

MasterSeal M 616

Water-based hybrid polyurethane elastic waterproofing, UV resistant, high solar reflectance for terraces, balconies and roofs, for the encapsulation of asbestos.

MATERIAL DESCRIPTION

MasterSeal M 616 is a single-component water-based elastic waterproofing in hybrid polyurethane, UV resistant. In fact, MasterSeal M 616 is classified both as a waterproofing agent UNI EN 14891 (to be used under ceramic tiles glued with adhesives), of the DM-O1-P type:

- DM, waterproofing in dispersion;
 - O1, crack bridging ability improved at low temperatures (-5°C);
 - P, resistant to water containing chlorides;
- both as a waterproofing agent for reinforced concrete structures satisfying the principles of UNI EN 1504/2;
- 1 (PI), suitable for protection against the entry of aggressive agents (Method 1.3);
 - 2 (MC), suitable for humidity control (Method 2.3);
 - 8 (IR), suitable for increasing resistivity (Method 8.3);
 - and as an encapsulant for asbestos cement type A UNI 10686 according to DM 20/8/1999.

Available in white, grey and red.

FIELDS OF APPLICATION

MasterSeal M 616 is indicated as a waterproofing system, for example for balconies, terraces both exposed to UV rays and under tiles and for roofing in the residential sector in general.

MasterSeal M 616 is indicated as an encapsulating system for asbestos cement for type A interventions according to the Ministerial Decree 20/08/1991

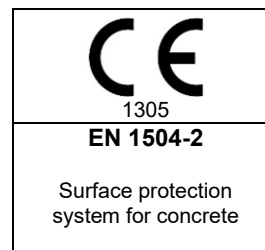
FEATURES AND BENEFITS

MasterSeal M 616 has the following peculiar characteristics:

- mono-component with water;
- it is very easy to apply by roller or brush;
- primer and waterproofing membrane are made with the same product;
- does not require finishing;
- very high elastic characteristics of the membrane (elongation at break > 400%);
- resists the opening of cracks of more than 2.5 mm (crack bridging class A5 UNI EN 1504/2);
- UNI EN 14891 certified compatible with type C2 UNI EN 12004 adhesives for tiles (always recommended C2-S1);
- can be covered with tiles after only 24 hours;

- impermeable to water (not under pressure);
- also acts as a protective anti-carbonation;
- UNI 10686 certified as an encapsulating system for type A asbestos cement according to Ministerial Decree 20/8/1999;
- resistant to UV rays and can therefore be left exposed;
- can be walked on balconies and terraces;
- UNI 10686 certified as an encapsulating system for type A asbestos cement according to Ministerial Decree 20/08/1999.

In compliance with the European Regulation (EU No 305/2011 and EU No. 574/2014) the product is provided with the CE marking according to UNI EN 1504-2 and 14891 and UNI EN 10686 and the relative DoP (Declaration of Performance).



COVERAGE

1,4 – 2 kg/m².

as waterproofer

	Kg/m ²
Primer	0,4 - 0,6
First hand	0,5 - 0,7
Second hand	0,5 – 0,7

as encapsulant

	Kg/m ²
Primer	0,15-0,20
First hand	Not less of 0,35
Second hand	Not less of 0,35

PACKAGING

20 kg can. White, grey and red colour.

STORAGE

Store the product in a sheltered, dry place at a temperature anywhere between +5°C and +30°C.

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Technical Information	
Density	1,25 kg/l
Solids by weight	55 %
Touch dry time at 20°C	1 ora
consumption	1,4 – 2 kg/m ²
Recoating time at 20°C	5 h
Rain resistant	8 h
Operating temperature	• - 5°C – +80°C
Walkable at 20°C	• 24 h

Essential characteristic in accordance to UNI EN 1504/2 (2 mm)			Limits and class	Performances
Adhesion	In the absence of thermal cycles	UNI EN 1542 on substrate MC (0,40) EN 1766	> 0.8 MPa	> 1.4 MPa
Crack bridging ability at 23°C UNI EN 1062/7	Static	23°C	Class A ₁ ; A ₂ ; A ₃ ; A ₄ ; A ₅	A ₅ (>2,5 mm)
		-20°C		A ₄ (1,25-2,5mm)
		-10°C		Class B ₂
Permeability	To Water vapour	UNI EN ISO 7783/1. Equivalent air thickness Sd, Sd = μ s, μ = coefficient Vapor diff., S = thickness	Class I: Sd < 5 m (Permeable), Class II: Sd ≥ 5 e ≤ 50 m, Class III: Sd > 50 m (Non perm.)	Sd=1,3m Class I
	to CO ₂	UNI EN 1062/6. Equivalent thickness of air Sd, Sd = μ · s, μ = coeff. Diff. CO ₂ , s = thickness (4 mm)	Sd > 50 m	Sd > 100 m
	To water	For capillary absorption EN 1062/3	< 0,1 kg·m ⁻² ·h ^{-0,5}	<0,05 kg·m ⁻² ·h ^{-0,5}
Slip / creep resistance UNI EN 13036/4		Class I: wet test for internal surfaces: > 40 units Class II: dry test for internal surfaces: > 40 units Class III: wet test for external surfaces: unit > 55		Class I Class II Class III

