

EPOGROUT GP

EPOXY GROUT SYSTEM FOR EQUIPMENT BASE PLATES



DESCRIPTION

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

BASIC USES

- 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 of foundation to base plate
- Stable in deep or thick sections

TECHNICAL INFORMATION

Typical Engineering Data

The following results were developed under laboratory conditions.

Compressive Strength

ASTM C-579 (50 mm cubes)

| Age | Strength |
|----------|----------|
| 24 hours | 82 MPa |
| 3 days | 87 MPa |
| 7 days | 95 MPa |
| 28 days | 97 MPa |

Creep Data, ASTM C-1181

| | |
|---------|--|
| 3 days | 2.8×10^{-4} in/in (2.8×10^{-4} mm/mm) |
| 7 days | 2.9×10^{-4} in/in (2.9×10^{-4} mm/mm) |
| 28 days | 4.0×10^{-4} in/in (4.0×10^{-4} mm/mm) |

Linear Shrinkage, ASTM C-531

| | |
|---------|--------|
| 3 days | 0.003% |
| 7 days | 0.007% |
| 14 days | 0.008% |

Coefficient of Thermal Expansion ASTM C-531

2.6×10^{-5} in./in./°F (4.5×10^{-5} mm/mm/°C)

Bond to Concrete : Exceeds tensile and shear strength of concrete

Abrasion Resistance : Greater than concrete.

Flexural Strength , ASTM C 580

| | |
|----------|----------|
| 24 Hours | 20.8 MPa |
| 3 days | 21.7 MPa |
| 7 days | 24.1 MPa |
| 28 days | 24.7 MPa |

Modulus of Elasticity , ASTM C 580

| | |
|---------|---|
| 1 day | 0.95×10^6 psi (6.5×10^3 MPa) |
| 28 days | 1.24×10^6 psi (8.5×10^3 MPa) |

Tensile Strength, ASTM C 307

| | |
|---------|----------|
| 1 day | 11.5 MPa |
| 28 days | 12.3 MPa |

Gel Time, ASTM D 2471 90 minutes @ 23° C

Chemical Resistance

ASTM D 543

| | |
|----------------------------------|------|
| Hydrochloric Acid 10% | Good |
| Sulphuric Acid 10% | Good |
| Citric Acid 1% | Good |
| Ethanol 50% | Good |
| Sodium Hydroxide 1% | Good |
| Ammonium Hydroxide Concentration | Good |
| Soap Solution 1% | Good |
| Sodium Carbonate 2% | Good |
| Acetic Acid | Poor |

Rating:

Good : No swelling, crazing, bubbling, cracking, and solubility.

Poor : Discoloured.

Impact Strength: ISO 6272:1993

No indication of cracking was observed, when 450 gm. steel ball was dropped at a height of 1 meter and 2 meters. Impact resistance is greater than that of concrete.

Peak Exotherm , ASTM D 2471, 23°C - 30° C @ 230 minutes

SPECIFICATIONS / COMPLIANCES

- **EPOGROUT GP** meets the requirements of ASTM C 307, type I, grade II class A.
- **EPO GROUT GP** meets the thermal compatibility with concrete requirements of ASTM C 884

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 scabblor, bushhammer, shotblast or scarifier which will give a surface profile of a minimum 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.

| | |
|------------------|---|
| YIELD | will yield approximately 0.014m^3 of grout. It will cover approximately 1.4m^2 when placed at an average depth of 10mm. |
| PACKAGING | EPO GROUT GP is packed in 27 kg kit |

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 a bond as strong as using 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 polythene. Anchor Bolt Holes and Blockouts - Holes and blockouts should be cleaned of all dust, dirt and debris allowed to dry. If the sides are smooth, roughen the hole with a stiff bristle wire brush or with a rotary bush 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 and 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 25 mm thick and a maximum 150 mm per lift when placed in a large mass. For more than 150 mm thickness per lift, CMCI can be consulted.

Note

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

Quality Statement

CMCI manufactures its products at their manufacturing facility in Saudi Arabia as per the Quality Procedures certified to conform with quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high performance construction products CMCI also offers full technical field support to consultants, Architects, contractors, applicators and End Users.

PRECAUTIONS & LIMITATIONS

- Wear protective gloves and eye glasses when handling epoxies
- Do not use over frozen concrete
- Store material at room temperature before use
- Solvents used for clean-up are flammable, keep away from heat, sparks, open flame, or lighted cigarettes. Use explosion-proof application equipments.

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