MAGIFLEX

TWO-COMPONENT CEMENT-BASED FLEXIBLE WATERPROOF COATING

DRACO

WATERPROOFING LINE

WATERPROOF COATINGS FOR CONCRETE AND OTHER STRUCTURES

CE EN 1504-2 PRINCIPI PI-MC | CE EN 1504-2 | CE EN 14891 | CRACK BRIDGING +15% | FLEX ANTI CRACKING | MAGIFLEX TERRAZZO SYSTEM

MAGIFLEX is a waterproof cementitious coating based on selected aggregates, hydraulic binders, admixtures and polymers (component A) that are mixed with micronized synthetic lattice (component B). **MAGIFLEX** is quick and easy to apply and exhibits high tensile strength and bonding. **MAGIFLEX** allows to create waterproof coatings of up to 1.5-3mm thickness on all types of surface, even those subject to micro-cracking (determination of crack-bridging properties: **"static crack bridging" according to UNI EN 1062-7 – ELLETIPI certification 46759/17 of 19/12/17 and "dynamic crack bridging" according to UNI EN 1062-7 - ELLETIPI certification 48191/18 of 21/02/18)**. **MAGIFLEX** complies with the minimum requirements for materials that come into contact with water intended for human consumption, as provided for by Legislative Decree no. 18 of 23 February 2023, implementing Directive 2020/2184/EU.

BENEFITS

Specific product features:

- ✓ **High chemical resistance: MAGIFLEX** exhibits superior resistance to freeze-thaw cycles, aggressive environments, polluted water, salts, etc.
- ✓ **Waterproof and breathable: MAGIFLEX** is completely impermeable to water and allows the disposal of any residual moisture in the substrate. It is also effective against negative pressure (< 0.5 atm)
- ✓ **High adhesion to the substrates: MAGIFLEX** has a high adhesion to the substrates even when subject to moisture or when they are low absorbing.
- ✓ **It is flexible even at low temperatures: MAGIFLEX** ensures a good flexibility even at temperatures up to -10° C.
- ✓ **Suitable for contact with drinking water.**
- ✓ **Easy to apply: MAGIFLEX** is easy and quick to apply by spatula and guarantees high yield.

AREAS OF APPLICATION

MAGIFLEX is ideal for:

- ✓ Structures subject to micro-cracking or structures that already have micro-damages.
- ✓ Waterproof coating for subflooring flat or sloping surfaces, such as terraces, roofs, etc.
- ✓ Coating to protect structures including precast elements which are subject to controlled deformation and cracking.
- ✓ **MAGIFLEX** is particularly suitable for waterproofing tanks, basins, pools, pipes and conduits, etc. suitable for contact with drinking water.
- ✓ Ideal for waterproofing concrete bridge and viaduct piers and decks.

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HOW TO USE

SUBSTRATE PREPARATION

Recommendations:

- Remove all loose and crumbling parts from the substrate to be restored including cement laitance, efflorescences, etc. remove stains, residues of oil, grease, form-release agents, previous treatments, dust, etc.
- Roughen the substrate surface if it is too smooth.
- Moisten the surface before applying.

Restore the missing volumes (rebar covers, etc.) with a thixotropic mortar of FLUECO line after application of DRACOSTEEL (see data sheets) on reinforcing bars. For particularly porous substrates, the use of a consolidating ACRIPRIMER primer is recommended. Use specific products for corners and joints: MAGICORNER to treat corners and MAGIJOINT elastic joint cover strip to treat joints.

PRODUCT PREPARATION

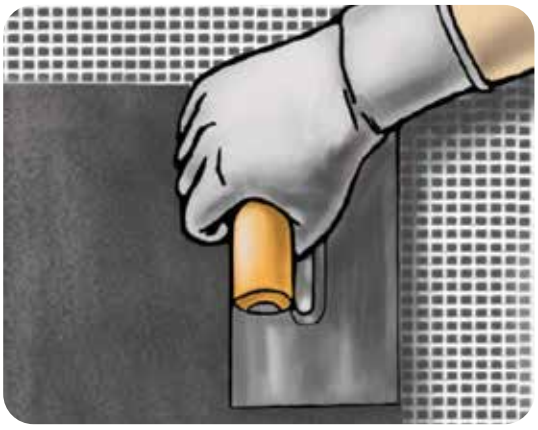
Pour component B (resin) in a suitable container and gradually add component A (powder) according to the given mixing ratio. Mix for 4-5 minutes with a drill at low speed, let it stand for about 5 minutes and mix again till getting a well-blended and free of lumps mix with dense grout texture which can be applied manually by pasting brush, by push broom or by spray. The mixed product shall be applied within about 40 min. Higher temperatures will reduce the pot life. If during application the product is too dense, we recommend to mix it again by drill or trowel.

