



Ebofix® Grout

Pre-Bagged, Non-Shrink Cementitious Grout
for Discrete Anode Anchoring

DESCRIPTION

Ebofix® Grout is supplied as a ready to use dry powder requiring only the addition of a controlled amount of clean water to produce a thixotropic non-shrink grout.

Ebofix® Grout is a high alkaline grout based on Portland cements and additives 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.

APPLICATIONS

The product is designed for use with most types of discrete anodes used in cathodic protection.

- Bridges
- Tunnels
- Parking garages
- Heritage structures
- Marine structures
- Steel framed buildings

** As with all galvanic protection systems, service life and performance is dependent upon a number of factors including reinforcing steel density, concrete conductivity, chloride concentration, temperature, humidity and anode spacing.*

FEATURES AND BENEFITS

- Expansion system compensates for shrinkage and settlement in the plastic state ensuring continuity with the substrate.
- Pre-packaged material overcomes potential on-site batching variations.
- Develops high early strength without the use of chlorides.
- High ultimate strength and low permeability ensure the durability of the hardened grout

SPECIFICATION

Performance specification

All anode grouting, where shown on the drawing, must be carried out with a pre-packaged cement-based product which is iron-free and chloride-free. It shall be mixed with clean water to the required consistency. The plastic grout must not bleed or segregate.

A positive volumetric expansion of up to 1% shall occur. The compressive strength of the grout must exceed 45N/mm² at 7 days and 60N/mm² at 28 days.

The storage, handling and placement of the grout must be in strict accordance with the manufacturer's instructions.

Supplier specification

All grouting where shown on the drawing must be carried out using Ebofix® Grout and used in accordance with the manufacturer's current data sheet.

INSTALLATION INSTRUCTIONS

Preparation

The hole shall be free from any deleterious material prior to grouting, the hole should be flooded with fresh water. Immediately before grouting takes place any free water should be removed.

Mixing and placing - Application Mixing

Ebofix® Grout should be mixed with a slow speed drill (400/500 rpm) and paddle. Place between 3.0-4.0 liters of drinking water, depending on required consistency, into a suitable mixing container and add one full 20kg bag of Ebofix® Grout and mix for three minutes until fully homogeneous.

Installation

Remaining water should be removed from the hole and the Ebofix® Grout injected by hand pump to the rear of the hole to avoid air entrapment, ensuring sufficient is placed to cover the entire length of the active Ebonex discrete anode. The thixotropic nature of Ebofix® Grout will prevent significant flow from vertical and overhead holes. Wet each Ebonex anode with clean water, but do not immerse for more than 10 seconds, before gently inserting into the hole. Ensure the vent pipe is unobstructed and that sufficient tail wire remains exposed to enable connection with the feeder wire.

Place the Ebofix® Grout within 30 minutes of mixing to gain benefit of the expansion system and allow to cure for a minimum of 24 hours, without physical disturbance. When cured the open end

PROPERTIES

Compressive strength:	25N/mm ² @ 1 day
(BS 1881: part 4 1970 flowable consistency)	45N/mm ² @ 7 days 60N/mm ² @ 28 days
Fresh wet density:	Approx. 2000kg/m ³ depending on actual consistency used
Chloride content:	Nil to BS 5075
Expansion	A positive expansion of characteristics: up to 1%



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of the gas vent network can be directed to a well-ventilated location.

Cleaning

Ebofix® Grout should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically.

LIMITATIONS

Low temperature working

When the air or contact surface, temperatures are 5°C or below on a falling thermometer, warm water (30-40°C) is recommended to accelerate strength development.

Normal precautions for winter working with cementitious materials should then be adopted.

High temperature working

It is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

1. Store unmixed material in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
2. Keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
3. Try to eliminate application during the hottest times of the day.

4. Make sufficient material, plant and labor available to ensure that application is a continuous process.

5. Water (below 20°C) should be used for mixing the grout prior to placement.

ESTIMATING

Supply Ebofix® Grout: 20kg bags

Yield Ebofix® Grout: 13 litres/20kg bag (approx.)

Allowance should be made for wastage when estimating quantities required.

STORAGE

Shelf Life

Ebofix® Grout has a shelf life of 12 months from the date of manufacture if kept in dry storage in the original, unopened bags.

Storage conditions

Store in unopened bags in cool dry internal conditions. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to less than 6 months.

PRECAUTIONS

Health and safety

Ebofix® Grout 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.

Fire

Ebofix® Grout is non-flammable.

ABOUT VECTOR

Vector Corrosion Technologies takes pride in offering technically advanced, cost effective corrosion protection solutions to extend the service life and improve the durability of concrete and masonry structures around the world. Vector has earned numerous project awards and patents for product innovation and is committed to a safe, healthy and sustainable environment.

For additional information on concrete preservation and sustainability, visit **WeSaveStructures.info**. For additional information or technical support, please contact any Vector office or our extensive network of international distributors.

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