

MasterSeal 550

Acrylic reinforced cementitious, flexible waterproof coating

MATERIAL DESCRIPTION

MasterSeal 550 is a two-component acrylic modified cementitious coating that requires only on site mixing to form the ideal product to waterproof concrete, masonry, and most other construction materials.

Simply applied by stiff brush, roller, or trowel, it forms a waterproof, flexible coating. **MasterSeal 550** provides an effective barrier to waterborne salts and atmospheric gases. Fluid applied, **MasterSeal 550** provides a hard wearing, seamless, waterproof membrane for roofs and foundation protection.

TYPICAL APPLICATIONS

- As a waterproof coating for roofs, balconies and parapet walls.
- To provide protection to concrete surfaces from carbonation and chloride attack.
- For waterproofing and protection against brackish water.
- As a waterproof lining for water retaining structures.
- To reface and even out variations in concrete surfaces.
- For coating seawater channels.
- Sealing and coating tie bar holes to ensure watertightness.
- To provide foundation protection.
- As a backing to marble and granite to prevent water ingress and thus alleviate surface staining.
- For use on pedestrian walkways in marine areas.

PACKAGING

MasterSeal 550 is available in 20kg double pack.

MasterSeal 550 Liquid = 5kg (Part A)

MasterSeal 550 Powder = 15kg (Part B)

MasterSeal 550 is available in standard colour Grey.

ADVANTAGES

- Waterproof.
- Excellent adhesion. Bonds to porous and non-porous surfaces.
- Flexible.
- Non-toxic suitable for contact with potable water.
- Suitable for light pedestrian traffic.
- Breathable - whilst repelling water, allows substrate to breathe.
- High resistance to chloride ion diffusion.
- Unlike conventional coatings which require a 7-28 day cure of concrete, **MasterSeal 550** can be applied to 24 hour-old concrete thereby giving immediate protection

COMPOSITION

MasterSeal 550 is composed of specially selected cements, silica sand and reactive fillers supplied in powder form together with a liquid component of blended acrylic copolymers and wetting agents.

TYPICAL PROPERTIES*

Density	1826kg/m ³
Toxicity	Non-toxic - Suitable for use in contact with potable water
Initial surface absorption	>95% reduction against control
Chloride ion diffusivity	Not measurable after 24 months of testing
Moisture vapour transmission (equivalent air layer thickness)	SD < 1.5m (839µm dft)

STANDARDS

WRAS - "Suitable for use in contact with potable water" - BS 6920 : 2000 BS 476: Part 6 : 1989 - Fire tests on building material & structures - Method of test for fire propagation for products.

CHLORIDE ION DIFFUSIVITY

MasterSeal 550 provides an effective barrier to waterborne salts such as chlorides and sulphates. *Independent assessment has shown that even after 12 months constant immersion the chloride ion diffusion coefficient could not be measured for **MasterSeal 550**.

CHEMICAL RESISTANCE

MasterSeal 550 has outstanding wear and weather resistance and good resistance to gasoline, diesel oil, sodium hydroxide, calcium chloride, de-icing salts. **MasterSeal 550** coated surfaces exhibit good resistance to mild acids.

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ANTI CARBONATION COATING

MasterSeal 550 is an extremely effective barrier to atmospheric acidic gases which cause carbonation in concrete structures. **MasterSeal 550** at an applied rate of 1.8 kg/m² gives an equivalent air layer thickness for carbon dioxide diffusion (R) of 92 metres. The accepted minimum value for R is 50m. Testing to confirm this was carried out independently by Taywood Engineering 2005. A report is available on request.

APPLICATION PROCEDURE

Surface preparation:

As with all coating systems, surface preparation is of prime importance. Remove all grease, oil, dust, residual curing compound, mould release agent or other contaminant that could impair adhesion. Laitance should preferably be removed by light sweep blasting or hydro jetting. Mechanical wire brushing may be appropriate for small areas. Spalled concrete should be cut back to sound concrete and made good with a suitable cementitious repair mortar from our MasterEmaco Range. Conventional concrete curing compounds should be removed before application. The exception to this is when **MasterKure 181** has been used. Roofing tiles should be firmly bedded and grouted before application.

MIXING

MasterSeal 550 is supplied in premeasured units and should be mixed on site utilising clean containers. Slowly add the powder to the liquid and mix, using a slow speed drill fitted with a suitable paddle. MIX AND USE. Do not mix more material than can be used in one hour.

NOTE: Although **MasterSeal 550** is supplied in premeasured packs, part packs can be used by mixing 2 volumes of powder to 1 volume of liquid. Mix thoroughly and keep mixed during application.

DO NOT RE-TEMPER WITH WATER.

APPLICATION

Do not apply to dry concrete. Saturate concrete surfaces with clean water whilst still visibly damp, but free of standing water, apply, using a short, stiff bristle brush or roller. Trowel application can be undertaken as necessary. For heavy 6-10mm depressions, honeycombs etc. use less gauging liquid and mix to the desired consistency. Where more than one coat is found necessary to achieve the desired thickness, apply the second or subsequent coats after the previous coat has dried.

It is recommended, for general resurfacing, that each coat should be a minimum of 1mm thick. Spray application is recommended for large areas, details of suitable equipment can be provided by Master Builders Solutions' Technical Service Department.

COVERAGE

1.826 kg / m² at 1 mm thickness.

SPECIFICATION CLAUSE

All exposed concrete surfaces are to be coated with MasterSeal 550, a two-component reactive polymer composite. The material shall be mixed and applied fully in accordance with the manufacturer's instructions. The cured coating shall have the following diffusion properties. Chloride ion diffusion:	Not measurable after 24 months of testing
Moisture vapour transmission (equivalent air layer thickness)	SD < 1.5m (800µm dft)

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STORAGE

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. Shelf life is 12 months from date of manufacture when stored in undamaged, unopened packaging.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Master Builders Solutions' Technical Services Department.

SAFETY PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention.

NOTE

Technical support, where provided, does not constitute supervisory responsibility. For additional information contact your local MB Construction Chemicals Solutions South Africa (Pty) Ltd representative. Master Builders Solutions shall not be liable for technical advice provided.

MB Construction Chemicals Solutions South Africa (Pty) Ltd reserves the right to have the true cause of any difficulty determined by accepted test methods. Undertaking such tests is not, and shall not be deemed to be, an admission of liability or an assumption of any risk, loss, damage or liability.

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions South Africa (Pty) Ltd are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

* Properties listed are based on laboratory controlled tests.

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