

# MasterSeal<sup>®</sup> 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.

**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 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 watertightness.
- 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.
- For waterproofing of wet areas under tiling.
- As a waterproof and protection coating on top of spray polyurethane foam roof insulation.

### 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
- White color has high solar reflectivity index (SRI) to prevent heat island effect on roofs

### PACKAGING AND COLORS

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

**MasterSeal 550** is available in three standard colours: J-Light Grey, K-White and H-Dark Grey.

### STANDARDS

BS 6920: Part 1 2000 - Suitable for use in contact with potable water.

### TYPICAL PROPERTIES\*

|  |  |
|--|--|
| Density  | 1826 kg/m <sup>3</sup>                                     |
| Toxicity BS 6920   | Non-toxic - Suitable for use in contact with potable water |
| Chloride ion diffusivity   | Not measurable after 24 months of testing                  |
| Depth of water penetration under pressure BS EN 12390 Part 8: 2009 | Nil  |
| Liquid water permeability BS EN 1062-3: 2008                       | <0.1 kg (m <sup>2</sup> xh <sup>0.5</sup> )                |
| Carbon dioxide permeability BS EN 1062-6: 2002 Method A            | >50 m  |
| Equivalent air layer thickness (SD)                                |  |

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## APPLICATION GUIDELINES

### 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 such as **MasterEmaco S 488**. 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.

### 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 co-efficient could not be measured for **MasterSeal 550**.

### Chemical resistance

**MasterSeal 550** has outstanding wear and weather resistance and good resistance to 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 m. The accepted minimum value for R is 50 m. Testing to confirm this was carried out independently by Taywood Engineering 2005. A report is available on request.

## 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.

## PLACING / 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 6-10 mm 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 1 mm thick. Spray application is recommended for large areas, details of suitable equipment can be provided by BASF's Technical Service Dept.

### Notes

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



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# MasterSeal<sup>®</sup> 550

## COVERAGE / YIELD

1.8 kg / m<sup>2</sup> at 1 mm thickness.

## STORAGE AND SHELF LIFE

**Part A (powder):** Shelf life is 12 months from date of manufacturing in unopened original bags.

Product must be kept out of direct sunlight, in a dry, cool place, stored clear of the ground on pallets. Avoid excessive compaction.

**Part B (liquid):** Shelf life is 9 months from date of manufacturing in unopened original containers.

Product must be kept out of direct sunlight and in a dry, cool, preferably air-conditioned warehouse below 35°C temperature. Store clear of the ground on pallets. Do not stack pallets.

## HEALTH AND SAFETY

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.

## QUALITY AND CARE

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.

\* Properties listed are based on laboratory controlled tests.

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### NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF, are responsible for carrying out procedures appropriate to a specific application.

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