

MasterSeal 528

One-component, polymer modified cementitious waterproofing, class A3 crack bridging, fiber-reinforced, 2 mm in a single coat without reinforcing mesh, for concrete and screeds.

MATERIAL DESCRIPTION

MasterSeal 528 is a light grey, micro-fiber-reinforced, single-component, cement-based, modified-polymer waterproofing product specific for interventions both on sub-tile screeds and on reinforced concrete structures.

MasterSeal 528 is classified as a protective waterproofing UNI EN 14891 (to be used under ceramic tiles glued with adhesives), type CM-01-P:

- CM, cementitious waterproofing;
 - 01, crack bridging ability improved at low temperatures (-5°C);
 - P, resistant to water containing chlorides.
- It is also classified as a waterproofing product 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 2.2);
 - 5 (PR), suitable for increasing physical resistance / surface improvement (Method 5.1);
 - 8 (IR), suitable for increasing resistivity (Method 8.2).

FIELDS OF APPLICATION

MasterSeal 528 is indicated for waterproofing:

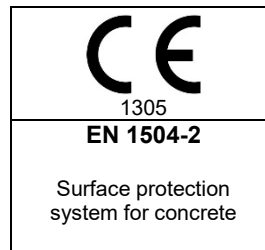
- under tiles such as balconies, terraces, sidewalks, showers, kitchens, tubs, fountains and swimming pools;
- of reinforced concrete structures such as tanks for drinking water or for white water, fountains, wells, flower boxes.

FEATURES AND BENEFITS

MasterSeal 528 also has the following additional peculiar characteristics:

- 2 mm applicable in a single coat;
- impermeable to water in both positive and negative thrust;
- resistant to UV rays and can therefore be left exposed;
- single-component: compared to two-components products, it allows simpler warehouse management, reduces storage spaces and disposal costs;
- reduces CO₂ emissions: compared to two-component waterproofing products, in fact, not having component B in plastic cans, it contributes to the reduction of greenhouse gas emissions into the atmosphere.

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 the relative DoP (Declaration of Performance).



COVERAGE

2.2 kg/m² for 2 mm thickness.

PACKAGING

Packed in 20 kg paper bag with handle.

STORAGE

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

| Technical Information | |
|------------------------------|---|
| Mixing ratio | 4,8-5,4 l (32-36 %) |
| Dough density, UNI EN 1015-6 | 1,55 kg/l |
| Application temperature | + 5°C - + 40°C |
| Workability time | 60 minutes a 20°C 45 minutes at 30°C |
| Recoating time at 20°C | 4-6 h |
| Consumption | 2.2 kg/m ² per 2 mm |
| Packs | 15 kg bag |

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| 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 | |
| | After 50 freeze / thaw cycles with UNI EN 13687/1 de-icing salts | | > 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 ₃ (0,5-1,25 mm) |
| | | Dyn | 23°C | Class B ₁ , B ₂ B _{3.1} B _{3.2} B _{4.1} B _{4.2} | Class B ₁ |
| 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.) | Classe 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 > 50 m |
| | To water | For capillary absorption EN 1062/3 | | < 0,1 kg·m ⁻² ·h ^{-0,5} | < 0,1 kg·m ⁻² ·h ^{-0,5} |
| Mechanical resistance | Impact | UNI EN ISO 6272 | | Class I: 4 N·m, Class II: 10 N·m Class III: 20 N·m | Class III |
| | Abrasion | UNI EN ISO 5470/1 (1000 g grindstone H22/1000 cycles) | | Weight loss < 3000 mg | < 600 mg |
| UV resistance | Aging under artificial atmospheric agents (2000 hours of UV rays and condensation), UNI EN 1062/11 | | No swelling, cracks or flaking | No swelling, cracks or flaking | |
| 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 528 | 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 0 g | |
| Crack bridging ability UNI EN 14891 A.8 | | a 23°C | ≥ 0,75 mm | > 1.1 mm | |
| | | a -5°C | ≥ 0,75 mm | > 1,1 mm | |
| Essential characteristic in accordance to hydraulic pressure | | | Limits and class | Performances | |
| Positive hydraulic pressure resistance UNI EN 12390/8 (5 bar) | | | Guidelines Cons. Sup. LL.PP Average penetration <20 mm Penetration maximum <50 mm | < 20 mm < 50 mm | |
| Resistance to negative hydraulic pressure UNI 8298/8 | | | 0 to 2,5 bar | 2,5 bar | |

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APPLICATION SHEET

STRUCTURALLY SOUND CONCRETE

The preparation of all surfaces must include the removal of all inconsistent surface parts, greases, oils, traces of release agents and must be carried out by pressure washing, hydro-sandblasting or sandblasting.

