

REC EPOX GROUT 21

EPOXY GROUT FOR DEEP POUR APPLICATIONS



DESCRIPTION

REC EPOX GROUT 21 is a high strength epoxy grout designed for grouting machine and equipment bases of all types. Formulated to be used in deep placements, REC EPOX GROUT 21 is suitable for grouting bases of numerous configurations. This formula gives excellent strengths and resistance to many corrosive chemicals. REC EPOX GROUT 21 provides excellent bond to the foundation and provides maximum bearing for long lasting grouting projects. REC EPOX GROUT 21 meets the requirements of the American Petroleum Institute Standard 610, Appendix L for Baseplate and Soleplate Grouting.

PRIMARY APPLICATIONS

- Large/deep volume precision placements
- Rebuilding foundations, bases and columns
- Vibration dampening for equipment
- Tanks, turbines and housings
- Pour-backs for post tension projects

FEATURES/BENEFITS

- Low exotherm for large volume areas
- High chemical resistance
- Expansive/non-shrink
- Excellent bearing
- Variable fill ratio
- Excellent bond foundation to base plate
- Stable in deep placem

TECHNICAL INFORMATION

The following results were determined at 70oF (21oC) laboratory conditions:

PROPERTY	Standard Unit			High Flow Mix		
	1 Day	7 Days	28 Days	1 Day	7 Days	7 Days
Compressive Strength ASTM C 579	11,050 psi (76 MPa)	14,100 psi (97 MPa)	15,500 psi (107 MPa)	11,000 psi (76 MPa)	13,600 psi (94 MPa)	15,100 psi (104 MPa)
Creep ASTM C 1181	400 psi (2.8 MPa) @ 140oF (60oC)		2.3 x 10 ⁻³	400 psi (2.8 MPa) @ 140oF (60oC)		2.7 x 10 ⁻³
Flexural Strength ASTM C 580	3,650 psi (25 MPa)	4,000 psi (28 MPa)	4,300 psi (30 MPa)	3,500 psi (24 MPa)	3,800 psi (26 MPa)	4,250 psi (29 MPa)
Tensile Strength ASTM C 307	1,800 psi (12 MPa)	2,000 psi (14 MPa)	2,100 psi (14 MPa)	1,800 psi (12 MPa)	2,000 psi (14 MPa)	2,100 psi (14 MPa)
Coefficient of Thermal Expansion ASTM C 531	12.9 x 10 ⁻⁶ (73o to 210oF) (23o to 99oC)			13.9 x 10 ⁻⁶ (73o to 210oF) (23o to 99oC)		
Bond to Concrete	Exceeds tensile and shear strength of concrete					
Chemical Reistance	Excellent resistance to most industrial chemicals					
Maximum Thickness Per Lift	Up to 18 in. (45 cm)			Up to 9 in. (23 cm)		
Early Age Height Change ASTM C 827 @	.66%			.10%		

90oF (32oC)		
Effective Bearing Area ASTM C 1339	>95%	>95%
Peak Exotherm 3"x 6" cylinder (adiabatic)	99.6oF (37.6oC)	110.0oF (43.3oC)
FLDOT Peak Exotherm 12"x 12"x 3"	94.0oF (34.4oC)	104.0oF (40.0oC)
Working Time	90 min.	70 min.

PACKAGING

REC EPOX GROUT 21 is packaged in 1.4 ft³ (0.039 m³) kits. To mix to a high flow consistency, remove 1 bag of aggregate.

Resin, Part A:
(3.07 L)

Hardener, Part B:
(2.87 L)

Aggregate, filler Part C:
(14..06 kg) bags

SHELF LIFE

2 years in original, unopened package

DIRECTIONS FOR USE

Surface Preparation: 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 pressure washer and then vacuum until all water is gone. 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. Base Plate Preparation: Abrasive blast metal base plates to a commercial finish (SSPC-SP6) to enhance bond. Apply grout immediately to prevent re-oxidizing.

Form Preparation: Forms must be liquid tight to prevent leakage. They must be strong, well braced, and set slightly higher than the bottom of the base plate. To facilitate stripping, the forms should be coated with two applications of a paste wax or each form 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: Slowly mix parts A & B (resin & hardener) for 2 minutes using a drill and mixing prop in a clean mixing pail. 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. Do not whip air into the epoxy while mixing. After the epoxy has been mixed, directly pour the resin into a horizontal shaft mortar mixer. Add the part C (aggregate) to the mixture, one bag at a time and mix thoroughly 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, working from one side only. 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 18" (46 cm) per lift when placed in a large mass. **Note:** Bring all REC EPOX GROUT 21 materials as well as the 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 cut down on working time.

Curing: REC EPOX GROUT 21 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 REC SOLVENT.

PRECAUTIONS/LIMITATIONS

- Wear protective gloves and eye glasses when handling epoxies.
- Do not use over frost covered or frozen concrete.
- Store material at room temperature 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.
- In all cases, consult the Safety Data Sheet before use.

COVERAGE

One standard 1.4 ft³ (0.039 m³) unit of REC EPOX GROUT 21 will cover approximately 8.4 ft² (0.78 m²) when placed at a depth of 2" (5 cm). When mixed to a high flow consistency, the yield is 1.15 ft³ (0.033 m³).

CLEAN-UP

Tools and mixer may be cleaned with soap and water.