

# MasterSeal® 550

Acrylic reinforced cementitious, flexible waterproof coating

## DESCRIPTION

**MasterSeal 550** is a two component acrylic modified cementitious coating that requires only on site mixing to form the ideal product to waterproof and resurface 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

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

## PACKAGING

**MasterSeal 550** is available in 20kg double pack.

**MasterSeal 550** is available in three standard colors : Light Grey, White and 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 <sup>3</sup>
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 vapor transmission (equivalent air layer thickness):	SD < 1.5m (839µm dft.)

Tensile Strength (ASTM D 412)	>4 Mpa
Bond strength ASTM D4541	>2 MPa
Depth of Water Penetration @ 7 Bar (DIN 1048)	nil
Crack Bridging Availability (ASTM C 836)	3mm
Abrasion Resistance (ASTM D 4060) (CS 17 Wheel, 1000 g weight, 1000 cycles)	<180 mg

## STANDARDS

BS 6920 : Part 1 2014 complies with the requirements for use in potable water application

BS 476: Part 6 : 1989 - Fire tests on building material: & structures - Method of test for fire propagation for products.

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## 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.

## 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/m<sup>2</sup> gives an equivalent air layer thickness for carbon dioxide diffusion (R) of 92 meters. 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, mold 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 such as **MasterEmaco S488**. 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 utilizing 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's Technical Service Dept.

## COVERAGE

1.826 kg / m<sup>2</sup> 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 vapor transmission (equivalent air layer thickness)	SD < 1.5m (800µm dft.)

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## NOTE

Where subsequent tiling works are to be carried out on vertical surfaces, contact the local Master Builders Solutions representative for advice.

## 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.

## STORAGE

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. 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's Technical Services Department.

## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local Master Builders Solutions representative.

Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All Master Builders Solutions Products are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health and safety standards of ISO 9001 and Master Builders Solutions ESHQ recommendations.

\* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC-Group in many countries

## CONTACT

Should you require any further information, please do not hesitate to contact us:

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### Disclaimer:

In view of widely varying site conditions and fields of application of our products, this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with Master Builders Solutions and possible resulting damages are in the sole responsibility of the customer.

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