

MasterShield WP 530

A single-component, elastic, fibre-reinforced, cement-based waterproofing product for the protection of concrete structures and for use beneath tiling.

Material description

MasterShield WP 530 is a cement-based, single-component, elastic and thixotropic waterproofing compound enriched with special polymers.

By mixing the powdered contents with water in accordance with the specified proportions, you obtain an easily workable mixture which, once cured, forms a protective coating with excellent adhesion to the substrate and waterproofing properties.

Due to its special fibre content, **MasterShield WP 530** can be applied in a 2 mm layer, even without including a reinforcing mesh.

Main uses

The cementitious coating **MasterShield WP 530** is suitable for the protection and waterproofing of concrete structures and cementitious substrates such as:

- hydraulic structures such as dams, canals, pipelines and reservoirs, even where contact with drinking water is anticipated;
- structures made of reinforced concrete that have insufficient concrete cover, shrinkage cracks or cracks due to minor deformations;
- cement screeds for structures such as balconies, terraces and pavements, subsequently covered with tiles.

If the structure is subject to specific operating conditions (e.g. aggressive water), always contact the Master Builders Solutions Technical Service to validate the application.

Features

- Can also be applied on earth-retaining structures or structures subject to negative hydraulic pressure.
- Capable of improving the durability of the repair by effectively counteracting the diffusion of carbon dioxide (anti-carbonation coating) and offering excellent crack-bridging properties even at low temperatures.
- Applicable in a 2 mm layer without a reinforcing mesh: due to special fibers that enrich the formulation, **MasterShield**

WP 530 can be applied without reinforcing mesh where traditional products need it;

- **Certificate for contact with drinking water.**
- **Highly resistant to weathering and UV rays**, it can therefore be left exposed.

In compliance with the European Regulations (EU No. 305/2011 and EU No. 574/2014), the product is CE marked in accordance with UNI EN 1504-2 and the relevant DoP (Declaration of Performance).

CE
EN 1504-2
Protection systems of the surface of the concrete
Category PI-MC-IR-RC

CE
EN 14891
Cementitious elastomer single-component, for work behind tiles.
Category CM-01-P

Consumption

1.2 kg/m² per cm of thickness.

Packaging and storage

MasterShield WP 530 is available in 20 kg bags.

Keep the product in its original packaging in a dry, protected location at a temperature between +5°C and +35°C. Do not expose to direct sunlight.

Under the above conditions, the product has a shelf life of 12 months.

Preparation and method of application

Preparing the substrates

- The concrete surface to be coated with **MasterShield WP 530** must be perfectly clean, solid, without degraded, loose or detached parts, without irregularities that could compromise the application of the product, and free of

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cement laitance, traces of release agents, or any substance that could affect the adhesion of the product to the substrate.

- Once the above has been verified, you can proceed according to the possible scenarios described below:
 - If it is not necessary to restore degraded areas or repair surface irregularities, the substrate must still be made slightly rough by sandblasting, hydro-sandblasting or high-pressure washing;
 - If, on the other hand, the substrate has slight irregularities or is slightly uneven, these must be repaired, after adequate treatment and saturation of the dry substrate surface with water, using fine-grained cortical repair mortars from the **MasterCrete** range;
 - If the substrate shows deterioration with thicknesses to be restored exceeding 1 cm and any exposed reinforcement rods, the latter must be treated with the **MasterCrete** range passivating mortar, while the appropriate **MasterCrete** line product must be used for the volume to be restored, depending on the nature of the work.
- When laying tiles over existing tiles that are to be subsequently covered with a new layer of tiles, the preparation of the ceramic substrate must include the removal of the vitrified surface layer by sanding.
- All joints between the flooring and vertical surfaces must be treated by creating chamfers, or **MasterJoint** reinforcement strips must be used.
- All structural joints, expansion joints or discontinuities subject to continuous dynamic stress must be adequately treated using elastic strips or sealants from the **MasterJoint** range.
- Before applying **MasterShield WP 530**, ensure that the porous substrate is also dust-free and damp but not saturated; in any case, there should be no traces of water on the surface, which should be removed with compressed air or absorbent sponges if necessary.

Preparation of mortar

Pour 3/4 of the necessary water into a clean, sufficiently large container to create the final mixture. Gradually add the powder

while mixing with a mechanical mortar mixer or drill with a whisk attachment, at low speed (< 500 rpm) to avoid excessive air incorporation. Continue mixing and add the remaining water to the mixture to comply with the mixing ratios indicated herein. Mix for a few minutes until the mixture is smooth and lump-free.

Leave the mixture to rest for a few minutes, then stir for about a minute.

The workability time of the product at 20°C is approximately 40 minutes.

Application of mortar

For manual application of **MasterShield WP 530**, use a smooth trowel, roller or brush, depending on the consistency achieved.

For spray applications using a plastering machine, do not use continuous-cycle machines. **MasterShield WP 530** must be mixed separately and then loaded into the hopper either manually or using a dedicated pumping unit.

In case of several environmental conditions or heterogeneous supports, we always recommend the application including a reinforcing mesh (e.g. A.R. glass fibre mesh for skim coats with a weight greater than 100 g/m²); in case of doubt, always contact the Master Builders Solutions Technical Service to validate the application.

Cleaning of equipment

To clean tools whilst the product is still fresh, use fresh water.

Ageing and maturation

In environmental conditions such as dry, very windy or particularly hot climates, curing carefully the applied product to prevent excessive and sudden drying of the product itself. In such cases, proceed by keeping the surface moist with sprayed water.

