

MasterSeal® M 808

**Elastic polyurethane membrane for waterproofing and protection of concrete structures.
Suitable for direct contact with potable water and foodstuff (*)**

DESCRIPTION

MasterSeal® M 808 is a two component elastic polyurethane membrane, with 100% solids formulation, high chemical and abrasion resistance. Approved for direct contact with potable water and foodstuff (*).

FIELD OF APPLICATION

MasterSeal® M 808 is used in waterproofing applications where contact with potable water or a high level of chemical resistance is required.

This includes:

- Water towers, storage tanks or any other water retaining structures.
- Interior coating to drinking water tanks.
- Storage tanks containing foodstuffs etc.
- Waste water treatment plants (urban and industrial), both in the inflow and outflow areas.
- Sewage effluent pipelines.
- Steel and concrete pipes.

MasterSeal® M 808 can be applied on:

- Horizontal and vertical substrates.
- Internal and external areas.
- Concrete, cementitious mortar or steel substrates.
- Reinforced concrete to protect it against carbonation or chloride induced corrosion and for protection against chemical attack in secondary containment bunds in chemical and petrochemical industries.

Contact your local Master Builders Solutions representative for any other applications.

FEATURES AND BENEFITS

- Can be applied on vertical and horizontal surfaces.
- Easy to apply by roller or air-less spray equipment.
- Waterproof.
- Resistant to standing water.
- Elastic, flexible and crack-bridging.
- High chemical resistance.

(*) check local regulations regarding contact to potable water and foodstuff

- Protects concrete against carbonation and rebar corrosion: Once hardened it is impermeable to water and carbon dioxide.
- Excellent mechanical and elastic properties (elongation, tensile and tear strength, abrasion).
- Excellent adhesion on different substrates (concrete, steel).
- Excellent freeze/thaw resistance.
- UV resistant

- Thermoset – does not soften at elevated temperatures.
- 100% solids formulation, no risk for the environment and operative caused by solvent vapours.

APPLICATION METHOD

(a) Surface Preparation

All substrates (new and old) must be structurally sound, dry, free of laitance and loose particles and clean of oil, grease, rubber skid marks, paint stains and other adhesion impairing contaminants.

Concrete: The surface should be prepared by shot blasting, high-pressure water jetting or other suitable mechanical method.

After preparation, concrete and other cementitious substrates must have a minimum pull off strength of 1 N/mm².

Substrate temperature must be minimum +10 °C and maximum +35°C and minimum 3°C above the dew point both during the application and for at least further 2 hours (at 15° C). The residual moisture content of the substrate must not exceed 4% (check with e.g. CM device).

Iron/ steel: Should be sand blasted to a SA 2½ finish prior to application of the product.

(b) Primer coat

A primer coat will improve the adhesion and prevent the appearance of pinholes or bubbles in the hardened coating. The recommended primers for **MasterSeal® M 808** on dry substrates are **MasterTop® P 617***, **MasterTop® P 617 RC*** or **MasterTop® P 621***. The residual moisture content of the substrate must not exceed 4% (check with e.g. CM device). Waiting time before applying **MasterSeal® M 808** depends on curing time of the primer used.

On humid substrates or where osmotic pressures can exist, it is recommended to use **MasterSeal® P 385*** as primer coat.

Apply **MasterSeal® M 808** between 48 - 72 hours after application of **MasterSeal® P 385** (depends on conditions).

* Please refer to relevant product data sheet for details.

(c) Mixing

MasterSeal® M 808 is supplied in working kits which are pre-packaged in the exact mixing ratio.

Pour the entire content of Part B into the container of Part A. DO NOT MIX BY HAND! Mix with a mechanical drill and paddle at a very low speed (max. 400 rpm) for at least 3 minutes. Scrape the sides and the bottom of the container several times to ensure complete mixing.

Keep the mixer blades submerged in the coating to avoid introducing air bubbles. Do not part mix packs.

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(d) Application

MasterSeal[®] M 808 can be applied by brush, roller or by air-less spray machine. It is always recommended to complete the application in a minimum of two layers.

FINISHING AND CLEANING

Tools can be cleaned with solvent while still wet. Once cured, the material can only be removed mechanically.

COVERAGE

The consumption of **MasterSeal[®] M 808** is approximately 0.4 – 0.8 kg/m², in two coats, depending on the condition and porosity of the substrate and requested film thickness. This will provide a dry film thickness of 0.3 to 0.6 mm. In harsh, abrasive environments it is important to apply a total minimum thickness of at least 0.5 mm in order to obtain best performance.

In high chemically demanding environments (e.g. waste water treatment plants) a minimum thickness of 1 mm is recommended. Therefore, a minimum consumption of 1.2 Kg/m² in two or three layers must be applied.

These consumptions are theoretical and can vary according to the absorption and roughness of the substrate. It is essential to carry out representative trials on site to evaluate the exact consumption.

WORKING TIME

Approximately 20 minutes at 20°C ambient and substrate temperature.

PACKAGING

MasterSeal[®] M 808 is available in 10 kg and 5 kg units.

COLORS

Grey and light grey

STORAGE

MasterSeal[®] M 808 should be stored in original containers under dry conditions at temperatures between 10 - 25° C preferably. Do not expose to direct sunlight.