LAYING: MAGIFLEX is applied manually by spatula. We recommend a total thickness of about 2 mm. According to standard procedure, subsequent coats must be applied waiting 4-8 hours between coats once the first layer has hardened. The insertion of an elastic reinforcing mesh made of MAGINET synthetic fibre between the first and the second coat will improve mechanical performance and will allow for better control of the thickness of the product applied, especially on areas that are micro-cracked or subject to heavy stress (terraces, roofs, etc.). Following application, tools must be cleaned with water before the product hardens. Use rubber gloves and safety glasses while applying and laying the product. For joints, corners and particular intersections use MAGIJOINT elastic joint cover strip and MAGICORNER corner-pieces.

• Thoroughly clean the substrate.

• Dampen it with water.

• Lay MAGINET over the first coat of **MAGIFLEX** while it is still fresh by applying pressure with the hands.



• Apply a second coat of **MAGIFLEX** after 4-8 hours, depending on the room temperature.

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SAFETY INSTRUCTIONS

MAGIFLEX is a product that can be applied even under temperature conditions, sun exposure and windiness which are incompatible with ordinary cement coatings. Nevertheless, it is appropriate to observe the normal precautions based on the experience gained on construction sites. Do not apply thicknesses of more than 1.5 mm for each layer and do not apply if temperatures are expected to drop below + 5° C or rise above +35° C in the next 24 hours. In case of weak or very absorbent substrate, apply water dispersed acrylic-based primer **ACRIPRIMER** and lay the first coat of **MAGIFLEX** within the touch dry.

HOT CLIMATES

- The product should be kept in the shade before, during and after mixing.
- Carry out work in the early hours of the morning, interrupting operations during the hottest hours.
- In the case of strong sun exposure, work should begin in the late afternoon provided that the structure has been subjected to continual wetting for at least one hour before work begins.
- Provide for adequate protection of the coating for the first 24 hours, and possibly cover with sheets that should be kept wet at all times.
- In the case of high temperatures, workability times will be reduced; the product must be thus applied quickly and without interruption.

COLD CLIMATES

- Store the product in a possibly heated environment.
- Do not apply the product at a room temperature lower than +5°C or on a frozen substrate.
- Start work late in the morning.
- Protect the applied product from freezing, covering it with impermeable, insulated sheets.

PACKAGING AND STORAGE

MAGIFLEX is available in:

- 25 kg bags (comp. A) + 9 kg cans (comp. B).

If the product is stored properly in its original packaging, indoors in a dry location, at a temperature of not less than +10° C and not higher than +30° C, it maintains its original features for 12 months.
Do not use the product if the package has been opened. Avoid direct contact of the product with water.

ITEM SPECIFICATIONS

TYPE OF INTERVENTION
Waterproofing and protection of old or new subfloors, such as terraces, balconies, roofs, etc.
TECHNICAL SPECIFICATION Supply and laying, following appropriate preparation of the substrate, of high-flexibility, waterproofing cement coating of **MAGIFLEX** type of **DRACO Italiana SpA.** The product will be applied at a rate of approx. 3.2 kg/m^2 or more, depending on the type of surface, with one or more coats using a spatula, with a thickness of at least 2 mm, with an alkali-resistant fibreglass mesh of MAGINET type and with the insertion of MAGICORNER corner-pieces and MAGIJOINT elastic joint cover strip if needed.

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PRODUCT FEATURES

	COMPONENT A	COMPONENT B
APPEARANCE	powder	liquid
COLOUR	grey	white
DRY MATTER CONTENT - UNI EN 480-8	100 %	48 %
PACKAGING	25 kg bag	9 kg can
STORAGE	12 months	12 months

APPLICATION SPECIFICATIONS

DENSITY OF THE MIX - UNI EN 1015-6	1700 kg/m^3 about
CONSISTENCE - UNI EN 1015-3	200 mm (plastic - trowelable)
APPLICATION TEMPERATURE	from + 5 ° C to + 35 ° C
POT LIFE (20°C)	60 min.
WAITING TIME BETWEEN ONE LAYER AND ANOTHER	at 20 ° C: 4-5 hours about at 10 ° C:> 8 hours
WAITING FOR ASSEMBLY of ceramic or other treatment-coating	Temp.> 20 ° C: 24 hours Temp. <10 ° C: 3 days
WATERPROOFING IN NEGATIVE THRUST	0,5 atm
APPLICATION THICKNESS	2 mm about
CONSUMPTION (*)	about 1,7 kg/m^2 per mm of thickness Spray-applied with plastering machine: about 2,2 kg/m^2 per mm of thickness

(*) *Consumptions given above refer to a product application on an evenly flat surface; they can increase if the substrate shows irregularities or slightly hollow spots.*

Times can vary depending on the substrate temperature and on the thermo-hygrometric environmental conditions.
The above values are indicative and calculated at a temperature of 20 ° C and relative humidity of 65%.

