

Structural Epoxy Adhesive / Fixing & Repair Paste

Guardian EAP is a two component, epoxy paste or pourable, structural adhesive/filler. It cures with minimal shrinkage at temperatures above 50C to a very strong, dense solid material. The mixed material is applied to a suitably prepared surface and quickly cures to form a complete impermeable repair/adhesive unaffected by many forms of chemical attack. It is supplied as a two pack colour coded material in pre-weighed quantities ready for on-site mixing and use. Conforms to ASTM C881-78 Type I Grade 3 Class B+C.

Guardian EAP is available in both pourable & paste grade.

USES & ADVANTAGES

For speedy and permanent patching repairs to concrete structures, bonding of precast concrete components, bridge bearings to concrete, and all repair work to concrete cementitious substrates where strength, impermeability to water and resistance to aggressive chemicals is essential, emergency repairs to concrete structures, sea walls and industrial floors in chemical handling and process areas. The thixotropic nature of **Guardian EAP** makes the product ideal for setting starter bars, dowels, holding down bolts and anchoring in general.

Advantages include:-

- Early development of initial hardness, minimizes maintenance disruption.
- Pre-weighed quality controlled materials ensure consistency and reduce risk of site errors.
- Two pack colour coding gives visual check on correct mixing.
- High early strength without shrinkage.
- Unaffected by a wide range of acids, alkalis and industrial chemicals.
- 3 to 4 times stronger than typical concrete.
- Excellent resistance to abrasion and impact.
- Natural grey colour sympathetic to aesthetic requirements.
- Two grades pourable & paste.
- Non sag. (paste), Easy to apply.
- Suitable for dry and damp (wet) surface.

PROPERTIES

Appearance:	Grey, when mixed (may yellow and/or darken when exposed to sunlight or certain chemicals)
Pot Life:	1.5 kg mixed at 30°C, 30 min.
Note:	To obtain maximum pot life, spread Guardian EAP into a thin (less than 10 mm.) layer immediately after mixing.
Initial Hardness:	4 hours.
Full Cure:	7 days, below 20°C the curing time will be increased
Setting Time (5mm):	Approx.30-40 min. (30°C)

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Guardian EAP	Paste	Pourable
Specific Gravity: (Mixed Approx.; kg/litre)	1.70	1.50
Compressive Strength (28 days) :		
BS 6319 Part 2	75-80 N/mm ²	65-70 N/mm ²
Flexural Strength: BS 6319 Part 3	30-40 N/mm ²	25-35 N/mm ²
Bond Strength to Concrete: (Concrete Failure)	≥2 MPa (both grades)	
Bond Strength to Steel:	10-15 MPa (both grades)	
Chemical Resistance:		
Citric Acid 10%	Excellent	
Tartaric Acid 10%	Excellent	
Sodium Hydroxide 50%	Excellent	
Diesel Fuel/Petrol	Excellent	
Sugar Solutions	Very Good	
Lactic Acid 10%	Very Good	
Hydrocarbons	Very Good	
Phosphoric Acid 50%	Very Good	

Data quoted is typical for this product and does not constitute a specification.

MIX RATIO

A : B = 2 : 1 by weight

Note: To obtain performance characteristics stated in this data sheet, the mixing ratio must be maintained.

SETTING TIMES

Guardian EAP setting time can be adjusted to meet specific requirements accelerating or retarding, for example, for precast segment gluing.

SUBSTRATE PREPARATION

All grease, oil, chemical contamination, dust, laitance and loose concrete must be removed by scabbling or light bush hammering to provide a sound substrate. Concrete must be at least 14 days old prior to treatment. Steel surfaces should be grit blasted to white metal. Surfaces which show any traces of oil must be degreased with a chemical degreaser prior to grit blasting.

MIXING

Care should be taken to ensure that **Guardian EAP** is mixed thoroughly. The hardener and the resin components should first be stirred separately to disperse any settlement. The entire contents of the hardener tin should then be poured into the resin tin and the two components mixed thoroughly using a low-speed drill and paddle for at least 2 minutes until a uniform colour is obtained

APPLICATION

Apply the mixed **Guardian EAP** with a notched trowel, putty knife, caulking gun, etc. depending upon the application.

Bonded surfaces should be held rigidly together until the **Guardian EAP** has set.

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ESTIMATING

Quantity Estimating Guide

Table indicates volume of **Guardian EAP** in ml/100 mm. bond.

Hole Diameter (mm.)	Volume of Grout for Bolt Diameter					
	12	16	20	25	32	40
20	25					
25	50	40	25			
32	80	70	60	40		
38		130	100	75	45	
45			150	130	100	45
50				180	150	90
62					280	225

CLEANING

All tools and equipment should be cleaned immediately after use with Guardian Cleaner. Hardened material can only be removed mechanically.

PACKAGING

1.5 And 6.0 kg. Two component packs.

STORAGE & SHELF LIFE

Guardian EAP has a shelf life of 12 months when stored in a dry place below 35°C in unopened containers.

HEALTH & SAFETY

Prolonged and repeated skin contact with epoxy resins and curing agents may cause dermatitis in persons sensitive to these products. Gloves, barrier creams, protective clothing and eye protection should be worn when handling these products. 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, flood with water for at least 15 minutes. If skin contact occurs, remove contaminated clothing and wash skin thoroughly.

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 TUV Nord.

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.