

MasterSeal 599

High range elastomeric, cement-based waterproof coating for concrete and masonry

MATERIAL DESCRIPTION

MasterSeal 599 is a blend of Portland cements, selected silica, micro-fibres and modifying agents. When mixed to a slurry consistency with the acrylic polymer emulsion, it can be easily applied by brush or spray equipment. It cures to give an elastomeric flexible membrane.

The 2mm thick **MasterSeal 599** membrane will accommodate movement up to 0.5 mm, or 1.2 mm when reinforced with FIBER mesh.

USES

- For waterproofing water-retaining structures which may be subject to movement like water tanks, pools, reservoirs, etc.
- As part of the MasterSeal basement waterproofing system, in areas sensitive to movement, vibrations and slight settlement.
- To protect concrete from water, carbonation and de-icing salts.
- Suitable for internal and external use, against positive and negative water pressure.
- Fiber mesh can be used in strip form over joints and cracks or as reinforcement for the whole application.

FEATURES AND BENEFITS

- Remains flexible when submerged.
- Good chemical resistance against soft water, domestic waste water, manure or other liquids moderately aggressive to mineral substrates.
- Freeze-thaw resistant.
- Water vapour permeable.
- CO₂ barrier.
- Crack bridging.
- UV stable.
- Simple and fast method of treating cracks and joints.
- Quick and easy brush or spray application.
- Can be applied to damp substrates.
- Thin layer application.
- Equipment to be cleaned simply with water.

TYPICAL PROPERTIES *

Maximum particle size	0.63mm
Water vapour permeability ((μH ₂ O)	985
Water resistance:	
Positive pressure	1.5 bar
Negative pressure	1.0 bar
Elongation (28 days):	
Ambient	45%
Freeze/thaw resistance (ISO/DIS 4846.2)	No scaling after 56 cycles
Strength at 28 days:	
Tensile	0.9 N/mm ²
Adhesive	1.1

*Typical values; all tests were carried out under temperature-controlled conditions of 21°C

COLOURS

Standard Grey.

COVERAGE

12 m² @ 1mm; 2 coats normally recommended.

PACKAGING

MasterSeal 599 Liquid Component: 5.7 kg (Can).

MasterSeal 599 Powder Component: 14.3 kg (Paper bag). Combined Kit size: 20kg.

STORAGE AND SHELF LIFE

Both components should be stored under cover, clear off the ground and stacked not more than 3 cans or 6 bags high. Protect the materials from all sources of moisture and frost (+5° C). Rotate stock in order not to exceed the shelf life of 12 months for cans (liquid) and 12 months for the powder bags. Rolls of mesh should be stood upright.

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APPLICATION SUBSTRATE PREPARATION

The surface to be coated must be clean and sound. Remove all traces of formwork, release agents, previous coatings, laitance, organic growth and any other contaminant that may affect the bond adversely. Suitable cleaning methods include high-pressure water treatment and grit blasting. NOT recommended are aggressive percussive methods such as scabbling. After the above treatment, surfaces must be thoroughly rinsed with clean potable water to remove all dust and loose particles.

For Cracks and bolt holes please consult Master Builders Solutions technical team for repair advice.

MIXING INSTRUCTIONS

Wet density	1750 kg/m ³
Pot life	60 minutes
Drying time	120 minutes

MasterSeal 599 Liquid Component: 5.7 kg

MasterSeal 599 Powder Component: 14.3 kg

MasterSeal 599 should be power mixed only, using a helix spiral mixer attachment in a slowspeed drill (400-600 rpm). DO NOT use a bricklayer's mortar mixer.

Add the liquid component to a clean suitably sized mixing bucket whilst stirring slowly, pour all powder components into the liquid, add powder at a steady but slow rate, Allowing for the powder to "wet-out" adequately.

Allow the product to stand for approximately 1 minute, remix briefly and then apply.

The product can be mixed with reduced amounts of liquid to adjust for the required consistency. Never add water. Diluting will reduce the products performance.

Provide adequate ventilation when mixing and applying **MasterSeal 599**.

APPLICATION

Do not apply **MasterSeal 599** to frozen substrates or if the ambient temperature is 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, make sure there is no free-standing water. Mixed material must be used within 60 minutes, or less under hot weather conditions.

First Coat:

Brush, broom or spray the mix onto the pre-dampened, prepared surface, brushing well into the surface. Strike off with the brush or broom in one direction for a neat appearance. Care must be taken not to spread the material too thinly.

Typical coverage: 0.75-1kg/m² /coat. When the material begins to drag or "ball", do not add more liquid, but dampen the surface again.

Spray through a ±4 mm nozzle at a pressure of 3.0 - 5.0 bar.

Reinforcing with mesh required:

Mesh is embedded in the first coat when it is still wet.

Second Coat:

Allow to cure at least 6 hours at 20°C before applying subsequent coats. Low temperatures and high humidity will delay setting and curing. Humidification of the previous coat is only allowed in extremely dry conditions. Remove as above, finishing in one direction, eventual condensation. Brush, roll or spray the mix onto the surface at a similar coverage to the first coat preferably at right angles to the previous layer.

Curing:

Under hot or excessive drying conditions adequate protective shielding should be foreseen. In cold and humid areas it may be necessary to leave the application for a longer curing period. **MasterSeal 599** needs to dry under airy circumstances.

Additional heating and/or ventilation can assist proper curing. NEVER use dehumidifiers during curing periods.

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Clean up and Spillages:

Uncured material may simply be removed with water. Hardened material will need mechanical removal.

Overpainting:

Do not overpaint **MasterSeal 599** in basements or other structures where the membrane is subject to negative water pressure. Never use solvent based paints.

HEALTH AND SAFETY

MasterSeal 599 powder is cement based and may be irritating to the skin and eyes. Gloves and eye protection should be worn. The use of dust masks is recommended.

MasterSeal 599 Liquid is non-toxic but should not be ingested as it is based on acrylic polymers. 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. A Material Safety Data Sheet for this product is available on request.

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. MB Construction Chemicals Solutions South Africa (Pty) Ltd 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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