

MasterSeal M 808

Elastic polyurethane membrane for waterproofing and protection of concrete structures. Approved under regulation 31 of the Water Supply (Water Quality) regulations 2000 for use in contact with potable water

DESCRIPTION

MasterSeal M 808 is a two component, 100% solids, elastic polyurethane membrane, with 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 (Commercial and industrial), both in the inflow and outflow areas.
- Sewage effluent pipelines.
- Steel and concrete pipes.


Additionally 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

- Regulation 31 approved
- 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.

	
BASF Construction Chemicals España, S.L. Carretera del Mig, 219 08907 L'Hospitalet del Llobregat, Spain 13 00238 - 0099/CPD/B15/0044	
UNE EN 1504 - 2	
Surface protection product for the principles and methods 2.2 and 8.2 defined in EN 1504-9	
Capillary absorption	≤ 0,1Kg/m ² ·h0.5
Water vapour permeability	Class II
Permeability to CO ₂	Sd > 50 m
Crack bridging ability	+23° C: Class A4 -10° C: Class A3 -20° C: Class A2
Adhesion strength by pull-off test	> 2 N/mm ²
Adhesion after thermal compatibility: Freeze-thaw cycling with de-icing salt immersion and thunder-shower cycling (thermal shock)	> 1,5 MPa
Abrasion resistance (Taber)	Mass loss < 3000 mg
Resistance to severe chemical attack: reduction in hardness < 50%	Group 4: Class II Group 9: Class II Grupo10: Class II Grupo11: Class II Grupo12: Class II
Behaviour after artificial weathering	No changes
Reaction to fire	Class F
Dangerous substances	Comply with 5.3 of EN 1504-2

(*) 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.
- High chemical resistance.
- Chemical resistance against biogenic acids in waste water treatment plants up to pH = 1.
- Excellent mechanical and elastic properties (elongation, tensile and tear strength, abrasion).
- Excellent adhesion on different substrates (concrete, steel).

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- 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

For application to potable water containing structures approved under regulation 31 of the Water Supply (Water Quality) regulations 2000, see separate IFU (Instructions For Use).

(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.

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 1.0 N/mm².

Substrate temperature must be minimum +5°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 and MasterTop P 617 RC. The residual moisture content of the substrate must not exceed 4% (check with e.g. CM device). Wait 24 hours before applying MasterSeal M 808.

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.

For fast track applications onto concrete Ucrete PFS, or Ucrete PLC can be used, contact the technical department for further information.

* check the relevant product data sheet

(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.

(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 0.6mm (300 – 600 microns).

In harsh, abrasive environments it is important to apply a total minimum thickness of at least 0.5 mm in order to obtain the optimum performance.

In 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

20 minutes at 20°C ambient and substrate temperature.

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PACKAGING

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

One 5 kg unit covers 6.0 – 12.5m² in 2 coats

One 10 kg unit covers 12.5 – 25m² in 2 coats

COLOURS

Grey and light grey

STORAGE

MasterSeal M 808 should be stored in original containers under dry conditions at a temperature between 15-25°C. Do not expose to direct sunlight.

SHELF LIFE

Shelf life under these conditions is 12 months for Part A and 6 months for Part B. See the "Best before..." date on the label.

WATCH POINTS

- Do not apply at temperatures below +5°C nor above +35°C
- Solvents, and or other products that could affect the product properties must not be added.
- Part B can crystallize if exposed to temperatures below +15°C. To avoid crystallization on site keep the product warm, for example in a heated container or storage unit. If this crystallization occurs, do not use the product.

APPROVALS

- 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.
- WRAS approved for use in contact with potable water-approval no 1210500
- Approved by the Directorate for Environment and Forestry, Drinking Water Quality Division, under Water Supply (Water Quality) (Scotland) Regulations 2001, 27 (4) (a).
- Approved by the Department of Regional Development, under Water Supply (Water Quality) Regulations (Northern Ireland) Regulation 30.

- 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 12872. 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. For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

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.

CONTACT DETAILS

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Product Data

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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 +5 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
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:	EN 1542	N/mm ²	2,9
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	EN 1062-6	S _b	74 m (required > 50 m)
Capillary water absorption:	Karsten	ml	0
Behaviour after artificial weathering	EN 1062-11	-	No changes
Static crack bridging:	EN 1062-7	-	A4 (+23°C)
			A3 (-10°C)
			A2 (-20°C)
Tensile strength:	EN ISO 527-1/-2	N/mm ²	9
Abrasion resistance	EN ISO 5470 -1	mg	Mass loss < 350 (required < 3000 mg)
Impact resistance:	EN ISO 6272/2	Nm	20
Shore D hardness:	EN ISO 868/07	-	70

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Property	Standard	Unit	Data
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
Resistance to severe chemical attack	EN 13529	% Reduction in hardness	Class II (required < 50%) Group 4 < 6% Group 9 < 10% Group 10 < 12% Group 11 < 9 % Group 12 < 4 %

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.

Chemical Resistance acc. UNE EN ISO 4628-2 (500 houts, 21 °C)

Media	Resistance	Media	Resistance
Motor oil	+	Sulphuric acid 40%	+
Diesel oil	+ (*)	Sulphuric acid 50%	±
Acetic acid 5%	+	Sodium chloride 25%	+
Citric acid 5%	+	Sodium chloride 30%	+ (*)
Lactic acid 5%	+ (*)	Sodium chloride 50%	+ (*)
Hydrochloric acid 5%	+ (*)	Sodium Hydroxide 25%	+
Nitric acid 5%	+ (*)	Sodium Hydroxide 50%	+
Phosphoric acid 25%	±	Sodium hypochlorite (Commercial)	+ (*)

resistant - not resistant ± resistant short-term (48 hours) + (*) resistant with changes (gloss, colour, etc.)



We create chemistry

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"BASF plc, Construction Chemicals" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.