

3 Component Early High Strength Epoxy Grout

Guardian HSEG is a solvent free 3 component high strength epoxy grout which when mixed produces a flowable material with excellent adhesion to concrete surfaces.

USES & ADVANTAGES

Guardian HSEG is a high early strength epoxy grout produced for speedy and permanent patching repairs of concrete surfaces including small honey combs, surface defects, blow holes and minor damage in roads, bridge decks, runways and precast units.

Advantages include:-

- High early strength.
- Fuel and chemical resistance.
- Fast setting.
- Shrinkage free hardening.
- Rapid hardening.
- High mechanical strength.
- Curing is not affected by high humidity.
- Abrasion & Impact resistant.
- Vibration resistant.
- Strong bond to metal & concrete.

PROPERTIES

Components:	3 (Base, Hardener & Filler)	
Form:	Pourable	
Appearance:	Grey (when mixed)	
Mixed Density (kg/ltr):	2.17 ± 0.05	
Working Time:	20 - 30 mins. @25°C	
Compressive Strength:	ASTM C579, Method B	
3 hrs:	≥70 N/mm ²	
1 day:	≥75 N/mm ²	
7 days:	≥85 N/mm ²	
Flexural Strength:	7 days ≥20 N/mm ²	ASTM C580
Bond Strength:	7 days ≥ 2 N/mm ² (concrete failure)	ASTM D4541
Guardian HSEG (Base+Hardener)		
Tensile Strength:	7 days ≥25 N/mm ²	ASTM D638
Bond Strength:	7 days ≥ 2 N/mm ² (concrete failure)	ASTM D4541
Chemical resistance	(ASTM D543):	
Citric Acid 10%	Excellent	
Tartaric Acid 10%	Excellent	
Acetic Acid 5%	Satisfactory	
Nitric Acid 25%	Good	
Hydrochloric Acid 25%	Excellent	
Sulphuric Acid 50%	Very good	
Sodium Hydroxide 50%	Excellent	
Diesel Fuel / Petrol	Very good	
Sugar Solutions	Very good	
Lactic Acid	Very good	
Hydrocarbons	Very good	
Phosphoric Acid 50%	Very good	
Application Temperature:	5°C to 40°C	
Grouting Thickness	Min : 10 mm. Max : 50 mm	

3 Component Early High Strength Epoxy Grout

Note:

- The above data is typical under laboratory conditions @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.
- Strengths are typical of standard mix ratios.
- To obtain performance characteristics stated in this data sheet, the mixing ratio must be maintained.

CHEMICAL RESISTANCE

Guardian HSEG resists non oxidising mineral acids and salts, caustics, dilute oxidising acids and salts, plus some organic acids and solvents. Please refer to Guardian for more information.

MIX RATIO

Part A : Part B : Part C
= 5 : 1 : 19 by weight.

SUBSTRATE PREPARATION

Surface preparation is important. All surfaces should be dry, clean, free from standing water, grease, curing compounds, mould oils and all loosely adhering particles. Cement laitance should be removed by mechanical means. Roughen surfaces with chipping to ensure good bonding. Steel surfaces should be grit blasted to white metal. Concrete surfaces should be chipped so as to expose aggregates to ensure laitance and weak particles are removed.

PRIMING

For maximum adhesion of heavily filled mortars etc. the surfaces to be treated should be primed by mixing A & B in the packed ratio. Apply with a stiff brush, work in well.

For concrete surface with moisture content >4%, use **Guardian EAP** as primer.

Alternatively **Guardian EAP** can also be used as primer for wet & damp conditions.

Tack free time for **Guardian EAP** is approx. 3-4 hours @25°C.

MIXING

Mix component A and B thoroughly with a slow speed drill for 1-2 minutes. (Max 400 R.P.M.) Then add component C for the desired consistency and mix until a homogeneous mortar is achieved.

FINISHING

A smooth finish may be achieved before the grout reaches its setting time by spraying or brushing the surface with xylene, white spirit or epoxy grade thinner and then by using the steel trowel or wooden trowel level the surface.

APPLICATION

Whilst the primer is still tacky pour the material and trowel firmly into place. For large volumes apply in layers ensuring the previous layers have hardened and cooled. Contact Guardian for advise on difficult applications.

- If grouting in multiple layers, it is necessary to sprinkle a small amount of 2.5 mm aggregate over the first layer before the grout reaches its setting time. Before placement of 2nd layer brush out loose aggregates from the 1st pour. Another method is to scabble gently the top surface and make it rough when grout reaches near to its setting time.

CURING

- Cure time will depend on the ambient and substrate temperature. For the best results pour the grout and cure above 12°C
- The grouts setting time will be delayed and will not achieve the desired properties at temperatures below 5°C.
- For cold weather grouting please contact Guardian for assistance.
- Construct a shelter over the foundation to protect the work area from the elements particularly during cold, wet or very hot conditions.

3 Component Early High Strength Epoxy Grout

IMPORTANT NOTES

The minimum and maximum substrate application temperature should be 5°C and 40°C respectively. For additional information contact Guardian Coating Service Department.

PACKAGING

A+B+C = 25 kg. (Part A = 5 kg, Part B = 1 kg and Part C = 19 kg) premeasured sets or larger packaging is available upon request.

CLEANING

Clean all tools and equipment immediately with Guardian Cleaner.

STORAGE & SHELF LIFE

Store in dry conditions between 5-40°C. The shelf life is 12 months when stored correctly in unopened original containers.

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

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 TUV Nord.

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Guardian does not take responsibility nor need to defend others testing that does not achieve the published data.

The user must test the products suitability for the intended application and purpose. Guardian reserves the right to change the properties of the product.

Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advice offered.