VOGEL
SYSTEMS

Method Statement

CEMENTITIOUS WATERPROOFING

Table of Contents

SCOPE

The aim of this method statement is to provide and maintain effective quality control procedures and to execute the work in compliance to standard and good practice at all stages during the execution of cementitious Waterproofing at the site project.

The application of cementitious waterproofing

PURPOSE

The purpose of this method statement is intended to inform the consulting engineer how the work will be delivered on site associated with risks and precautions to be taken during working on site.

The purpose of this statement:

- To outline how the work will be achieved on site.
- To meet the drawings and specifications requirements.
- To predict possible problems.

SPECIFICATIONS CLAUSES

- Project specification.
- Approved shop drawing.
- Contract documents.

MATERIALS

- VogaPair-Seal
- VogaBond Latex
- Voga Flex
- Voga Hi-seal

VOGAFLEX S

VOGABOND LATEX

VOGAPAIR-SEAL

PERSONAL RESPONSIBILITIES

A full and detailed description of the roles and responsibilities of our staff is included within the Project Quality Plan. For the works as covered by this method statement, the following personnel have specific duties.

1. Technical office Engineer specific responsibility include:

• Responsible for ensuring that the various submittals are timely undertaken (Materials, method statements, workshop drawings, technical issues)
• Responsible for quotations as required (materials, subcontractors).

2. Site Engineer specific responsibility include:

• Ensuring that the project is managed in a safe manner and meets the requirements of the project documentation.
• Ensuring that contractors and suppliers achieve the on-site required standards.
• Shall refer to the QA/QC Department and the HSE Department for advice and guidance when required.
• Shall ensure that operatives comply with the relevant method statements, Toolbox Talks and general site briefings.

TOOLS & EQUIPMENT

- Paint Brushes/ Rollers

- Grinder

- Paint Sprayers

AS REQUIRED.

- Hand Tools

Trowel , Spatula or putty knife ,scraper ,hammer ..etc).

- Air compressor

AS REQUIRED.

CONSTRUCTION PROCEDURES

Surface preparation for waterproofing

1.Surface / substrate preparation is the most important for cementitious and reactive waterproofing system.

2.The concrete surface shall be clean and free from contamination such as dust, oil, grease, organic growth ….etc.

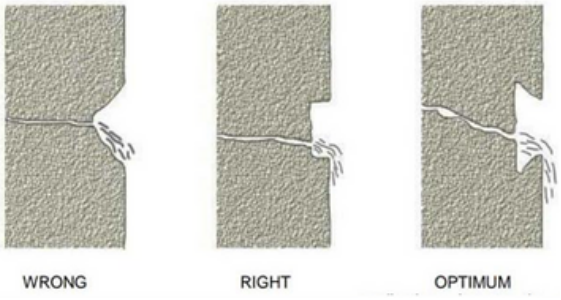
3.All loosely adhering particles such as mortar and cement laitance shall be removed.

4.The surface would be cleaned by brushing and finally soft brushing or compressed air. Cracks (if any) shall be repaired as recommended by the manufacturer by using grout VogaPair-Seal.

5.The corner fillet will be between any horizontal and vertical element by using mortar with adding Vogabond Latex.

6.Surface preparation is the most important for cementitious and reactive waterproofing system.

7.Cracks or fissures must be opened to a minimum depth of 4 cm and a width from 3 to 4 cm. In order to provide a good mechanical key, make a square-shaped groove; preferably dovetail to the surface to which the material is applied. Avoid a "V" shape, as shown in drawings application, dampen the surface before applying VogabondPair-Seal.



VOGAPAIR-SEAL

CONSTRUCTION PROCEDURES

Sealing leaks in cracks or joints

1.Prepare the surface removing the loose or unsound concrete from the crack or joint and cutting to a depth of 5 cm. VogaPair-Seal should be applied in small amounts that can be applied by hand.

2.Once VogaPair-Seal is mixed, form the mixture into the shape of a plug and hold it in your hand until it becomes warm and then, VogaPair-Seal firmly into the crack or joint but do not twist or overwork. Maintain pressure with the hand until it sets and finally remove any excess material with a trowel.

VOGAPAIR-SEAL

A

B

C

Sealing joints between concrete (slab & wall) or (wall &wall)

This is a common situation . Along the concave corners at least a 2 x 3 cm groove must be opened and filled with Vogabond Latex in the shape of a waterproofing cove.

VOGABOND LATEX

Sealing all coves

CONSTRUCTION PROCEDURES

Sealing pipes

Once VogaFlex S is mixed, form the mixture then seal around all pipes , VogaFlex S firmly into the crack or joint but do not twist or overwork. Maintain joints and seals with until it sets and finally remove any excess material with a trowel.

