

MasterSeal[®] 599

An elastomeric, cement-based waterproof coating for concrete and masonry

MATERIAL DESCRIPTION

MasterSeal 599 part 1 is a blend of Portland cements, selected silica, micro-fibres and modifying agents. When mixed to a slurry consistency with the acrylic polymer emulsion **MasterSeal 599** part 2, it can be easily applied by brush or spray equipment. It cures to give an elastomeric flexible membrane.

Fiber mesh is a fabric which can be used in strip form over joints and cracks or as reinforcement for the whole application.

TYPICAL APPLICATION

- 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

Once cured, a 2 mm thick **MasterSeal 599** membrane will accommodate movement up to 0.5 mm, or 1.2 mm when reinforced with FIBERL mesh

ADVANTAGES

- Retains 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

PACKAGING

MasterSeal 599 part 1 25kg sack
MasterSeal 599 part 2 10ltr cans

COST EFFECTIVE

- Simple and fast method of treating cracks and joints
- Quick and easy brush or spray application

EASY TO APPLY

- Can be applied to damp substrates
- Thin layer application
- Equipment to be cleaned simply with water

TYPICAL PROPERTIES

Properties listed are for guidance and are not a guarantee of performance.

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:	no scaling
(ISO/DIS 4846.2)	after 56 cycles
Strength at 28 days	N/mm ²
Tensile:	0.9
Adhesive:	1.1

(a) Typical values; all tests were carried out under temperature controlled conditions of 21°C

ENVIROMENTALLY FRIENDLY

Contains no solvent, safe to handle and use

COVERAGE

0.75-1 kg/m²/coat; 2 coats normally recommended.

STORAGE

Both components should be stored under cover, clear of the ground and stacked not more than 2 pails, 3 cans or 6 sacks 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 pails and **MasterSeal 599** part 2 and 6 months for sacks. Rolls of mesh should be stood on end.

APPLICATION SUBSTATE 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

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treatment, surfaces must be thoroughly rinsed with clean potable water to remove all dust and loose particles. For Cracks and bolt holes please consult MBS technical team for repair.

MIXING

Wet density	1750 kg/m ³	
Pot life	60 minutes	
Drying time	120 minutes	
Mixing Liquid	±10.0ltr	(9.37-10.8)
MasterSeal 599 part 2 / 25kg part 1		

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

Blend 25 kilograms of part 1 into approximately 10.0 litres of part 2. The quantity may vary slightly depending upon the ambient conditions. Mix maximum 3 minutes to a lump-free consistency.

Allow the mix to saturate for ±5 minutes and remix for maximum 2 minutes adding powder or liquid when necessary to obtain the correct consistency.

Do not exceed the maximum liquid demand. Do not over-mix. For colour uniformity always mix with the same amount of liquid.

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.

If a reinforcement mesh is 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 air-dry circumstances.

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

CLEAN UP

Not hardened material may simply be removed with water.

OVER PAINTING

Do not overpaint **MasterSeal 599** in basements or other structures where the membrane is subject to negative water pressure.

Never use solvent based paints.

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SAFETY PRECAUTIONS

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

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

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

* Properties listed are based on laboratory controlled tests.

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QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions 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.

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DISCLAIMER

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