DAMAGED CONCRETE

Provide for the removal of the degraded concrete layer or contaminated by oils, greases or other substances and then for the quick-drying restoration with MasterSeal P 385 D mixed with water only. If a quick-drying restoration is not required, repair the deteriorated concrete using mortars from the MasterEmaco range.

WATER LEAKAGE

Water infiltration must be stopped using the fast setting mortar MasterSeal 590 or MasterSeal P 385 D mixed with water only, before applying MasterSeal 528.

COVINGS

The covings will be prepared using MasterSeal 590 or MasterSeal P 385 D mixed with water only. For details, always refer to the relevant technical sheets. In the case that is not feasible to realize the coving (for example in swimming pools lined with tiles that require an angle of 90°) reinforce the corners using the tape MasterSeal 944 or MasterSeal 924.

JOINTS

To ensure proper waterproofing of the structure great care must be taken over levelling out geometrical and constructional unevenness by suitably using MasterSeal NP 474 sealant, elastic tapes MasterSeal 944 or MasterSeal 924, MasterSeal 902 bentonite hydro-swelling water stop or MasterSeal 910 rubber hydro-swelling water stops.

POSSIBLE LEVELLING

In the waterproofing of structures intended for the continuous containment of liquids, therefore subjected to positive hydrostatic pressure, the substrate must be free of any discrepancies that could affect its effectiveness.

Any macroscopic pitting or other solutions of non-continuity of the substrate must be corrected by pre-

skimming with mortars from the MasterEmaco range or, promptly, during the application phase of MasterSeal 528, with the product itself.

For interventions of only protection and waterproofing of structures not subject to containment of liquids, such as, for example, piers and beams of road or railway viaducts, underpasses, walls against the ground, pillars, preventive smoothing is not necessary.

CLEANING AND SATURATION OF THE CONCRETE

Once the substrate has been prepared, thoroughly wash the whole surface to be treated to saturate it and also to remove any dust left from substrate preparation.

APPLICATION TEMPERATURE

Between +5°C and +40°C.

PREPARING THE MIX

Pour the entire 4.8 - 5.4 liters mixing water into a plastic bucket. Then gradually add the contents of the entire bag of MasterSeal 528, mixing it with a whisk drill at low rotation speed (400-600 rpm) thoroughly for about 2 minutes until a smooth, lump-free fluid mixture is obtained. Let the mixture rest for 2 minutes in order to allow the complete dispersion of the polymer. Then stir for another minute.

APPLICATION

The application can be done in a single coat either with a spatula or with a stiff bristle MasterSeal brush. Spray application by means of a Turbosol T7 screw pump or equivalent is also possible. For the set up of the pump, depending on the type of construction site, seasonality, any state of wear of the pump itself, always refer to the instructions provided by the manufacturer of the machines. Before starting the construction site, always provide this setting in a test field, also requesting the assistance of the manufacturer / hirer of the spraying machinery.

CURING

Whenever the product is not yet set it must be protected against the rain.

After 7 days MasterSeal 528 is fully cured and it can be used for waterproofing purposes.

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CLEANING

If MasterSeal 528 is used to waterproof drinking water tanks or fish tanks, it is recommended, after application and curing, to provide at least two pressurized water washes spaced a few hours apart in order to remove any traces of construction site processing residues.

COVERING WITH CERAMIC COATINGS

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

WATERPROOFING OF TANKS AND RETURNING TO SERVICE

After 7 days at 20°C it has reached the main waterproof characteristics and can therefore be put back into service.

SANITIZATION OF THE TANKS

Use a 1% sodium hypochlorite (bleach) solution in water. Leave to act for at least 30 minutes and a maximum of 60 minutes, then wash thoroughly with tap water. In the case of heavily soiled surfaces, this process can be repeated a second time or higher concentrations of sodium hypochlorite (maximum 5%) can be used.

NOTES ON THE HARDNESS OF THE CONTACT WATER

To evaluate the compatibility of the waterproofing coating with the hardness of the contact water, refer to the following table:

| Water hardness in French degrees ° f | Type of water | MasterSeal 528 |
|--------------------------------------|---------------|----------------|
| Up to 4 °f | Very sweet | Unsuitable |
| From 4 °f up to 8 °f | Desserts | Eligible |
| From 8 °f up to 12 °f | Medium hard | Eligible |
| From 12 °f up to 18 °f | Discret. hard | Eligible |
| From 18 °f up to 30 °f | Hard | Eligible |
| > 30 °f | Very hard | Eligible |

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.

Master Builders Solutions Italia Spa

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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.