

3 Component Pourable Underwater Epoxy Grout

Guardian UEG is 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.

USES & ADVANTAGES

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 include:-

- Chemical resistance.
- Solvent free & non flammable.
- Rapid shrinkage free ardening.
- 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.

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:	7 days 30 N/mm ²	ASTM C580
Tensile Strength:	7 days 15 N/mm ²	ASTM C307
Bond Strength:	7 days > 3.5 N/mm ² (concrete failure)	ASTM D4541
Yield:	2100 kg/m ³	
Application Temperature:	10°C to 40°C	
Service Temperature:	5°C to 60°C	
Creep:	0.6 %	ASTM C1181
Linear Shrinkage :	Negligible	ASTM D 2556
Thermal Expansion Coefficient:	3.21 x 10 ⁻⁵ mm/mm/°C	ASTM C 531
Effective Bearing Area:	>95%	ASTM C 1339
Shrinkage Unrestrained :	Negligible	ASTM C 531
E-Modulus:	16000 N/mm ²	ASTM C 580
Elongation:	1.55%	ASTM D 638
Water Absorption Coefficient @ 7days:		ASTM C 413
Grouting Thickness:	Min: 10 mm. Max:100mm.	
Chemical resistance:	Excellent most chemicals	ASTM D543

Note:

- The above data is typical under laboratory conditions at 25°C and does not constitute a specification. Field trials are recommended.
- The working time starts when the hardener is added to the resin material. Do not let the resin and hardener stand still without adding aggregates which may result in shorter working time. Working time will vary depending on the temperature and the quantity mixed. To get the optimum working time keep the material shaded and in a cool place.

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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.

MIXING

- For optimum performance, all components should be conditioned to between 65°F and 85°F (18°C and 29°C) 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.

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.

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 5°C - 30°C. The shelf life is 12 months when unopened and stored correctly.

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.

TECHNICAL SERVICE

The Guardian Coating Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001 : 2015 verified by BSI

All statements and data presented herein are given in good faith and believed to be appropriate and reliable. It is given without express or implied warrant or guarantee. Potential users of Guardian's materials are urged to conduct confirmatory trials to satisfy themselves as to the suitability of the selected product for their particular end use prior to purchase.