

MasterRoc[®] MP 307 CE

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

Product 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.

Fields 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

Features 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 more than 12 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 -15% 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 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

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|------------------|--------------|
| 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

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|----------------|------------------|
| 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 15 minutes |
| Final curing (20°C) | 10 to 25 minutes |

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Application procedure

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

To prepare Part B, take 20 l of water and dissolve 0.20% (40 g) to 5% (1 kg) of hardener powder in the water (the same volume of water 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 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 water | [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.

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.

Safety 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 MasterRoc 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.



We create chemistry

MasterRoc[®] MP 307 CE

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| MasterRoc[®] MP 307 CE | |
| BASF Construction Chemicals Europe Ltd. Im Tiergarten 7 CH-8055 Zurich Switzerland | |
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| EN 1504-5 | |
| Concrete injection product for filling of voids, fissures and cracks | |
| U (S2) W (1) (1/2/3) (5/40) | |
| Water tightness | 7·10 ⁵ Pa |
| Viscosity | ≤ 60 mPa.s |
| Corrosion behaviour | no corrosion |
| Change in volume / mass by air drying and water immersion | Air drying: approx. -15 % Water immersion: approx. +20 % |
| Sensitivity to water | passed |
| Sensitivity to wet-drying cycles | passed |
| Compatibility with concrete | passed |
| Application temperature | + 5°C to +40°C |
| Dangerous substances | Comply with 5.4 |

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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