SHELF LIFE

Shelf life under these conditions is 12 months for Part A and Part B. See, in any case "Best before....." label.

WATCH POINTS

- Do not apply at temperatures below +10°C nor above + 35°C
- Do not add any solvents, sand or other components to **MasterSeal[®] M 808** mixes.

APPROVALS AND CERTIFICATES

- Approved by the Secretary of State for Environment under Regulation 31(4) (a) for use in contact with potable water. Specific instructions for use available on request. (UK)
- WRAS approved for use in contact with potable water approval no 1210500 (UK)
- Approved by the Directorate for Environment and Forestry, Drinking Water Quality Division, under Water Supply (Water Quality) (Scotland) Regulations 2001, 27 (4) (a).
- Approved for contact with drinking water and solid foodstuff according RD 866/2008 (Spanish transposition of European directive 2002/72/EC).
- Approved for contact drinking water according RD 140/2003 (Spanish transposition of European directive 98/83/EC).
- Approved for contact with potable water according to the Italian Ministerial Decree DM 174 of April 2004.
- Tested according EN 12873-2 (Influence of materials on water intended for human consumption - Influence due to migration).
- Tested according EN ISO 4628/2004 (500 h) accelerated corrosion test in saline mist chamber.
- CE marked according EN 1504 part 2.

HANDLING AND TRANSPORT

Usual preventive measures for the handling of chemical products should be observed when using this product, for example do not eat, smoke or drink while working and wash hands when taking a break or when the job is completed.

Specific safety information referring the handling and transport of this product can be found in the Material Safety Data Sheet.

Disposal of product and its container should be carried out according to the local legislation in force. Responsibility for this lies with the final owner of the product.

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Product Data			
Property	Standard	Unit	Data
Density of mixed material	EN ISO 2811-1	g/cm ³	approx. 1.2
Viscosity	ISO cup n° 8	s	32
Application temperature (substrate and material)	-	°C	from +10 to +35
Maximum substrate moisture (during application)	-	%	≤ 4
Maximum relative humidity (during the application)	-	%	≤ 70
Pot-life (10 kg kit)	at +20 °C	minutes	approx. 20 - 25
Re-coating interval	at +20 °C	hours	6-24
Dry to touch	at +20 °C	hours	approx. 6
Exposure to water pressure after	at +20 °C	days	3
Fully cured after	at +20 °C	days	7
Service temperature (dry)	-	°C	- 20 to +80
Service temperature (wet)	-	°C	- 20 to +50
Adhesion to concrete after 28 d	EN 1542	N/mm ²	3.8
Adhesion to steel	EN 12636	N/mm ²	>10
Adhesion strength after freeze-thaw cycles	EN 13687-1	N/mm ²	2,6
CO ₂ permeability SD	EN 1062-6	m	74 (required > 50)
Water vapour permeability SD	EN ISO 7783	m	6.2 (class II 5 < S _D < 50)
Capillary water absorption	EN 1062-3	kg/m ² ·h ^{0,5}	0.001 (required < 0.1)
Behaviour after artificial weathering	EN 1062-11	-	No changes
Tensile strength	EN ISO 527-1/-2	N/mm ²	> 20
Abrasion resistance	EN ISO 5470 -1	mg	Mass loss < 350 (required < 3000)
Impact resistance	EN ISO 6272/2	Nm	20
Shore D hardness after 7 d	EN ISO 868/07	-	70
Static crack bridging	EN 1062-7	class	A4 (+23°C)
			A3 (-10°C)
			A2 (-20°C)
			B2 (+23°C)
Dynamic crack bridging	EN 1062-7	class	B2 (-20°C)
			B2 (+23°C)
Elongation at break	DIN 53504	%	60
Cathodic disbondment	ASTM G95	mm	3.8
Mandrel Bend Test	ASTM D522 (180°)	-	Pass
Dielectric breakdown voltage	ASTM D149	V/mil	251.1
Salt spray test (500h & 500 microns)	EN ISO 4628	-	Pass

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Product Data (continued)			
Resistance to severe chemical attack	EN 13529	Reduction in hardness	Class II (required < 50 %) Group 2 < 9 % Group 3 < 14 % Group 5 < 13 % Group 6a < 28 % Group 7b < 33 % Group 8 < 16 % Group 9 < 15% Group 9a < 17% Group 10 < 15% Group 11 < 10 % Group 12 < 8 % Group 12 < 21 % HCl 10% < 16 % HCl 30% < 30 %* H2SO4 30%< 16 % H2SO4 50%< 21 % NaOH 30%< 12 % NaOH 50%< 16 % * colour change

Note: Hardening times are measured at 21°C ± 2°C and 60% ± 10% relative humidity. Higher temperatures and/or higher R.H. can shorten these times, and vice versa. Technical data shown are statistical results and do not correspond to guaranteed minima. Tolerances are those described in appropriate performance. Measured values by an application of 0.4 kg/m² (equivalent to 0.3 mm) if not otherwise indicated.

DISCLAIMER

In view of widely varying site conditions and fields of application of our products, this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with **Master Builders Solutions** and possible resulting damages are in the sole responsibility of the customer.

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