

MasterRoc MP 4WRE

Premixed, single-component, anti-washout mortar for injections, with rheology specifically designed for injections in the presence of water even in motion.

Material description

MasterRoc MP 4WRE is a pre-mixed cement mortar, single-component with maximum diameter equal to 700 μm , when mixed only with water it results in a mortar with high fluidity and free of bleeding or segregation even under high-pressure conditions. Thanks to its anti-washout features it gives a fluid mixture with high cohesion, which withstands water washout even in motion and is therefore especially suited to be injected in cavities and voids with water.

The mixture is optimally pumpable.

Fields of application

The product may be used in applications such as filling the voids behind tunnel segments, also in presence of water, or in injection applications to fill and consolidate structures, in general where anti-washout features are required.

Features and benefits

- Extremely low viscosity and therefore excellent penetration capacity.
- Regulation of the gel formation time.
- The mixing and pumping equipment used are those typical for the injection of cement slurries.
- It can be applied with one-two-component pumps.
- Good adhesion on wet surfaces.
- Can be used at temperatures between 5 and 35°C.
- Being a mineral blend, the product is not aggressive so safety and hygienic conditions in the workplace are respected.

Consumption and packaging

1.36 kg of product is required to obtain one litre of mortar. Available in 25 kg bag and in bulk.

Storage

Store the product in a cool, dry place indoors (5 ÷ 35°C) away from direct contact with the sun, fire or naked flames.



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Essential characteristic			
Marsh cone UNI EN 445 (with orifice diameter 12.5 mm)	test performed upon completing mixing	UNI EN 445	< 30 s
	test performed 4 hours after mixing (with material kept in motion)		< 30 s
Spillage test with mini cone, UNI EN 445		UNI EN 445	140 mm
Density of the fresh mixture		UNI EN 1015-6	1.830 ± 50 Kg/m ³
Chloride content		UNI EN 1015-17	< 0.05%
Setting time		UNI EN 196-2	Start after about 8 hours End after about 13 hours
Compression strength		UNI EN 196-1	1 g ≥ 1 MPa 7 gg h ≥ 3.5 MPa 28 gg h ≥ 5.5 MPa
Bleeding test		UNI 480-4 - UNI 11152	Absent
Bleeding test under 3.0 bar pressure (pressurised cylinder method)			Absent
Compression elastic modulus		UNI EN 13412	4300 MPa
Dynamic elastic modulus		UNI EN 12504-4	6300 MPa
Anti-washout features		BS 8443	Weight loss < 2.5% after 5 cycles

Application sheet

Mixing

Mix MasterRoc MP 4WRE with water, dosage is 37 - 41% of powder weight, using vertical axis mixers to obtain a consistent mixture without any lumps. Do not exceed the recommended mixing water in order to avoid either bleeding and/or reduction of the anti-washout capability.

Application

Inject the mortar with conventional injection pumps inside the suitably arranged pipes.

Equipment cleaning

Due to the high mixture cohesiveness it is recommended to remove waste material from the equipment as soon as possible.

Safety instruction

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



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Other services

For additional technical information, brochures, references, technical reports and technical support 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 data sheet and any additional documentation.



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.

Master Builders Solutions Italia Spa
Via Vicinale delle Corti, 21 – 31100 Treviso – Italia
T +39 0422 429200 F +39 0422 421802
www.master-builders-solutions.com/it-it
e-mail: infomac@masterbuilders.com