VOGAFLEX S

Sealing all pipes

CONSTRUCTION PROCEDURES

Cementitious Waterproofing Application

1.Substrate surface be thoroughly wetted/dampen.

2.Mix Voga Hi-seal®to a brushable slurry consistency using 5 parts powder to 2 parts clean water. Pour water into a clean suitable mixing vessel, then gradually add the powder into the water while mixing with a low speed paddle mixer until a consistency of thick oil paint is obtained. Only mix suitable quantities that can be applied within 20 minutes and stir mixture frequently. If the mixture starts to set, do not remix with additional liquid, simply re-stir to restore workability .
• For spray application the substrate shall be prepared in the same manner as of brush application.

3.Using a natural bristle concrete brush, coat the entire area using an aggressive circular motion and covering the entire surface area.

4.The recommended coverage for single or double coat applications may vary depending on local conditions such as the weather and physical properties of the concrete substrate. If necessary, on-site testing should be done previous to application by applying a small quantity or product (ex. one pail), measuring the area covered and calculating the coverage rate.

Applying the first layer

CONSTRUCTION PROCEDURES

5.Allow one to two hours for the surface application to dry.

6.Using a natural bristle concrete brush to apply the second coat , coat the entire surface using an aggressive circular motion and covering the entire surface area. The recommended coverage for the second coat is 0.7 kg/m² although it may vary depending on local conditions.

7.When the Voga Hi-seal application has set (roughly one to two hours from completion of application) wet the area. Keep the area damp for a minimum of 48 hours. If conditions allow extend the wetting for 7 days. Protect against sun, wind and rain for a minimum of 48 hours.

Applying the second layer

Notes :
- Do not acid etch .
- If surface is too smooth, it must be roughened slightly for better adhesion.

Filling of tank and testing

1.Fill the tank with water to its operable level – typically taken as the effluent invert – and let the tank stand undisturbed for 24 hours. Some water absorption into the interior concrete surface may occur, and the water level may drop as a result. Restore the tank to its initial water level after 24 hours, if necessary. Once the tank is refilled, the one-hour test duration may begin.

2.Before beginning a test, ensure the tank has reached sufficient strength to undergo the test. The concrete should reach at least 75% of its design compressive strength prior to testing. It is imperative that the concrete has developed enough tensile and compressive load capacity prior to inducing loads by vacuum.

3.Prior to beginning a watertightness test, perform a visual inspection of the tank to locate any potential issues that could cause problems during the test. These issues should be resolved before conducting a vacuum test on the tank.

Pass
• If the water level remains constant for the entire period, the septic tank passes the test.

Retest
• If the water level falls during the period, restore the tank to its initial water level. Once the tank is refilled, begin timing another one-hour test duration. The tank must maintain the water level for the entire one-hour period to pass the test.

Troubleshooting
• If at any time during the test period the water level drops, the tank may be repaired per the manufacturer's recommendations in accordance and the test procedure may be restarted from the beginning.

CONSTRUCTION PROCEDURES

Curing of waterproofing works

1.Manufacturer`s printed recommendations shall be followed for curing the waterproofing.

2.Curing shall be started after hardening 2nd coat of application.

3.Allow a minimum cure time of equivalent to 3 days with potable water.

RISKS

- Avoid any inhalation of vapours, avoid skin contact Wear protective gloves and protective goggles In case of skin contact, rinse immediately with soap and water In case of eye contact, bathe eyes with water at once, then consult a doctor. Observe the guidelines concerning the handling of epoxy resins and amines issued by the Employer's Liability Insurance Associations.

- As with all chemical products, care should be taken, during use and storage, to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product has fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Re-seal containers after use.

HEALTH AND SAFETY

- Make sure that the workers involved in the installation of the epoxy resin floor coating are experienced and well trained.
- Every stage of the installation must be supervised properly. Check all the routes of material transportation and remove any form of obstacle that could cause accidents. There should be frequent cleaning during working hours.
- Every equipment used must be maintained in accordance with legal requirements.
- Electrical connections should be handled by qualified and approved electricians.
- The workplace must be barricaded and well protected to prevent unauthorized personnel. A work permit must be issued to every person by the main contractor before work starts on the site.
- Appropriate loading and offloading equipment should be provided by the contractor. All the equip, eats should be certified and handled by a qualified operator.
- Keep a material safety data sheet to ensure that materials star handled well especially chemicals. Major spill kit available and personal protective equipment must be made available to every personnel must be worn at all times.

STORAGE

- Materials shall be stored in a cool and dry place and avoid putting in direct sun light and as directed by the materials manufacturer.
- Materials shall be placed in a way to avoid the direct contact with ground soil.
- Materials shall not be exposed to the fire or naked flames in any circumstances.
- Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

CONTACT INFORMATION

+201208160230 info@vogelsystems-eg.com vogelsystems-eg.com