



# E<sup>3</sup>-XTREME

## ULTRA-HIGH PERFORMANCE EPOXY GROUT WITH DL TECHNOLOGY™ AGGREGATE

### DESCRIPTION

E<sup>3</sup>-XTREME is a three-component, high flow, ultra-high strength epoxy grout. A special resin and hardener formulation plus patented DL Technology™ aggregate, sets the E<sup>3</sup>-XTREME apart from competitive products. E<sup>3</sup>-XTREME has extremely high compressive strength, with ultra-low creep and outstanding Effective Bearing Area (EBA). DL Technology™ aggregate helps to greatly reduce the amount of dust released into the environment during mixing and handling.

### PRIMARY APPLICATIONS

- Pumps and rotating equipment
- Wind turbine bases and crane rails
- Compressors and turbo-machinery
- Skid-mounted equipment
- Presses and stamping machines
- High dynamic load applications

### FEATURES/BENEFITS

- DL Technology™ aggregate minimizes dust
- Positive effective bearing
- Very high early strengths, fast return to service
- User friendly placing characteristics
- >95% Effective bearing
- High chemical resistance
- Exceptional flexural and tensile strengths
- Very low creep
- Clean tools with soap and water

### TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

| PROPERTY   | 1 DAY  | 7 DAYS                    | 28 DAYS                         | POST CURE*                |
|--|--|---------------------------|---------------------------------|---------------------------|
| Compressive Strength<br>ASTM C 579<br>2 in (50 mm) cubes @ 73°F (23°C)   | 15,800 psi<br>(109.0 MPa)                                  | 17,000 psi<br>(117.2 MPa) | 17,500 psi<br>(120.7 MPa)       | 19,000 psi<br>(132.0 MPa) |
| Compressive Creep<br>ASTM C 1181, 28 day cure<br>400 psi (2.8 MPa) @ 140°F (60°C)  | -----  | -----                     | 1.9 x 10 <sup>-3</sup> in/in/°F | -----                     |
| Flexural Strength<br>ASTM C 580  | 5,550 psi<br>(38.2 MPa)                                    | 5,600 psi<br>(38.9 MPa)   | 5,650 psi<br>(39.2 MPa)         | 5,700 psi<br>(39.6 MPa)   |
| Tensile Strength<br>ASTM C 307   | 1,900 psi<br>(13.1 MPa)                                    | 2,000 psi<br>(13.9 MPa)   | 2,300 psi<br>(15.9 MPa)         | 2,400 psi<br>(16.5 MPa)   |
| Bond Strength, ASTM C 882  | N/A  | 3,300 psi<br>(22.9 MPa)   | 3,900 psi<br>(27.0 MPa)         | -----                     |
| Coefficient of Thermal Expansion<br>ASTM C 531, 7 days   | 2.2 x 10 <sup>-5</sup> in/in/°F (74 to 210°F) (23 to 99°C) |                           |                                 |                           |
| Effective Bearing Area<br>ASTM C 1339  | >95%   |                           |                                 |                           |
| Approximate Working Time<br>ICRI PROTOCOL  | 32 minutes at 73°F (23°C)                                  |                           |                                 |                           |
| Peak Exotherm<br>12 in x 12 in x 3 in specimen<br>(30 cm x 30 cm x 8 cm)<br>ASTM D 2471  | 168°F (75.6°C) at 65 minutes                               |                           |                                 |                           |
| Chemical Resistance  | Excellent resistance to most industrial chemicals          |                           |                                 |                           |
| Abrasion Resistance  | Greater than concrete                                      |                           |                                 |                           |
| *Post Cure Procedure: De-mold specimens after 24 hours; place in oven @140°F (60°C) for 18 hours; remove from oven for 24 hours; perform test. |  |                           |                                 |                           |

## PACKAGING

E<sup>3</sup>-XTREME is packaged in 1.7 ft<sup>3</sup> (0.048 m<sup>3</sup>) units. **Part A**, resin: 27.71 lb (12.6 kg), **Part B**, hardener: 6.32 lb (2.87 kg). Part A and Part B are contained in a 6 gallon plastic pail, and **Part C**, aggregate: 6/32 lb (14.5 kg) bags.

## SHELF LIFE

2 years in original, unopened package

## 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 suitable equipment to give a surface profile of at least a CSP 5-7 in accordance with ICRI Guideline 310.2, exposing the coarse aggregate of the concrete. The final step in cleaning should be the complete removal of all dust and residue with a vacuum cleaner followed by pressure washing. Then vacuum all water up and allow to dry completely. **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 must 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.

**Mixing:** Mix parts A & B (resin & hardener) separately using a drill and mixing prop. Then pour the Part B into the Part A container. Mix for 2-3 minutes, scraping the bottom and sides of the container, to ensure proper chemical reaction. Do not whip air into the epoxy while mixing. After the epoxy has been mixed, directly pour all of the mixed resin into a horizontal shaft mortar mixer. Add Part C (aggregate) to the mixture, one bag at a time and mix for 2 to 3 minutes, until the aggregate is completely wetted out. 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 can be placed at a minimum of 1" (25 mm) thick to a maximum of 6" (150 mm) per lift when placed in a large mass. **Note:** Bring all E<sup>3</sup>-XTREME 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 the difficulty of baseplate grouting. Higher temperatures will increase initial flow but reduce working time.

**Curing:** E<sup>3</sup>-XTREME 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 soap and water.

## PRECAUTIONS/LIMITATIONS

- Wear proper PPE when handling epoxies.
- Do not use over frost covered or frozen concrete.
- Store all materials at 75°F (23°C) for at least 24 hours before use.
- Grout should be placed at ambient temperatures of 50°F to 90°F (10°C to 32°C).
- Rate of strength gain is significantly affected at temperature extremes.
- Do not remove, or add more aggregate, than stated on this technical data sheet.
- In all cases, consult the Safety Data Sheet before use.

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