Essential characteristic in accordance to UNI EN 14891 (2 mm)			Limits and class	Performances
Adhesion of glues for ceramic coatings UNI EN 12004 on MasterSeal 545	Initial (adhesive application after 24h)	UNI EN 14891 A.6.2	≥ 0,5 MPa	≥ 1 MPa
	After immersion in water	UNI EN 14891 A.6.3	≥ 0,5 MPa	≥ 1 MPa
	After thermal aging	UNI EN 14891 A.6.5	≥ 0,5 MPa	≥ 1 MPa
	After freeze and thaw cycles	UNI EN 14891 A.6.6	≥ 0,5 MPa	≥ 1 MPa
	After contact with water and lime	UNI EN 14891 A.6.9	≥ 0,5 MPa	≥ 1 MPa
Impermeability to water UNI EN 14891 A.7			Zero penetration Weight gain <20 g	Zero penetration Weight gain 1 g
Crack bridging ability UNI EN 14891 A.8		a 23°C	≥ 0,75 mm	> 3 mm
		a -5°C	≥ 0,75 mm	> 1,3 mm

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APPLICATION SHEET

PREPARATION OF THE SUPPORT

Cementitious support

Eliminate flaking parts, dust, dirt, grease and anything that can affect the adhesion of the coating. In the case of concrete slabs, roughen the surface by sanding or sanding.

Any macro-defects must be previously repaired with mortars from the MasterEmaco range.

Always dust the surfaces with a vacuum cleaner before applying the primer.

Masonry support

The plaster and bedding mortars must be sound and well bonded to the substrate. Any repairs will be provided with the mortar from the MasterEmaco line suitable for the specific use.

Always dust the surfaces with a vacuum cleaner before applying the primer.

Ceramic support

It is essential to evaluate in advance the state of degradation of the ceramic coating (broken or detached tiles, saturated screed, cracked joints), as well as the degree of imbibition of the underlying screed.

These problems must be identified and solved before proceeding with the application of the waterproofing system.

Any enameled layer will be removed by abrasive treatment such as sanding or sanding.

The precise and detailed evaluation is always subject to a site visit.

An opinion from the Technical Service is always recommended.

Always dust off the surfaces with a vacuum cleaner before applying the primer.

Support in bituminous sheath

In the case of surfaces in bituminous sheath, particular attention must be paid to the damaged areas, the surface of the bituminous sheath must be free of loose parts, grease, oils, dust and any element that could prevent the adhesion of the material. Any bubbles or detachments present must be eliminated and repaired.

The preparation must be carried out by pressure washing. Flame the sheath before proceeding with the application of the primer.

The substrate must then be primed with MasterTop P 686 W and sown with MasterTop F5 (for the slated sheath instead use MasterSeal M 616 as a primer as indicated in the table). For this type of support, always contact the Technical Service.

Metallic support

Abrade the surface until obtaining a regular support free of live metal oxides. In the areas of joints, rivets and fixings, always use the self-adhesive reinforcement strip MasterSeal 944.

Always dust off the surfaces with a vacuum cleaner before applying the primer.

The substrate must then be primed with MasterSeal P 681.

Support in plastic or non-ferrous metal

Cleaning must be carried out by washing with water or solvent, detergent or degreaser. The specific assessment is linked to the specific case and therefore to the site inspection. An opinion from the MBCC Technical Service is always recommended.

Always dust the surfaces with a vacuum cleaner.

The substrate must then be primed with MasterSeal P 684 for non-ferrous metal or stainless steel substrates and with MasterSeal P 691 for plastic substrates.

Expansion and contraction joints

Existing joints on the screed must be respected by sealing them with MasterSeal NP 474. The sealing must be left exposed and not covered with MasterSeal M 616.

Wall-floor connection

Reinforce the wall-floor connection using the MasterSeal 924 or MasterSeal 944 waterproofing strip. For executive details consult the relative technical data sheets.

Application under tile and expansion and contraction joints
When installing MasterSeal M 616 under the tile, the existing joints on the screed must be respected by sealing them, for example, with MasterSeal NP 474. The sealing must also be applied to the ceramic flooring.

