ABADUR-G3 LE

3-COMPONENT LOW EXOTHERMIC EPOXY GROUT

DESCRIPTION

A three-component pourable, Solvent free, epoxy grout based on a high grade epoxy resin and specially graded aggregates. The moderately low exothermic characteristic being designed in this material, has made it to be useful selection in hot weather and tropical climates. Once mixing, a flowable grout is produced for use in heavy duty application and difficult conditions. ABADUR-G3 LE is recommended to be applied in 50 to 150 mm thickness in temperatures spanning from +15˚c into +45 ˚c.

FIELD OF APPLICATION

- Under-grouting and bedding of base plates, bridge bearings, machine bases, seat base-plates for light and heavy machinery including heavy impact and vibratory machinery, reciprocating engines, compressors, pumps, presses, etc.
- Crane tracks
- Reinforcement

ADVANTAGES

- Low exothermic and suitable choice at hot and tropical climate applications
- Ready-to-mix, pre-batched units
- Excellent chemical resistance
- Rapid shrinkage free hardening
- High mechanical strength
- Good impact and vibration resistance
- Excellent self-leveling behavior
- Good bonding to most substrates

SURFACE PREPARATION

• All surfaces should be dry, clean, and free from standing water, grease, curing compounds, mold oils, all loosely adhered aggregates and cement particles, etc.

• Concrete should be old enough, if it is newly placed concrete then it needs to be 28 days old and to have reached its design strength.it is also needed the substrate to have structural humidity less than 4 percent.

• Concrete should have attained a minimum compressive strength of 21 MPa, higher strength concrete is recommended for optimum performance of grout.

• Chip the concrete surface so aggregates are exposed to ensure all laitance and weak particles are removed. Alternatively use a spray on surface retarder when placing concrete.

• Chamfer the edges of the concrete 45 degrees to 50 mm. width to avoid sharp corners which helps to reduce the potential for cracking.

• Shade the foundation from direct sunlight for at least 24 hours before grouting and 48 hours after grouting.

MIXING

• Before mixing ensure all the components are cool, shaded and dry. If not preconditioned store all components below 25°C for 24 hours before using.
• The temperature of grout, base plate and foundation are more important than the air temperature because they are directly related to the flow of grout.
• Add component A & B in a mixing vessel and mix under slow speed (RPM 400) for approximate 1 minute. Then add component C and continue mixing for about further 2 minutes until a flowing uniform grout is achieved.
• Avoid excessive mixing which will result in reduction of working time and heat generation.

APPLICATION

• Grouting operation should be done immediately after mixing completion, in less than 15 minutes. Grout should be applied continuously and from the appropriate height.
• While grouting the base plates ensure there is sufficient pressure head to maintain movement of grout.
• Base plates with a flat base pour the grout from one side through the other across the short dimensions.
• Drop pressure from a higher height may be required to fill larger dimensions and longer distances. In this case, it is recommended to use the Head Box. Head boxes are usually installed along the length and on one side of the foundation.
•the grout site should be designed in such a way that it is possible for air to escape out of the section under grout. Therefore, ensure entrapped air can escape when grouting closed areas.
• Where grout cannot flow and have smooth movement because of the length of pour pushing aids like steel chains, strips of plywood, etc. can be used.
• The base plate with anchor bolts, dowel, starter bar, etc. should be grouted first followed by the base plate.

TECHNICAL NOTES

• The hardening reaction of epoxy grout is exothermic and increasing the temperature of the grout in the mixing vessel will lead to loss of its efficiency. Therefore, always mix the amount of components together and apply in the first minutes after mixing.
•The nature of all epoxy-based resins is such that, depending on parameters such as viscosity, temperature in the cold season, etc., they may be accidentally solidified and look like water freezing, which is called crystallization. The crystallization phenomenon in epoxy resin materials is reversible and does not affect the quality of the epoxy mixture. In case of this situation, it is necessary to place the epoxy resin at a temperature of 50°C to 70°C to fully return to the original state.
Note: In cold seasons, to stabilize the physical condition of the material, it should be stored in an environment with a temperature of 30°C for 24 hours before consumption.
• In hot weather, the temperature of the components before mixing should be between 20 and 25 degrees Celsius. Otherwise, the Pot Life will be drastically reduced.
• If the height of the place being grouted is more than 150 mm, the grouting operation should be done in several stages and in accordance with the table of environmental conditions.
• Never dilute the mixture.

• Never expose the material to direct sunlight before mixing.
• Considering the expansion joint for the epoxy grout leads to the conduction of possible stored stresses there and greatly reduces the possibility of cracking.

APPLICATION CONDITIONS/LIMITATIONS

Substrate Temperature	+ 15°C - + 45°C
Ambient Temperature	+ 15°C - + 45°C
Material Temperature	+ 20°C - + 25°C Condition the material by also storing at this temperature for 24 hours before use.
Substrate Moisture Content	≤ 4% pbw
Dew Point	Substrate temperature during application must be at least 3°C above dew point to avoid condensation.

TECHNICAL PROPERTIES

Color (A:B:C)	Brown
Appearance	Part A: liquid Part B: liquid Part C: powder
Mixing Ratio (A:B:C)	3.64 :1: 24 (by weight)
Density (A+B+C)	2.25 ± 0.1 g/cm^3
Layer Thickness	Minimum grout depth: 50 mm Maximum grout depth: 150 mm

Compressive Strength
(According to ASTM C 579)

Curing time	+23°C
1days	~ 5 MPa
3 days	~ 75 MPa
7 days	~ 95 MPa

Flexural Strength
(According to ASTM C 580) ~ 28 MPa

Tensile Strength
(According to ASTM C 307) ~ 8 Mpa

Liner shrinkage <0.1%
(According to ASTM C 531)

Thermal compatibility NO LAYERING
(According to ASTM C 884)

Drying Time

Temperature	Touch dry	Over-coating	Full cure
+15 °C	16hrs	20hrs	13 days
+25 °C	12hrs	16hrs	7 days
+45 °C	8hrs	12hrs	4 days

Pot life

Material temperature	+15 °C	+25 °C	+45 °C
Pot life	100 min	60 min	35 min

PACKAGING
28kg set.

STORAGE & SHELFLIFE
The shelf life is 6 months if unopened, stored free from frost, moisture and direct sunlight.
Note: In cold seasons, to stabilize the physical condition of the material, it should be stored in an environment with a temperature of 30 ° C for 24 hours before consumption.

HEALTH & SAFETY
This product is Flammable. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the health:
1-Circulate adequate fresh air continuously during application and drying.
2-Use fresh air masks and explosion proof equipment.
3- Prohibit all flames, sparks, welding and smoking.
MSDS is available at ABADGARAN website.

TECHNICAL SERVICE
The ABADGARAN INTERNATIONAL GROUP Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.