Legal notice - SLCMP version dated 01.03.2017

In the technical specifications herein, Draco Italiana s.p.a. used the indicators therein specified, with the relevant standards.

Please check if this Sheet and the figures therein contained apply to the product batch you are interested in or if they have been overridden by any later release. If in doubt, check whether this Sheet matches the one applicable at the time of finalising the sales agreement, at **www.draco-edilizia.it**, and/or contact our Engineering Department.

No advice provided by our staff, either verbally or in writing at your request, about the potential applications of the Products shall be binding under the sales agreement or shall be considered an integral part of the agreement. Such advice is based on our experience and on the best available practical and/or scientific knowledge; as such, it shall not be binding or conditional on the buyer or user. Please try our products first to find out whether they are fit for your intended use or application; in any case, you shall be solely responsible for your choice.

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PERFORMANCE FEATURES 20°C - 50% R.H. - Thickness 2 mm

REQUIREMENTS AS PER EN 14891 and EN 1504-2 COATING (C) ACCORDING TO PI, MC AND IR PRINCIPLES

FEATURE	TEST METHOD	MINIMUM REQUIREMENTS EN 1504-2	PERFORMANCE REQUIREMENTS
ADHESION TO CONCRETE - after 28 day	EN 1542	≥ 0.8 MPa for flexible traffic-free systems; ≥ 1.5 MPa with traffic	**Flexible traffic-free systems ≥ 0,8 N/mm²**
VAPOUR PERMEABILITY - equivalent air thickness S_D (m)	EN ISO 7783-2	class I: S_D <5m (permeable to water vapour) class II: 50m ≥ S_D ≥ 5m class III: S_D > 50 m (not permeable)	**S_D = 1.1m class I** (permeable to water vapour)
WATERPROOFING - capillary absorption - (kg/m²·h^{0,5}):	EN 1062-3	< 0.1 kg/m²·h^{0,5}	**0.1 kg/m²·h^{0,5}**
THERMAL COMPATIBILITY MEASURED AS BONDING ACCORDING TO 1542 (MPa) OF CONCRETE MC 0.4 UNI EN 1766: - Freeze-thaw cycles with immersion in de-cing salts:	EN 13687/1	≥ 0.8 N/mm²	**≥ 0,8 N/mm²**
STATIC CRACK-BRIDGING cracking ability after conditioning (28gg) **cert. ELLETIPI 46759/17**	EN 1062-7	classes from A1 (0.1 mm) to A5 (2,5 mm)	**Class A4 > 1,25 mm**
DINAMIC CRACK-BRIDGING at 23°C **cert. ELLETIPI 48191/18**	EN 1062-7	classes from B1 to B 4.2	**Classe B2** (No breakage in the test specimen after 1000 cycles of loading with crack opening from 0.10 to 0.15 mm)
CARBON DIOXIDE PERMEABILITY (CO_2) - equivalent air thickness S_D	EN 1062-6	> 50 m	**> 50 m**
REACTION TO FIRE	UNI EN 13501-1	Euroclass	**E**

FEATURE	TEST METHOD	MINIMUM REQUIREMENTS EN 14891	MAGIFLEX PERFORMANCE
INITIAL ADHESION	EN 14891–A.6.2	≥ 0.5 N/mm²	**1.2 N/mm²**
ADHESION AFTER CONTACT WITH WATER	EN 14891–A.6.3	≥ 0.5 N/mm²	**0.8 N/mm²**
ADHESION AFTER HEAT	EN 14891–A.6.5	≥ 0.5 N/mm²	**1.4 N/mm²**
ADHESION AFTER FREEZE-THAW CYCLES	EN 14891–A.6.6	≥ 0.5 N/mm²	**1.1 N/mm²**
ADHESION AFTER CONTACT WITH LIME WATER	EN 14891–A.6.7	≥ 0.5 N/mm²	**0.7 N/mm²**
ADHESION AFTER CONTACT WITH CHLORINATED WATER	EN 14891–A.6.9	≥ 0.5 N/mm²	**1.0 N/mm²**
IMPERMEABILITY TO WATER PRESSURE (150 kPa for 7 days of positive pressure)	EN 14891–A.7	no penetration	**no penetration**
CRACK-BRIDGING ABILITY AT +23 ± 2°C; 50 ±5 % U.R.	EN 14891–A.8.2	≥ 0.75 mm	**1.17 mm**
CRACK-BRIDGING ABILITY AT -5 ± 1°C	EN 14891–A.8.3	≥ 0.75 mm	**1.02 mm**
IMPERMEABILITY TO WATER IN NEGATIVE PRESSURE			**0.5 atm**

Adhesion strength according to EN 14891 determined with MAGIFLEX and C2 cementitious adhesive according to EN 12004

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