

HIGHSEAL MP

Complete Waterproofing and Repair by Crystallization

DESCRIPTION

HIGHSEAL MP is a surface applied material which waterproofs and repairs concrete in-depth. Available in grey or white, it is a complex blend of high quality cements, aggregates and complex active chemicals.

When HIGHSEAL MP is applied to a concrete surface, the active chemicals combine with free lime and water present in the capillary tracks to form insoluble complex crystalline structures.

These crystals block the capillaries and any minor cracks in the concrete to prevent any further ingress of water even if it is under pressure.

Highseal MP is a multi-purpose product which can be used as a tanking slurry, primer, render or by addition of high quality aggregate as a Microconcrete.

ADVANTAGES

- Multi-purpose.
- Needs only the addition of clean water.
- Waterproofs.
- Protects against aggressive water and sea water.
- Suitable for potable water structures.
- Protects against positive and negative water pressure.
- Fibre reinforced.

USE ON

- Basement retaining wall.
- Concrete slabs.
- Construction joints.
- Water retaining structures.
- Swimming pools.
- Waste water treatment.
- Sea walls.

TECHNICAL INFORMATION

Binder	Ordinary Portland Cement
Colour	Grey/White
Size of Aggregate	0 – 0.6mm
Pack Size	20kg
Water Requirement	5 : 2 (powder : water) for slurry or primer
Setting time	60 mins. (approx)
Pot Life	1 hour
Storage & Shelf Life	12 months from date of manufacture, when stored unopened in dry conditions.
VOC Content	Nil

TEST RESULTS

DETERMINATION OF WATER PERMEABILITY DIN 1048: PART 5:1991

Control Specimen (without surface coating)				Test Specimen (with surface coating HIGH SEAL 200)		
Specimen ID	1	2	3	4	5	6
Maximum depth of Water penetration (mm)	48	47	45	Nil	Nil	Nil
Mean maximum depth of water penetration (mm)	46.7			Nil		

TESTING OF PHYSICAL PROPERTIES

Test Description	Unit	Test Method	Age/ Days	Specimen Results			Average
				1	2	3	
Pull Off Strength	(N/mm ²)	BS 1881-207	28	0.401	0.400	0.400	0.400

Note: The above technical information is based on controlled laboratory conditions. However, there may be variation in yield and coverage depending on the ambient weather and site conditions.

DIRECTIONS

Preparation

All concrete to be treated with HIGHSEAL MP must be clean and have an open capillary system. Remove dirt, grease, laitance etc.

Faulty concrete in the form of cracks, honeycombing, etc. should be chased out and coated with HIGHSEAL MP and filled with HIGHSEAL MP concrete repair mortar.

Surfaces must be carefully pre-wetted before application of HIGHSEAL MP. The surface must be damp not wet.

Use as a tanking slurry/primer.

Mixing

Put clean water in a clean mixing vessel, add the powder whilst mixing until the product has a consistency of thick gloss paint.

Application

If applying by brush, two coats are required, second coat at right angles to the first coat.

If spraying one good even coat is usually sufficient.

COVERAGE

Concrete to be back filled in foundations or bridge abutments.

One coat 0.7 kg/m²

Second coat 1.0 kg/m².

Water retaining Structures and internal concrete surfaces.

2 coats each @ 0.75 kg/m².

Concrete slabs

Hardened concrete – Apply one coat @ 1.5kg/m².

Fresh Concrete – Trowel apply when concrete has reached initial set 1 kg/m² or apply dry powder as dry-shake and trowel in @ 2kg/m².

Construction joints apply as slurry or dry powder immediately prior to placing next list or bay of concrete @2kg/m².

Use as a Render – Usage 2kg per mm per m².

Mixing

Put clean water into a clean mixing vessel and add powder with mechanical mixing until the product is a slump free trowelable consistency.

Application

Apply primer coat to surface to be repaired, wait until primer has stiffened then apply render in layers maximum 20mm thick allowing each layer to set firmly before application of subsequent layers.

Note: if material stiffens do not add water just re-mix, if re-mixing does not achieve original consistency discard and re-mix fresh material.

Use as a Microconcrete

Usage dependant on aggregate size approx. 1.5kg per sq. m + aggregate.

Mixing

Put clean water into a clean mixing vessel and with mechanical stirring add Highseal MP blended 3 : 1 with approx 2 – 5mm aggregate until a just flowable homogeneous mixture is achieved.

Suitable aggregates are silica, quartz, basalt, copper slag or aluminium oxide, do not use limestone.

Application

Erect a suitable demountable shutter/formwork around the area to be repaired. Mix the material and pour into place until the formwork is filled. It is important that no more than 30 mins. Is left between pours.

Leave formwork in place for as long as possible before striking.

Note: The mixture must not be used if temperature is above 30°C. In tropical conditions use iced

Water.

PRECAUTIONS

Application of the HIGHSEAL MP should be done according to the procedure mentioned in this technical data sheet. We will not be held responsible for any claim arising out of non-performance of the product due to incorrect application procedure or usage of product for non-recommended purpose.

Please contact technical team for more details on application of HIGHSEAL MP for any purpose other than mentioned above or on surfaces with other special construction additives.

HEALTH AND SAFETY

This product contains cement, and contact with skin may cause irritation. It should not be inhaled, and a properly designed and maintained face mask should be used whilst handling, pouring and mixing the powder. Avoid contact with the product by working carefully, using a barrier cream and wearing protective gloves. If any contact does occur, wash thoroughly with soap and water. Use eye protection. Avoid contact with eyes, if such contact occurs irrigate with water for 20 minutes and seek medical advice.

If mistakenly ingested, drink plenty of clean water and seek medical advice.

TECHNICAL SERVICE

The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

DISCLAIMER

To the best of our knowledge and belief, this information is true and accurate, but as conditions of use and any labour involved are beyond our control, the end user must satisfy himself by prior testing that the product is suitable for his specific application, and no responsibility can be accepted, or any warranty given by our Representatives, Agents or Distributors. Products are sold subject to our Standard Conditions of Sale and the end user should ensure that he has consulted our latest literature.

