Vetogrout *GA514*
Cable grout additive

Uses

- Post-tensioned bridge deck ducts.
- Pre-stressed structural element cables ducts.
- Slip-form silo tendon ducts..

Product Description

Vetogrout GA514 is a pre-blended powder admixture containing expansive agents which impart controlled expansion in the plastic state whilst minimizing water demand. The material is designed to allow uniform mixing and eliminates unwanted segregation and bleeding.

Advantages

- Plastic state shrinkage compensation.
- High early strength promotion.
- Increased concrete durability and permeability reduction.
- Compatibility with ordinary Portland cement.

Standards Compliance

➤ ASTM C494

Design Considerations

Vetogrout GA514 is tested using 50 mm cubes. The mixture design shall be based on the following to achieve required results:

➤ 6 Kg of Vetogrout GA514.

➤ 30 to 35 Liters of clean water.

➤ 100 Kg of ordinary portland cement.

Technical Data

Vetogrout GA514	Typical Values
Compressive Strength based on EN196	>20 N/mm² @ 1 day >40 N/mm² @ 7 Days >50 N/mm² @ 28 days
Fresh wet density	2 Kg/Liter
Expansion (EN 445)	up to 4%
Bleeding (EN 445)	<1% after 3 hours
Adhesion Strength to Concrete	>2 MPa
Fluidity (final) (EN 445 flow cone)	20 seconds after 30 minutes

Usage Instructions

Preparation

Several hours before grouting, the area should be flooded with fresh water. Immediately before grouting takes place, remove any free water.

Thoroughly clean all cable ducts. Flush all ducts formed without metal sheaths with water; after that, remove all surplus water. Seal cable anchorages before the duct grouting are carried out.

Mixing

For best results, use a mechanically powered grout mixer. Do not use a colloidal impeller mixer if sands/aggregates are being used. To enable the grouting operation to be carried out continuously, it is essential to provide a sufficient mixing capacity and labor on-site. Use a grout holding tank with provision to gently agitate the grout if required.

For a 6kg bag of Vetogrout GA514, add 30 to 35 liters of clean water (depending on the nature of cement) to 100kg of cement to achieve the correct consistency.

Accurately measure the water into the mixer. Slowly add the Vetogrout GA514 bag's total contents with the cement and mix continuously for 5 minutes. This will ensure that the grout has a smooth, even consistency.

Placing

Place Vetogrout GA514 mix within 20 minutes of mixing in annular gaps of up to 60mm thick. If needed, use a screw feeding pump such as a PFT ZP3 booster pump or equivalent.

Curing

Use standard curing practices as per ACI recommendation to cure any exposed surfaces of the placed mix but use a curing compound such as Vetocure XT425.

Cleaning

Clean tools and equipment with fresh water. Remove hardened material mechanically.

Sampling Procedure

1. All sampling procedures for Vetogrout GA514 are to be conducted within the confines of a temperature-controlled laboratory. The reactive agents within Vetogrout GA514 do not permit site sampling and transport. The procedure for sampling is to be as follows:

2. Select a full and unopened bag of Vetogrout GA514 from the batch allocated for site use and dispatched to the testing laboratory.

3. Mix the Vetogrout GA514 in the laboratory following the instructions listed on the product data-sheet.

4. All sampling shall be conducted using 50mm cube molds; any other size is not permissible.

5. When mixed, pour the Vetogrout GA514 into 50mm cube molds, treated with a release agent, in two lifts of 25mm each with a 60-second interval between pours. The Vetogrout GA514 shall not be tapped, but gentle tapping of the cube mold is permitted to promote air release.

6. Fill three 50mm cube molds with the Vetogrout GA514 for each curing time interval specified. Mold filling should be completed within 15 minutes of the end of the mixing cycle. The filled molds should be stacked three high on top of each other to provide conditions of restraint. Restrain the top mold either with a weighted metal plate or an empty cube mold.

7. Store the cubes at a 20°C + 2°C temperature for 24 hours in the laboratory. After 24 hours, place the cubes in a water curing tank maintained at a 20°C + 2°C temperature. Cure the cubes following the standard curing practices.

8. Cubes are to be crushed in calibrated compression testing apparatus with a loading rate not exceeding 0.2 - 0.4 N/mm2 per-second. Types of cube fractures are to be recorded. Three cubes are to be crushed for each curing time interval specified. Results are to be calculated and issued as an average..

Packaging & Coverage

Product	Pack Size	Yield
Vetogrout GA514	24 kg Bag	Refer to mix design.

Shelf Life & Storage

The original sealed bag of Vetogrout GA514 has a shelf life of 12 months provided it is stored clear of ground in a dry and shaded place.

Health & Safety

Vetogrout GA514 is alkaline and should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs, wash with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought. Vetogrout GA514 is non-flammable.

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