

MasterRoc MP 307 CE

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

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 BS EN 1504-5.

FIELDS OF APPLICATION

- Concrete repair - swelling fitted filling of cracks and fissures (BS 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

MasterRoc MP 307 CE offers the following 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.

APPLICATION

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.

The components can be prepared accordingly using water instead of MasterRoc 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).

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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.

PACKAGING

MasterRoc SA 160 is supplied in the following 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

CONTACT DETAILS

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CE	
MasterRoc[®] MP 307 CE	
Master Builders Solutions Deutschland GmbH Salzachstrasse 17, 68199 Mannheim Germany	
12	
EN 1504-5	
Injection product for swelling fitted filling of cracks, fissures and voids	
U (S2) W (1) (1/2/3) (5/40)	
Water tightness	7·10 ⁵ Pa
Viscosity	≤ 60 mPa.s
Corrosion behavior	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

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Product 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 15 minutes
Final curing @ 20°C	10 to 25 minutes
Logistics	
Shelf Life	12 months if stored according to manufacturer's instructions in unopened container.
Storage Conditions	Store in original sealed containers and at temperatures between 10°C and 30°C. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Handling and Transportation	Refer to MasterRoc MP 307 CE Safety Data Sheet
Disposal	Refer to MasterRoc MP 307 CE Safety Data Sheet

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"Master Builders Solutions UK Ltd" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.