Application temperatures

Application environment temperature needs to be between +5°C and +35°C.



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Warnings

- Do not apply **MasterShield WP 530** to surfaces that are overheated, frozen or thawing.
- Do not apply **MasterShield WP 530** for thick coatings.
- Do not add water, binders or aggregates to **MasterShield WP 530**.
- Do not add fresh mortar to the mixture that has already begun to set.
- Protect against rain or any water or other substances for at least 24 hours after application.

Technical data

Product identification data	
Texture	Powder
Colour	Grey
Mixing ratio	4.8 - 5.2 litres of water per bag (24-26%)
Consumption	1.2 kg/m ² per cm of thickness
Fresh density	approximately 1500 kg/m ³
Mixture consistency	Plastic - Thixotropic
Workability time (+20°C)	40 minutes
Application temperature	+5°C to +35°C
Category (EN 1504-2)	PI-MC-IR-RC
Category (EN 14891)	CM-01-P
Minimum applicable thickness	2 mm

Performance – UNI EN 1504-2

(The performance values shown below are obtained in accordance with UNI EN 1504-2 for a dry thickness of 2 mm)

Feature	Test method	Regulatory requirement	Product performance
Adhesion to concrete	UNI EN 1542 (MC 0.40 substrate – UNI EN 1766)	≥ 0.8 MPa	> 1.0 MPa
Water permeability as capillary absorption coefficient	EN 1062-3	$W < 0.1 \text{ kg/m}^2\text{h}^{0.5}$	$W < 0.02 \text{ W kg/m}^2\text{h}^{0.5}$

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Crack-bridging (for a thickness of 2.5 mm)	static at 23°C	EN 1062-7	Classes A ₁ , ..., A ₆	Class A3 (0.5–1.25 mm)
	static at -5°C	EN 1062-7	Classes A ₁ , ..., A ₆	Class A3 (0.5–1.25 mm)
	dynamic at 23°C	EN 1062-7	Classes B ₁ , ..., B _{4,2}	Class B2
	dynamic at -5°C	EN 1062-7	Classes B ₁ , ..., B _{4,2}	Class B2
Permeability	Water vapour	EN 7783	Class I, Sd < 5 m Class II, 5 m ≤ Sd ≤ 50 m Class III, Sd > 50 m	Class I, Sd < 5 m
	CO ₂	EN 1062-6	Sd > 50 m	Sd > 150 m
Chemical resistance	UNI EN 13529	I _ Petrol	<u>Class I</u> : after 3 days of contact, reduction in Shore hardness ≤ 50% <u>Class II</u> : after 28 days of contact, reduction in Shore hardness ≤ 50% <u>Class III</u> : after 28 days under pressure, reduction in Shore hardness ≤ 50%	Class III
		5a _ Alcohols and glycol ethers		Class III
		6a _ Halogenated hydrocarbons		Class III
		9a _ Organic acids (except formic acid) and their salts		Class III
		10 _ Inorganic acids up to 20% and salts (except hydrofluoric acid, oxidising acids and their salts)		Class III
		11 _ Inorganic bases and their salts (except ammonium solutions and oxidising solutions of these salts)		Class III
		12 _ Solutions of non-oxidising inorganic salts with a pH of 6–8		Class III
		15a _ Ayclic ethers		Class III
Abrasion resistance (for a thickness of 2.5 mm)	EN ISO 5470-1 (load 1000, H22 abrasive /1000 cycles)		weight loss < 3000 mg with H22 abrasive after 1000 cycles/load 1000 g	< 500 mg

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Performance – UNI EN 14891

(The performance values shown below are obtained in accordance with UNI EN 1504-2 for a dry thickness of 2 mm)

Feature	Test method		Regulatory requirement	Product performance
Water resistance	UNI EN 14891 – A.7		No penetration Weight gain < 20 g	No penetration No weight gain
Crack bridging	+23°C	EN 14891 – A.8	≥ 0.75 mm	≥ 0.75 mm
	-5°C	EN 14891 – A.8	≥ 0.75 mm	≥ 0.75 mm
Bonding of adhesives UNI EN 12004	Initial (adhesion after 24 hours)	EN 14891 – A.6.2	≥ 0.5 MPa	≥ 1.0 MPa
	After being submerged in water	EN 14891 – A.6.3	≥ 0.5 MPa	≥ 0.5 MPa
	After thermal ageing	EN 14891 – A.6.5	≥ 0.5 MPa	≥ 0.5 MPa
	After cycles of freezing and thawing	EN 14891 – A.6.6	≥ 0.5 MPa	≥ 0.5 MPa
	After coming into contact with lime-saturated water	EN 14891 – A.6.9	≥ 0.5 MPa	≥ 0.5 MPa
	After contact with chlorinated water	EN 14891 – A.6.7	≥ 0.5 MPa	≥ 0.5 MPa

Additional performance

(The performance values shown below are obtained for a dry thickness of 2 mm)

Feature	Test method	Regulatory requirement	Product performance
Resistance to negative hydraulic pressure	UNI 8298-8	From 0 bar to 2.5 bar	2.5 bar

Safety instructions

For guidance on the correct and safe use, transport, storage and disposal of the product, please see the latest Safety Data Sheet (SDS).

Other services

For additional technical information, brochures, references, technical reports and technical assistance please visit www.master-builders-solutions.com/it-it or alternatively contact infomac@masterbuilders.com.

Scan QR code to visit the product page and download the latest version of this technical sheet and any additional documentation.



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Disclaimer

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.

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.

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