes @ 70°F (21°C):

- 1) Standard Unit
 - a) 1 day: 11,000 psi (76 MPa)
 - b) 7 days: 14,000 psi (97 MPa)
 - c) 28 days: 15,000 psi (103 MPa)
- 2) High Flow Mix
 - a) 1 day: 11,100 psi (77 MPa)
 - b) 7 days: 14,500 psi (100 MPa)
 - c) 28 days: 15,100 psi (104 MPa)
- c. Creep, ASTM C1181 @ 400 psi (2.8 MPa) 140°F (60°C):
 - 1) Standard Unit
 - a) 28 days: 3.2×10^{-3} in./in. (mm/mm)
 - 2) High Flow Mix
 - b) 28 days: 4.0×10^{-3} in./in. (mm/mm)
- d. Coefficient of Thermal Expansion, ASTM C531:
 - 1) Standard Mix
 - a) 2.8×10^{-6} in./in. (mm/mm) (73° to 210°F) (23° to 99°C)
 - 2) High Flow Mix
 - a) 2.8×10^{-6} in./in. (mm/mm) (73° to 210°F) (23° to 99°C)
- e. Flexural Strength, ASTM C580:
 - 1) Standard Unit
 - a) 1 day: 4,000 psi (28 MPa)
 - b) 7 days: 4,400 psi (30 MPa)
 - c) 28 days: 4,500 psi (31 MPa)
 - 2) High Flow Mix
 - a) 1 day: 3,200 psi (29 MPa)
 - b) 7 days: 4,500 psi (31 MPa)
 - c) 28 days: 4,600 psi (32 MPa)
- f. Tensile Strength, ASTM C307:
 - 1) Standard Unit
 - a) 1 day: 1,800 psi (12 MPa)
 - b) 7 days: 2,000 psi (14 MPa)
 - c) 28 days: 2,100 psi (14 MPa)
 - 2) High Flow Mix
 - a) 1 day: 1,800 psi (12 MPa)
 - b) 7 days: 2,000 psi (14 MPa)
 - c) 28 days: 2,100 psi (14 MPa)
- g. Bond to Concrete:
 - 1) Exceeds tensile and shear strength of base concrete.
- h. Chemical Resistance:
 - 1) Excellent resistance to most industrial chemicals.
- i. Maximum thickness per lift:
 - 1) Standard Unit
 - a) Up to 18 in. (45 cm)
 - 2) High Flow Mix
 - a) Up to 9 in. (23 cm)
- j. Effective bearing area, ASTM C1339:
 - 1) Standard Unit
 - a) >95%
 - 2) High Flow Mix
 - a) >95%

- k. FLDOT peak exotherm, 12" x 12" x 3" beam:
 - 1) Standard Unit
 - a) 98.0°F (36.7°C)
 - 2) High Flow Mix
 - a) 113.0°F (45.0°C)
- m. Working time:
 - 1) Standard Unit
 - a) 90 min.
 - 2) High Flow Mix
 - a) 70 min.

2.3 CLEAN-UP AND FLOOR STRIPPER

- A. Clean-Up and Floor Stripper:
 - 1. Basis of Design Product:
 - a. "Euco Solvent" by The Euclid Chemical Company

PART 3: EXECUTION

{Note to Specifier: This section covers surface preparation, form preparation, mixing, placement, curing, and cleanup for Euclid Chemical's E³- Deep Pour epoxy grout. For complete current instructions and safety information, consult the Technical Data and Material Safety sheets posted at www.euclidchemical.com.}

3.1 SURFACE PREPARATION

- A. Concrete
 - 1. New concrete must be a minimum of 28 days old. Concrete must be clean, dry and rough. All oil, dirt, debris, paint and unsound concrete must be removed. Surface must be prepared mechanically using suitable equipment to give surface profile of CSP 5-7 in accordance with ICRI Guideline 310.2, exposing coarse aggregate of concrete. Final step in cleaning shall be complete removal of all dust and residue. Allow concrete to completely dry. All concrete must possess an open surface texture with all curing compounds and sealers removed. When used on existing concrete, prepare concrete surfaces in accordance with manufacturer's written instructions.
- B. Base plate preparation
 - 1. Abrasive blast metal base plates to a commercial finish (SSPC-SP6). Apply grout immediately to prevent re-oxidizing.
- C. Anchor Bolt Holes and Blockouts
 - 1. Holes and blockouts shall be cleaned of all dust, dirt and debris and allowed to dry. If sides are smooth, roughen hole with a stiff bristle wire brush or with a rotary brush hammer if access permits. Remove all dust and debris.

3.2 FORM PREPARATION

- A. Forms must be liquid tight and properly braced to prevent leakage. To facilitate stripping, coat with two applications of a paste wax or wrap each form with polyethylene. Forms shall be set slightly higher than bottom of baseplate.

3.3 MIXING

- A. Slowly mix parts A & B (resin & hardener) separately for 2 minutes using a drill and mixing prop in clean pail. For ease of mixing, add part B to part A (not the reverse). Epoxy must be well mixed to ensure proper chemical reaction. Do not whip air into the mix while mixing. After epoxy has been mixed, add part C (aggregate) one bag at a time and mix for an additional 2 to 3 minutes after each addition, until aggregate is completely wetted out. For large jobs, use mortar mixer. Place immediately.

3.4 PLACEMENT

- A. Pour into anchor bolt holes and blockouts through a funnel or directly if space permits. When grouting plates, pour grout into headbox and allow to flow under plate. Pre-placed straps under plate aid in working the grout. Grout shall be placed at a minimum of 1" (25 mm) thick and a maximum of 18" (46 cm) per lift. **Note:** Bring all epoxy grout materials as well as foundation and baseplate as close to 75°F (23°C) as possible. Cold temperatures will significantly reduce flow characteristics and will increase difficulty of baseplate grouting. Higher temperatures will increase initial flow but reduce working time.

3.5 CURING

- A. Epoxy grout requires no special curing procedures.

3.6 FINISH

- A. If a smooth finish is desired, the surface of the grout may be brushed and troweled with a light application of clean-up and floor stripper.

3.7 CLEAN UP

- A. Tools and mixer may be cleaned with soap and water.