

MasterSeal[®] 540

Flexible, polymer cement waterproofing slurry

**Method Statement & Installation
Procedure**

Section 1 – General Instructions

1.1 Background

Installation information contained in this procedure are as specific as possible, but cannot cover all variations in field conditions. If anticipated conditions do not permit following these guidelines, do not hesitate to call your BASF Representative.

IMPORTANT: READ THIS FIRST

BASF warrants the performance of this product only if the instructions of this document and other related BASF documents are adhered to in all respects.

1.2 High Temperature Working

The following recommendation is suggested as guideline for good working practices for temperatures above 35°C whenever using two parts cementitious polymer waterproofing products:

- 1.2.1 Store and place any unmixed materials in a cool and dry environment (preferably temperature controlled), avoiding exposure to direct sunlight.
- 1.2.2 If possible, try to avoid any application during the hottest times of the day. Arrange temporary shading and cover as necessary.
- 1.2.3 Make sufficient materials, labour and power supply available to ensure continuous application process.
- 1.2.4 Maintain all equipments that will be in use at cool environment to ensure that surfaces in direct contact with materials are in cool condition.

1.3 Equipment

The following list of equipment and necessities are recommended to be adopted as a minimum requirement. Protective Clothing:

- Protective overalls,
- Industrial gloves
- Goggles and Facemask, Safety glasses
- Ear plugs
- Dust masks.

Surface Preparation Equipment:

- Equipment to mechanically abrading the surface to remove laitance
- Industrial vacuum
- Regular and stiff bristled brooms etc
- Masking tape, paper and / or polyethylene for protection of adjacent areas.

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Installation Equipment:

- High intensity, temporary lighting with extension cord
- Electric Hand Drill Mixer
- Stiff brush

Section 2 – Surface Preparation and Treatment

2.1 Pre-Installation

The following checklist is recommended prior to starting the installation:

- Review in detail the current, published **Masterseal 540** Technical Datasheet.
- Inventory all materials ordered from BASF (Malaysia) Sdn Bhd, and find:

Masterseal 540	Part A	10.00 kg pack
Masterseal 540	Part B	26.00 kg pack
- Determine surface preparation requirements (i.e. sandblast, shot blast, scarify, etc.).
- Check that all necessary equipment is on the job site and that adequate electrical power is available for all power tools.
- Brief all installation personnel on application procedures and SAFETY requirements.
- Review Material Safety Data Sheets (MSDS) and have available at job site.

2.2 Surface and Material Preparation

Correct and thorough preparation is essential to ensure complete adhesion and water tightness that shall be maintained throughout the life of the material.

Correct surface preparation is critical for optimum performance. The performance of the coating is largely dependent upon a good bond to a strong concrete substrate. Lack of bond due to a weak surface may cause premature failure. The purpose of surface preparation is to remove any weak surface material or contamination that would impair bonding.

Surfaces should be structurally sound, clean and free from loose particles, oil, grease, moss, fungus growth, barnacles or any other contaminants.

Fillets should be provided at corners using a 4:1 sand cement mortar modified with an approved BASF Construction Chemical bonding agent.

Surface Treatment

Light to moderately contaminated surfaces which are covered with dirt or traffic soil, other than grease and oil, can be satisfactorily prepared by mechanical treatment. If the surface is contaminated with oil or grease, a detergent wash should be used prior to the mechanical treatment.

Strong, low-foaming detergents are recommended for this use. The detergent should be scrubbed vigorously into the surface with a brush or power scrubber and should then be thoroughly flushed with clean water before

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beginning further treatment. Multiple cycles of scrubbing and rinsing may be necessary for satisfactory results.

Heavily contaminated surfaces that have excessive caking of oil, grease, grime, earth, mortar or other materials may be encountered. Such conditions will prevent detergents from performing correctly. Caked deposits should be removed prior to any application of detergent. Thick-caked deposits (oil, grease, etc.) are best removed by scraping or chipping the area before detergent treatment. Animal fats and vegetable oils should be removed by scrubbing with a strong soap solution prior to further treatment.

The laitance and curing compound that may present on freshly placed concrete surfaces and sometime older surfaces must be removed to ensure a satisfactory bond.

The use of wet grit blasting or high pressure water jetting (approx 150 bars) or such other effective methods are recommended to remove cement laitance, loose particles, moss, fungus growth, barnacles and other contaminants from the surface.

Note: *Upon completion of all surface treatment and repair, the concrete should be thoroughly vacuumed to remove all dust and dirt from the substrate area. A successfully prepared concrete substrate will be sound, clean and be free from all contaminants. All "hollow" areas will have been removed and depressions, spalled areas or cracks pre-filled.*

All surface preparation should be completed prior to proceeding with the coating installation.

Section 3 – Installation

3.1 Mixing

Correct material mixing and equipment is essential for maximum product performance.

- 3.1.1 Mechanical mixing is necessary. A slow speed (600rpm) heavy duty electric drill with a wing type paddle is recommended.
- 3.1.2 Place approximately 75% of Part A (liquid) into a clean pail. Keeping the mixer running, add the Part B (powder) slowly.
- 3.1.3 It is necessary to add the powder gradually in order to avoid formation of lumps.
- 3.1.4 Mix for at least 3 minutes to get a lump-free homogenous mix.

Remarks:

While continuing to mix, add all of the remainder of Part A if applying on a horizontal surface or a part of it if applying on vertical surface till the required consistency is obtained.

- 3.1.5 The mixed material is usable only within its pot life. Refer to the related Technical Datasheet for details.
- 3.1.6 Keep the mixed **Masterseal 540** in homogenous state by mixing frequently during application.

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3.2 Placing

It is extremely important that the area being treated is shaded from direct sunrays and wind to prevent rapid drying of the coating.

- 3.2.1 It is essential that the surface to be treated with **Masterseal 540** is pre-soaked with clean water and should be damp during application.
- 3.2.2 Apply unbroken coat of **Masterseal 540** evenly with a stiff brush or by spray onto the prepared surface.
- 3.2.3 For brush application, short stiff brush preferably with width of 120 - 200 mm is recommended.
- 3.2.4 Apply the material to the recommended application rate. The total film build up should be 1 – 2 mm on vertical and overhead surfaces and 1 – 3mm in case of horizontal surfaces, which should be built up in at least 2 coats.
- 3.2.5 Any subsequent coat shall be applied after the previous coat has dried. The interval of each coat should be 1-2 hours minimum.
- 3.2.6 To avoid pinholes, apply the second brush coat at right angles to the direction of first coat.

3.3 Curing

Slow drying of **Masterseal 540** membrane ensures homogenous curing and high waterproofing characteristics. Treated surface must be protected against rapid drying due to high temperatures or wind.

3.4 Cleaning

Clean the tools and equipments immediately after use with water before the waterproofing coating hardens.

3.5 Ponding Test

Ponding Test can be carried out after 24 hours of application if required, within maximum test duration of 48hrs. After 48 hours water needs to be removed.

Section 4 – Responsibility and Variable

The technical information and application advice given in this BASF (Malaysia) Sdn Bhd publication is a general proposal for the application of **Masterseal 540** based on present state of our best scientific and practical knowledge. As the information is of a general nature no assumption can be made as to a product suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

Prepared by,
Stephanie Low
CS Technical

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STATEMENT OF RESPONSIBILITY

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NOTE

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Master Builders Solutions Ltd.,Co.

Level 11, Saigon Trade Center, 37 Ton Duc Thang, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam

Tel: +84 329 702 998

Register number: 0316341574

Website: <https://www.master-builders-solutions.com/vi-vn>