

# MasterSeal<sup>®</sup> 581 (formerly known as Thoroseal)

Waterproof polymer cement slurry

## DESCRIPTION

**MasterSeal 581** is a cement based waterproofing material that forms a brushable slurry when mixed with specified quantity of water, for coating on to prepared concrete and masonry surfaces.

The coating cures to form a water impermeable membrane with excellent adhesion to the substrate.

For improved adhesion and performance, **MasterSeal 581** can be mixed with a solution of acrylic based polymer such as **MasterSeal 600** (formerly Thoro Acryl 60). Consult a Master Builders Solutions representative for advice.

## RECOMMENDED USES

**MasterSeal 581** is designed to be used as an effective waterproofing membrane on a variety of substrates. Applications include:

- waterproof coatings to the internal faces of water tanks, sumps, reservoirs, planter boxes etc., before tiling or other surface finishing;
- treating terraces, balconies, kitchen & toilet floors as a sandwich treatment, to prevent water ingress.

## FEATURES AND BENEFITS

- **Resistant to weathering** – Suitable for use on both exterior and interior surfaces.
- **Permeable to water vapours** – Allows surface to breathe, preventing buildup of moisture below the membrane.
- **Brushable consistency** – Easy to apply by brush or spray.
- **Can be polymer modified** – Improved bond strength on a variety of substrates and improve mechanical properties.
- **Nontoxic** – Can be applied on surfaces in contact with drinking water.
- **Prevents water ingress** - suitable for both positive and negative hydrostatic pressure

## PROPERTIES

Tensile strength (ASTM C190-77) @ 28 days	~3 N/mm <sup>2</sup>
Bond to concrete (tensile bond)	~2.9 N/mm <sup>2</sup>

Shore A Hardness, 7 days, (Fed. Spec.)	35
Coefficient of thermal expansion (ASTM C531)	5x10 <sup>-7</sup> m/mm/°C
Permeability (ASTM E96)	12 Perms
Fungus resistance, 21 days (Fed, Spec. TT-P-29B)	No growth
Accelerated weathering - 5000 hr. (ASTM G26-77)	No failure
Supply form	Powder
Colour	Grey
Density of mixed material	1.9kg/L
Pot Life @ 20°C	1 hour (approx.)
@ 30°C	½ hour (approx.)
Application temperature	>5°C

## APPLICATION

### Surface preparation

Correct substrate preparation is critical for optimum performance.

Surfaces should be structurally sound, clean, and free from loose particles, oil, grease, or any other contaminant.

Cement laitance, loose particles, mould release agent, curing, and other contaminants must be removed by wet grit blasting, high pressure water jetting (approx. 150 bars) or such other effective methods. Water soaked substrates should be allowed to dry before application.

Fill surface irregularities such as blowholes honeycombs etc., with a **MasterEmaco** repair mortar to achieve a smooth and level surface.

Dampen the prepared substrate with clean water before applying **MasterSeal 581**.

### Mixing

Mechanical mixing is necessary. A slow speed (300 rpm), heavy-duty electric drill with a helical paddle is recommended. Place approx. 75% of water in a clean pail. Keeping the mixer running, add **MasterSeal 581** slowly. Mix for at least 3 minutes to get a lump-free homogenous mix. While continuing to mix, add the remaining 25% of water or a part thereof until the required consistency is achieved.



The Chemical Company

# MasterSeal® 581

Typical water demand: 4.8 to 5.6L/25 kg

**MasterSeal 600** can be used to polymer modify the **MasterSeal 581** to improve its bond strength and mechanical properties, dilute **MasterSeal 600** in the ratio of 1 part polymer and 3 parts water and use this as the mixing water.

## Placing

It is extremely important that the area being treated is shaded from direct sun and wind to prevent rapid drying of the coating. Do not apply in rain or when rain is expected within 2 - 3 hours.

Apply **MasterSeal 581** evenly with a stiff brush or by spray, onto the prepared surface, to give a continuous film. Apply in at least two coats, the second coat applied at right angles to the direction of the first and after an overnight's cure.

In case of large areas, **MasterSeal 581** can be spray-applied using a worm-gear type of spray equipment. For spraying on vertical or overhead surfaces, use the correct nozzle and adjust the viscosity of the mixed material to prevent sagging. It is necessary to carry out a few trials to adjust the viscosity for spraying.

## CURING

Slow drying of **MasterSeal 581** membrane ensures homogenous curing and high waterproofing characteristics.

**MasterSeal 581** must be protected against rapid drying due to high temperatures or wind. Curing by wet burlap, plastic sheet or BASF Construction Chemicals approved curing compound is recommended.

## ESTIMATING DATA

The minimum recommended coverage is 2.5 kg of mixed material per m<sup>2</sup> to obtain approximately 1mm thick dry film build in 2 coats. Actual coverage depends upon the method of application, the texture and porosity of the surface.

## PACKAGING

**MasterSeal 581** is available in 25 kg bags.

## SHELF LIFE

**MasterSeal 581** can be stored in tightly sealed original packaging for 12 months from date of manufacture, if kept dry and at constant temperature.

## PRECAUTIONS

For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

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## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this BASF Construction Chemicals publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's 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.

## 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 Construction Chemicals, are responsible for carrying out procedures appropriate to a specific application.

## BASF Construction Chemicals offices in ASEAN

Singapore	Malaysia	Indonesia	Thailand	Vietnam	Philippines	Hong Kong
Tel: +65-6861-6766	Tel: +60-3-5628-3888	Tel: +62-21-526-2481	Tel: +66-2-769-8564	Tel: +84-650-374-3100	Tel: +63-2-811-8000	Tel: +852-2408 4400
Fax: +65-6861-3186	Fax: +60-3-5628-3776	Fax: +62-21-526-2493	Fax: +66-2-769-8584	Fax: +84-650-374-3200	Fax: +63-2-838-1025	Fax: +852-2408-4401

Website: [www.ap.cc.basf.com](http://www.ap.cc.basf.com)