

REC EPO GROUT 21

EPOXY GROUT FOR DEEP-POUR APPLICATIONS

DESCRIPTION

REC EPO GROUT 21 is a high-strength epoxy grout designed for grouting machine and equipment bases of all types. Formulated for deep placements, **REC EPO GROUT 21** is suitable for grouting bases of numerous configurations. This formulation provides excellent strength and resistance to many corrosive chemicals. **REC EPO GROUT 21** provides excellent bond to the foundation and maximum bearing for long-lasting grouting projects. **REC EPO 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 between foundation and base plate
- Stable in deep placements

TECHNICAL INFORMATION

The following results were determined under laboratory conditions at 70°F (21°C).

Compressive Strength (ASTM C 579)	1 Day	11,000 psi (76 MPa)
	7 Days	13,600 psi (94 MPa)
	28 Days	15,100 psi (104 MPa)
Creep (ASTM C 1181)	400 psi (2.8 MPa)	
Flexural Strength (ASTM C 580)	1 Day	3,500 psi (24 MPa)
	7 Days	3,800 psi (26 MPa)
	28 Days	4,250 psi (29 MPa)
Tensile Strength (ASTM C 307)	1 Day	1,800 psi (12 MPa)
	7 Days	2,000 psi (14 MPa)
	28 Days:	2,100 psi (14 MPa)
Coefficient of Thermal Expansion (ASTM C 531)	13.9×10^{-6} (23°C to 99°C)	
Bond to Concrete	Exceeds tensile and shear strength of concrete	
Chemical Resistance	Excellent resistance to most industrial chemicals	

Maximum Thickness per Lift	Up to 9 in. (23 cm)
Early Age Height Change, ASTM C 827 @ 32°C	0.10%
Effective Bearing Area (ASTM C 1339)	>95%
Peak Exotherm, 3 × 6 in. Cylinder (Adiabatic)	110.0°F (43.3°C)
FLDOT Peak Exotherm, 12 × 12 × 3 in.	104.0°F (40.0°C)
Working Time	70 min.

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 provide a surface profile of at least 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, followed by vacuuming until all water is removed. Acid etching is acceptable only when mechanical preparation is impractical. It is recommended that only contractors experienced in the acid-etching process use this method of surface preparation. The salts from the reaction must be thoroughly removed by pressure washing. 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. 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-oxidation.

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 paste wax, or each form should be wrapped with polyethylene.

ANCHOR BOLT HOLES AND BLOCK OUTS

Holes and block outs 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 a rotary brush hammer if access permits.

MIXING

Slowly mix Parts A and B (resin and hardener) for 2 minutes using a drill and mixing prop in a clean mixing pail. For ease of mixing, add Part B to Part A, not the reverse. The epoxy must be thoroughly 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 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 block outs through a funnel, or directly if space permits. When grouting plates, pour grout into the headbox and allow it 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 thickness of 1 in. (25 mm) and a maximum thickness of 18 in. (46 cm) per lift when placed in a large mass.

NOTE: Bring all **REC EPO GROUT 21** materials, as well as the foundation and base plate, as close to 75°F (23°C) as possible. Cold temperatures will significantly reduce flow characteristics and increase the difficulty of baseplate grouting. Higher temperatures will increase initial flow but reduce working time.

CURING

REC EPO 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**.

CLEAN-UP

Tools and mixer may be cleaned with soap and water.

APPLICATION PRECAUTIONS

- Wear protective gloves and safety 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 10°C to 32°C.
- The rate of strength gain is significantly affected by temperature extremes.
- Consult Technical representatives of RECKON CHEMICALS PVT Ltd., Lahore for assistance.

COVERAGE

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

PACKAGING

REC EPO GROUT 21 is packaged in a single kit of various size according to request/demand of customer.

To mix to a high-flow consistency, remove one bag of aggregate.

- Resin, Part A: 3.07 L
- Hardener, Part B: 2.87 L
- Aggregate/Filler, Part C: 14.06 kg bags

STORAGE

Shelf life is 12 months from the date of manufacture when stored in the original, unopened packaging, under cover, in dry conditions, away from humidity, and protected from extreme temperatures and direct sunlight.

SAFETY PRECAUTIONS

While using the product, gloves, a mask, and safety goggles should be worn. Splashes on the skin or in the eyes should be washed immediately with clean water. In case of prolonged irritation, seek medical advice.

QUALITY STATEMENT

All our products are manufactured to comply with our internal quality management system to ensure consistency and quality.

DISCLAIMER

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