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HUMIDITY OF THE SUPPORT

The substrate must have a humidity of less than 6%.

SUPPORT CLEANING AND SATURATION

Once the substrate has been prepared, carefully wash the entire surface to be treated to saturate and remove any residual dust.

The substrate must be saturated with a dry surface.

MIXING

Homogenize the product with a whisk drill at low speed for about 1 minute.

APPLICATION TOOLS

Short-haired roller for solvent-based coatings, by brush with soft bristles.

American spatula

Airless pump (minimum pressure 220 bar, minimum flow rate 5.1 liters / minute and nozzle diameter > 0.83 mm, e.g. Graco ST Max II 595 PC Pro type or equivalent).

TEMPERATURE

The application can take place when the ambient temperature is between + 10°C and + 40°C.

APPLICATION OF THE PRIMER

Carefully choose the primer according to the following table:

Substrate	Primer
Cementitious	MasterSeal M 616
Brick and stone	MasterSeal M 616
Floor tiles	MasterSeal M 616
Slate bituminous sheath	MasterSeal M 616
Bituminous sheath	MasterTop P 686W
Non-ferrous metal surfaces and stainless steel	MasterSeal P 684
Plastic surfaces	MasterSeal P 691
Steel	MasterSeal P 681

APPLICATION OF THE WATERPROOFING PRODUCT

From the first coat of MasterSeal M 616 applied as a primer, wait at least 2 hours at 20 ° C before proceeding with the application of subsequent coats of waterproofing. Apply MasterSeal M 616 in at least two coats respecting the minimum overcoating time indicated in the table.

Protect the wet film from the direct influence of water for the first 24 hours.

If covered with ceramic coatings, the last layer must be sown to excess with the quartz filler MasterTop F 5 at a rate of 1-2 kg / m².

Reinforcement with mesh

In the case of bituminous substrates with mesh, or in cases where the cracks caused by movements may exceed 2.5 mm, install the FX Mesh reinforcement interposed between the second and third coat of MasterSeal M 616. Alternatively, treat the critical joints of the bituminous membrane with the self-adhesive waterproofing strip MasterSeal 944 and then proceed with the installation of MasterSeal M 616.

Reinforcement with non-woven fabric

For applications in difficult points such as corners or overlapping points or to give MasterSeal M 616 greater performance, it is possible to interpose some non-woven fabric in the manner described below: after applying a first coat of waterproofing, proceed with a second coat in which drown the non-woven fabric using a little pressure to make sure that the entire surface is inside the waterproofing layer; finish the application with a third coat of MasterSeal M 616.

APPLICATION OF THE ENCAPSULANT

All operations of the encapsulating system must be carried out in compliance with the relevant legal provisions in force.

After cleaning and allowing the asbestos cement slabs to dry, apply the first coat of consolidating primer using MasterSeal M 616 diluted with 10% water.

Therefore, wait no less than 2 hours at 20°C before proceeding with subsequent coats of waterproofing.

Apply MasterSeal M 616 in at least two coats respecting the minimum overcoating time indicated in the table.

It is important to remember that in accordance with the provisions of Ministerial Decree 20/08/1999 for encapsulating systems, the MasterSeal M 616 membrane must be applied in two coats with contrasting colours because over time any appearance of the colour of the first coat appears to be the indicator to carry out the maintenance intervention of the encapsulating system itself. For example, make the first coat in white and the

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second in grey or vice versa. Protect the wet film from the direct influence of water for the first 24 hours.

NON-SLIP SURFACE

To ensure a non-slip surface, follow the application procedure below:

	Kg/m²
Primer	0,4 - 0,6
First hand	0,5 - 0,7
Quartz sowing MasterTop F5	0,5 - 0,8
Second hand	0,5 - 0,7

TOOL CLEANING

Mains water.

WATER STAFF

Prevent prolonged stagnation of water through the correct arrangement of slopes.

COVERING WITH CERAMIC COATINGS

It can be covered with adhesives for ceramic tiles and stone materials after 24 hours at 20°C. C2-S1 UNI EN 12004 type adhesives are recommended for optimal performance.

SAFETY INSTRUCTION

For information on the correct and safe use, transport, storage and disposal of the product, consult the most recent Safety Data Sheet.

OTHER SERVICES

For price analysis, specifications, supplementary brochures, references, reports and technical assistance, visit the website www.master-builders-solutions.com/it-it or contact infomac@mbcc-group.com.

Scan the QR code to visit the product page and download the latest version of this datasheet.



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Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System compliant with the UNI EN ISO 9001 Standard. Furthermore, the Environmental Management System is certified according to the UNI EN ISO 14001 Standard and the Safety Management System is certified according to the UNI ISO 45001 Standard.

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For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.