

MasterRoc[®] MP 307 CE

Low viscosity, fast reacting acrylic resin for permanent water sealing and layer curtaining of concrete and masonry

Material Description

MasterRoc MP 307 CE is a highly reactive two-component acrylic sealing resin with a low viscosity for good penetration. The product cures quickly, forming a rubber-like resin with the ability to withstand certain ground and crack movement. MasterRoc MP 307 CE is especially designed for concrete repair and is CE certified according to EN 1504-5.

Areas of Application

- Concrete repair - swelling fitted filling of cracks and fissures (EN 1504-5: category S)
- Curtain injection
- Permanent water sealing of tunnel and shaft concrete linings and masonry
- Stopping of minor water inrush through cracks
- Injection hose applications
- Ground stabilization

Characteristics and Benefits

- Upon curing forms a highly flexible compact resin with good adhesion properties even on damp and wet surfaces.
- Due to the special latex emulsion of Part B the cured system is rubber-like and strong but still extremely flexible.
- Very low viscosity (close to water) allows deep penetration at low pressure into very fine cracks or fissures and long flow paths.
- Withstands a permanent water pressure of up to 7 bar.
- Superior flexibility (elongation at break >300%) enabling balance of ground movements or settlements.
- Not sensitive to water and always stays close to its original shape (maximum change of mass -1.5% to +20%).
- Neither the liquid nor the cured resin is corrosive and is therefore suitable for reinforced concrete structures.
- Good chemical resistance against acids, bases, solvents, fuels, etc.
- Environmentally friendly: harmless in contact with groundwater and does not emit any dangerous substances.

Packaging

Standard packaging
MasterRoc MP 307 CE Resin: 20 kg can

MasterRoc MP 307 CE Accelerator: 1.0 kg can
MasterRoc MP 307 CE Part B 20 kg can
MasterRoc MP 307 CE Hardener: 0.3 kg can

Technical Data

MasterRoc MP 307 CE Resin

Appearance Clear liquid
Viscosity (20° C) 5 mPa·s
Density (20° C) 1.05 kg/l

MasterRoc MP 307 CE Accelerator

Appearance Clear liquid
Viscosity (20° C) 2 mPa·s
Density (20° C) 0.93 kg/l

MasterRoc MP 307 CE Part B

Appearance White liquid
Viscosity (20° C) 12 mPa·s
Density (20° C) 1.01 kg/l

MasterRoc MP 307 CE Hardener

Appearance White solid
Density (20° C) Approx. 2.6 kg/l

Mixed material

(mixing ratio Resin: Part B of 1:1)
Appearance White liquid
Viscosity (20° C) 7 mPa·s
Density (20° C) 1.03 kg/l
Gel time (20° C) 3 to 22 minutes
Final curing (20° C) 10 to 25 minutes

Application Procedure

Premix the Resin (20 kg) with 5% of accelerator (1 kg) to activate it prior to use.

To prepare Part B, dissolve 0.20% (40 g) to 5% (1 kg) of hardener powder into 20 l of Part B and (the same volume of Part B as of activated resin). The amount of hardener is adjusted to the needed pot life (see Table 1).

The activated resin and Part B have a pot life of approx. 5 hours at 20 °C. The activated components are injected in the ratio of 1:1 by volume, using a two-component injection pump, equipped with a static in-line mixer or by premixing the two



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components thoroughly and using a one-component pump (long open time needed).

For steel reinforcement injection, the amount of hardener powder should be limited to 1.5 % (e.g., 300 g).

Table 1: Hardener dosage to adjust gel time

Amount of MasterRoc MP 307 CE Hardener		Gel time at 10°C	Gel time at 20°C
[%]	[g] per 20 kg Part B	[min]	[min]
0.2	40	24:18	22:00
0.25	50	21:42	20:17
0.5	100	17:15	15:17
1	200	13:10	09:40
1.5	300	09:40	07:10
3	600	05:46	04:30
5	1000	03:40	03:30

CE certification tests have been carried out with 0.25% of Hardener powder.

Please Note: The reaction time is dependent on the temperature of the components and the ground.

The components can be prepared accordingly using water instead of MP 307 CE Part B. Please note that for this composition, the CE testing has not been done.

Cleaning of Injection Equipment

Equipment can easily be cleaned of uncured material using water (if possible, with a detergent).

Storage

In unopened, tightly closed containers, the components of MasterRoc MP 307 CE can be stored for up to 12 months, if kept dry and within a temperature range of +10 °C to +30 °C, protected from sunlight.

Precautions

Please refer to the Material Safety Data Sheet for further safety measures.

Avoid contact with skin and eyes by using the required personal protective equipment, such as overalls, gloves, and safety glasses.

If contact with skin occurs, wash thoroughly using soap and water. If contact with eyes occurs, rinse thoroughly with water and seek medical advice. The cured Master-Roc MP 307 CE is harmless.

Uncured products should be prevented from entering local drainage systems and water courses. Spillage must be collected using absorbent materials such as sawdust and sand and disposed of in accordance with local regulations.

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Disclaimer

The information given here is true, represents our best knowledge and is based not only on laboratory work but also on field experience. However, because of numerous factors affecting results, we offer this information without guarantee and no patent liability is assumed. For additional information or questions, please contact your local representative.

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