

EstogROUT UW

Non-Shrink Cementitious Grout For Under Water Installations

Description

EstogROUT UW is supplied as a ready to use powder. The addition of a controlled amount of clean water produces a free flowing grout. The grout exhibits exceptional resistance to 'washing-out' of the cement phase when placed in stationary or moving water.

EstogROUT UW is a blend of cement, graded fine aggregate and chemical additives which impart controlled expansion, water reduction and non 'wash-out' characteristics. The aggregate grading minimises segregation and bleeding whilst assisting the flow characteristics.

Uses

EstogROUT UW is used for free flow or pumped grouting applications underwater or in tidal zones. There will be no significant 'wash-out' of the cement phase. Applications include bridge columns, quay pillars, concrete piling, slipways and dams.

Advantages

- No risk of significant 'wash-out' of cement phase when placed underwater
- Displaces water effectively
- Shrinkage compensated
- High early and ultimate strength and exceptional resistance to freeze-thaw cycling ensure durability of the hardened grout
- Chloride free
- Pre-packaged needing only on-site addition of water

Standards Compliance

- **BS 6319**
- **BS 5075 : Part 1 : 1982**

Physical Properties

The following results were obtained at water: powder ratio of 0.18 at 20°C.

Compressive Strength, N/mm ² BS 6319 : Part 2 1 day 7 days 28 days	25 35 55
Setting Time, hours BS 5075 : Part 1 : 1982 Initial Final	2.0 – 2.5 4.0 – 4.5
Fresh wet density	Approximately 2200kg/m ³ dependent on actual consistency
Expansion characteristics	Controlled expansion occurs in the unset material to ensure that the grout, when cured, will continue to occupy its original volume within the confines of the void in which it was placed

Application Instructions

Preparation

The substrate surface must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut to a sound base. Substrates which are permanently immersed should be sand-blasted or cleaned with a high pressure water jet. Non-immersed or intermittently immersed substrates can be prepared using these techniques. Alternatively scabbling or bush hammering may be appropriate.

Formwork

The formwork should be constructed to be leakproof, as **EstogROUT UW** is a free flowing grout, using foam rubber strip or mastic sealant beneath the formwork and between joints. Coat all formwork with **Estoform** to enable easy formwork release.

Mixing and placing

Mixing

For best results a mechanically powered grout mixer should be used. It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.

Measure 4.5 to 5.0 litres of water for each 25 kg bag into the mixer. Slowly add the **EstogROUT UW** whilst mixing continuously. When all the powder is added mix continuously for 2 minutes ensuring a smooth even consistency is obtained.

Placing

Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process. Continuous grout flow is essential. The mixed grout should be poured or pumped through a flexible tremie tube to the lowest point in the formwork. Care must be taken at the start of the grouting operation to restrict the grout flow so that water is not entrapped. The tube may be raised as necessary to reduce any back pressure. It should not be raised above the surface level of the grout.

Curing

Curing will not be required in intermittently or totally submerged situations. However, when cast above water, exposed areas should be thoroughly cured with **Estocure** curing membrane, continuous application of water and/or wet hessian.

Cleaning

Because of its water resisting properties, equipment used for **EstogROUT UW** will be difficult to clean. The use of hot water for cleaning purposes will assist. Cured material can be removed mechanically or with Estop Acid Etch.

Limitations

EstogROUT UW must not be applied below 5°C.

Packing & Size

EstogROUT UW	25 kg bag
Yield	Approx 11 – 13 litres depending on water addition

Note: Allowance should be made for wastage when estimating quantities required.

Technical Support

Estop offers a comprehensive range of high performance, high quality of repair product for both new and existing concrete surfaces. In addition, the company offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Important Note

Estop products are guaranteed against defective materials and manufacture and are sold subject to its standard Terms and Conditions of Sale, copies of which may be obtained on request. Whilst Estop endeavors to ensure that any advice, recommendation, specification or information in may give is accurate and correct, it shall not, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.

Storage

EstogROUT UW has a shelf life of 12 months if kept in a dry store in sealed bags. If stored in high temperature and high humidity locations, the shelf life may be reduced.

Precautions

EstogROUT UW contains cement powders which, when mixed or become damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provides additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately — **do not** induce vomiting.

Fire

EstogROUT UW is non-flammable.

Additional Information

Estop manufactures and offers a wide range of complementary products, which includes waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available.