

# MasterSeal<sup>®</sup> 583

A one-component cement based coating for waterproofing concrete and masonry

## DESCRIPTION

**MasterSeal 583** is a blend of Portland cements, selected aggregates and spray dried polymer modifying agents. The aggregates are carefully graded. When mixed with clean water to a slurry consistency, **MasterSeal 583** can be applied easily with a stiff hand brush, broom or spray equipment.

## RECOMMENDED USES

**MasterSeal 583** applications include:

- waterproof coating for concrete and masonry.
- waterproofing of floors and walls in showers, bathrooms, lavatories and other sanitary rooms, before the placing of decorative finish.
- waterproofing basements, foundations, water reservoirs, etc.

## FEATURES AND BENEFITS

- **Water vapour permeable** – Durable, it resists positive and negative water pressure, making it suitable for interior use, above and below ground level.
- **High bond strength** – Becomes integral part of the substrate.
- **Good application rate** – Cost effective.
- **Easy to apply** – Mixed with water only; can be brushed or sprayed; can be applied on a damp substrate; equipment cleans simply with water.
- **Cement based and solvent free** – Environmentally friendly.

## PROPERTIES

Compressive strength White Grey	35 N/mm <sup>2</sup> 45 N/mm <sup>2</sup>
Supply form	Powder
Wet density White Grey	2.08 kg/dm <sup>3</sup> 2.06 kg/dm <sup>3</sup>
Pot Life @ 20°C @ 30°C	1 hour (approx.) ½ hour (approx.)
Application temperature	>5°C

Tests carried out under temperature controlled conditions of 21°C. After 28 days. Curing: 7 days water-immersed, 21 days ambient.

## APPLICATION

### (A) SUBSTRATE PREPARATION

The surface to be coated must be clean and sound. Remove all traces of formwork, release agents, previous coatings, laitance and any contaminants that may affect the bond adversely.

Suitable cleaning methods include high-pressure water treatment and grit blasting. **NOT** recommended are chemical cleaning treatments of aggressive percussive methods such as scabbling. After the above treatment, surfaces must be thoroughly washed with clean potable water to remove all dust and loose particles.

Cracks and bolt holes must be cut out and filled solid with **MasterSeal 590** (Waterplug), **MasterEmaco S120** (Thoro Structurite) or **MasterEmaco S130** (Thoro Structurite 300) prior to the application of **MasterSeal 583**.

### (B) 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 583** 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.

### (C) MIXING

Mixing liquid: ± 5.4 litres (5.0 – 5.8) clean water / 25 kg powder

Blend 25 kg of powder into approximately 5.4 litres of clean water. The quantity may vary slightly depending upon the ambient conditions. In all instances, it is important that the material is mixed to the correct consistency.

Keep the quantity of liquid the same for all mixes, in order to avoid as much as possible batch to batch variation.

### (D) POWDER MIXING

Gradually add the powder to the water and mix using a slow speed-drill (400 – 600 rpm). Mix until a thick, batter-like consistency is obtained. Leave the **MasterSeal 583** to stand for 5 – 10 minutes to allow full saturation to take place.

Re-mix, adding a small quantity of water, if required, to restore the consistency. Do not exceed the maximum liquid demand.

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## (E) APPLICATION

Do not apply **MasterSeal 583** to frozen substrates or if the ambient temperature is below 5°C or expected to fall below 5°C or expected to fall below 5°C within 24 hours. Avoid application in direct sunlight.

Always apply the mix to a pre-dampened surface. High-suction substrates require more dampening than dense substrates. However, confirm there is no free-standing water. Apply by brush, broom or with traditional mortar sparing equipment. Mixed material must be used within 45 minutes or less under hot weather conditions. The actual nominal thickness per coat must be 1.0 and 1.5 mm.

## (F) FIRST COAT

Brush or broom the mix firmly onto the pre-dampened, prepared surface. After completing 2 or 3 m<sup>2</sup>, strike off with the brush or broom in one direction for aesthetic purposes. Care must be taken not to spread the material too thinly.

When the material begins to drag or “ball”, do not add more water, but dampen the surface again.

## (G) SECOND COAT

Allow at least overnight to cure before applying subsequent coats. Dampen the first coat and remove excess moisture. If **MasterSeal 583** is used in closed, poorly ventilated rooms condensation may occur on the first coat. This condensation must be removed from the surface. Apply the second coat at right angles to the first coat to ensure good covering.

**MasterSeal 583** can be spray applied but should afterwards be brushed well into the substrate to ensure proper adhesion.

To improve the aesthetic appearance an additional layer can be applied by spray, eventually sponge floated to give a uniform surface.

## CURING

Under hot or excessive drying conditions fog-spray after the initial set has taken place for as long as practicable.

## ESTIMATING DATA

A two layer application requires approximately 3.0 to 4.5 kg/m<sup>2</sup> and will be strongly influenced by the roughness of the substrate.

## PACKAGING

**MasterSeal 583** is available in 25 kg bags.

## CLEANING

Clean tools and equipment with water, before the adhering material hardens.

## SHELF LIFE

**MasterSeal 583** should be stored for 6 months under cover, clear of the ground and stacked not more than 6 sacks high. Protect the materials from all sources of moisture and frost. Rotate stock in order not to exceed the shelf life.

## PRECAUTIONS

**MasterSeal 583** is based on cement and can be irritating to the skin and eyes. Gloves and eye protection should be worn. The use of dust mask is recommended. Accidental splashes of the material to the skin or eyes should be immediately washed off with clean water. In the event of prolonged irritation seek medical advice. In the case of ingestion give water or milk to drink and treat symptomatically. Medical advice should be sought.

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

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