

3 COMPONENT POURABLE UNDERWATER EPOXY GROUT

A three component pourable epoxy grout based on a high grade epoxy resin and specially graded aggregates. On mixing a flowable grout is produced for use in heavy engineering and difficult conditions. It may be used as neat or in conjunction with fillers.

GUARDIAN UEG is a high strength epoxy grout with no shrinkage that is suitable for many grouting applications such as marine pile repair and restoration. Offers very good corrosion protection for concrete, steel, wood, etc.

ADVANTAGES

- Chemical resistance.
- Solvent free & non flammable.
- Rapid shrinkage free hardening.
- High mechanical strength.
- Good impact and vibration resistant.
- High adjustable flow.
- Good bonding to most substrates.
- Long pot life for big pours and deep pours.
- Low exotherm.
- Pumpable & pourable grout.

MIXING

- For optimum performance, all components should be conditioned to between 65oF and 85oF (18oC and 29oC) prior to use.
- Pour all component B (hardener) into pail containing component A (resin).
- Mix thoroughly by hand with a paddle or with a slow speed drill and paddle mixer to avoid air entrapment.
- While mixing, slowly add component C and mix only until the mixture becomes homogenous.
- Do not mix more material that cannot be placed in 45 minutes.

POST PLACEMENT PROCEDURES

In-service operation may begin immediately after minimum required grout strength and modulus have been achieved.

CLEANING

Use a solvent or water and strong detergent solution on tools and equipment before material hardens.

PACKAGING

A+B+C 10 & 25 kg. Pre-measured sets or larger packaging upon request.

STORAGE & SHELF LIFE

Store in dry conditions between 5oC - 30oC. The shelf life is 12 months when unopened and stored correctly.

METHODS OF PLACEMENT

GUARDIAN UEG may be pumped or poured into place. For vertical flow applications simply pour or pump from the top of the opening, or pump into ports. For horizontal applications, pour or pump from one side to the other. Tremie method are best suited to provide a suitable pressure head & rapid displacement of water.

HEALTH & SAFETY

Avoid contact with skin and eyes and avoid breathing vapour. Use only in well ventilated areas away from heat sparks or naked flame. Wear suitable protective clothing, gloves and eye protection when mixing or using. If poisoning occurs, contact a doctor or Poisons Information Centre. If swallowed, do NOT induce vomiting give a glass of water. If in eyes, hold eyes open, flush with water for at least 15 minutes and see a doctor. If skin contact occurs, remove contaminated clothing and wash skin thoroughly with soap and water.

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PROPERTIES

Appearance	Part A - Turbid thick liquid. Part B - Clear liquid. Part C - Filler.
Colour	Black (when mixed) Mixed density (kg/ltr): 2.10 + 0.05
Consistency	Pourable
Working time	60 mins.
Compressive Strength (ASTM C579)	
1 day	30 N/mm ²
3 days	70 N/mm ²
7 days	80 N/mm ²
Flexural Strength (ASTM C580)	7 days 30 N/mm ²
Tensile Strength (ASTM C307)	7 days 15 N/mm ²
Bond Strength (ASTM D4541)	7 days > 3.5 N/mm ² (concrete failure)
Yield	2100 kg/m ³
Application Temperature	10 oC to 40 oC
Service Temperature	5 oC to 60 oC
Creep (ASTM C1181)	0.6%
Linear Shrinkage (ASTM D 2556)	Negligible
Thermal Expansion Coefficient (ASTM C 531)	
Effective Bearing Area (ASTM C 1339)	>95%
Shrinkage Unrestrained (ASTM C 531)	Negligible
E-Modulus (ASTM C 580)	16000 N/mm ²
Elongation (ASTM D 638)	1.55%
Water Absorption Coefficient @ 7days (ASTM C 413)	
Grouting Thickness	Min 10 mm. Max : 100 mm.
Chemical resistance (ASTM D543)	Excellent most chemicals

SUBSTRATE PREPARATION

All surfaces to be in contact with GUARDIAN UEG shall be free of marine growth, oil, grease, laitance, and other contaminants. Concrete must be clean, sound, and abraded to ensure a good bond.

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