

MasterRoc MP 303 CE

Two-component, fast-reacting acrylic resin for the permanent sealing of water flows and the restoration of cracked concrete and masonry.

Material description

MasterRoc MP 303 CE is a hydrophilic, two-component, highly reactive, acrylic waterproofing resin with low viscosity for excellent penetrability. The product reacts quickly to form a very flexible hydrogel with excellent swelling properties.

Fields of application

MasterRoc MP 303 CE was designed for use as a permanent waterproofing system for water flows and to create film layers of resin. Thanks to its low viscosity (close to that of water), the resin is particularly suitable for little open cracks and long injection routes. Thanks to the hydrophilic characteristics of the product, capable of trapping water molecules within its structure, adhesion is good even on wet surfaces. with good adhesion properties even on damp or wet surfaces. The reacted resin is resistant to acidic or alkaline solutions as well as to other solvents. Once reacted MasterRoc MP 303 CE forms a very flexible compact resin, even in the presence of small settlements of the soil / structure or movements inside joints and fractures, it is able to seal permanently, thanks to the swelling up to 200% of its volume. initial. The swelling is reversible and even after dry periods the resin retains its self-healing properties.

MasterRoc MP 303 CE can be used for:

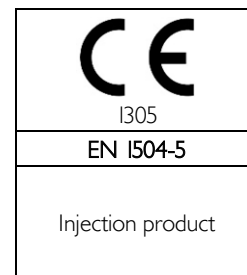
- sealing of slight splashes of water;
- injections of glaze;
- restoration of cracks in concrete (EN 1504-5: category S);
- permanent sealing of tunnels, shafts and brick structures.

Features and benefits

- Very low viscosity to allow the resin to penetrate into very narrow cracks and fractures;

- gelation time adjustable between 20 seconds and 60 minutes at 20°C. Thanks to the modular use of the specific retarder;
- usable between 5°C and 40°C.

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 1504-5 of the relative DoP (Declaration of Performance).



Packaging

Standard packaging:

MasterRoc MP 303 CE resin: 22.5 kg can

MasterRoc MP 303 CE accelerator: 1 kg bucket

MasterRoc MP 303 CE hardener: 1 kg bag

MasterRoc MP 303 CE retarder: 1 kg bucket

Storage

The components of the MasterRoc MP 303 CE can be stored for a period of 12 months if hermetically sealed in their original containers and stored in dry conditions at temperatures between + 10°C and + 30°C. Keep away from sunlight.



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Application data		
MasterRoc MP 303 CE resin	Appearance	clear blue liquid
	Viscosity (20°C)	40 mPa s
	Density (20°C)	1.19 kg / l
MasterRoc MP 303 CE accelerator	Appearance	clear liquid
	Viscosity (20°C)	280 mPa s
	Density (20°C)	1.12 kg / l
MasterRoc MP 303 CE hardener	Appearance	solid white
	Density (20°C)	About 2.6 kg / l
MasterRoc MP 303 CE retardant	Appearance	light yellow liquid
	Viscosity (20°C)	1 mPa s
	Density (20°C)	1 kg / l
Mixed material (mixing ratio resin: Comp. B of 1:1)	Appearance	clear blue liquid
	Viscosity (20°C)	5 mPa s
	Density (20°C)	1.14 kg / l
	Gel time (20°C)	10 seconds to 3 minutes
Technical data according to EN 1504-5		Performances
Water tightness	7 105 Pa	
Viscosity	≤ 60 mPa.s	
Corrosion resistance	It does not present any corrosive phenomenon	
Volume and weight changes due to air drying and water conservation	Volume change 87% Weight chagement: 76%	
Water resistance	Pass	
Resistance to dry and wet cycles	Pass	
Compatibility with concrete	Pass	
Application temperatures	5°C to 40°C	
Dangerous substances	Compliant with 5.4	

Application sheet

Application

The resin (e.g. 22.5 kg) must be premixed with 4.5% accelerator (e.g. 1 kg) to activate it before use.

Component B (e.g. 20 kg) is activated by dissolving 0.15-5% of hardener (e.g. from 30 g to 1 kg) in water with the same volume of activated resin. The amount of hardener must be adjusted according to the desired reaction start time (see table 1). The activated resin and component B have a pot life of about 5 hours at 20°C.



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The activated components are injected in a 1: 1 volumetric ratio through the use of a two-component pump with an in-line static mixer.



Table 1: Variations of gel time in the laboratory

Amount of MasterRoc MP 303 CE hardener		Gelation time at 10°C	Gelification time at 20°C
[%]	[g] for 20 kg of water	[min]	[min]
0.2	40	05:00	02:10
0.25	50	04:05	01:58
0.5	100	01:55	00:63
1	200	01:18	00:36
1.5	300	00:50	00:27
3	600	00:38	00:18
5	1000	00:24	00:14

CE certification tests were performed with 0.5% MasterRoc MP 303 CE Hardener.

Notes: for uses where CE certification is not required, the reaction time can be extended using MasterRoc MP 303 CE retarder (see Table 2). Simply by adding 1-5% retardant (e.g.

200 g to 1 kg) in the premixed component B. For example, by adding 1 l of retardant in 20 l of water, and from 200 g to 1 kg of hardener, the reaction times shown in table 2 are obtained.

Table 2: dosage of hardener and retarder to vary the gelation time

Amount of MasterRoc MP 303 CE hardener		Gelification time at 10°C	Gelification time at 20°C
[%]	[g] for 20 kg of water and 1 kg of retardant	[min]	[min]
1	200	103:00	40:57
2	400	40:40	15:16
3	600	21:45	10:25
4	800	12:48	7:02
5	1000	11:18	5:43

Note: the reaction time of the resin is strictly dependent on the temperature of the components and of the medium in which it is injected.

Equipment cleaning

The equipment can be easily cleaned using water

Warning

MasterRoc products are for professional use. For further information, consult the Master Builders Solutions Italia Spa area technician.

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.

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