# MasterRoc MP 300

Low viscosity, flexible acrylic resin

## Material Description

MasterRoc MP 300 product is a versatile, low viscosity resin that facilitates adjustable set times with adjustable water to resin contents. MasterRoc MP 300 product forms a flexible crosslinked gel with excellent adhesive properties. MasterRoc MP 300 product retains its excellent swelling property in the presence of water, even after dry periods.

## Areas of Application

- Sealing and consolidation in damp or wet areas
- Concrete repair
- Box culvert joint repair
- Storm and sewer pipe sealing
- Permanent water sealing of tunnels, shafts, concrete linings and masonry
- Pre-excavation injection

## Characteristics & Benefits

- Acrylamide-free
- Re-swells upon exposure to moisture after dry periods
- Cured material is a highly flexible gel
- Excellent adhesive properties, even on damp or wet surfaces
- Resistant to acidic and alkaline solutions, as well as many other solvents
- Very low viscosity (close to that of water)
- Controllable gel time (between 10 seconds and 30 minutes at 20 °C.
- Can be used with colored dye for better detection
- Environmentally preferable
- Swelling-fitted filling of cracks and fissures
- Can accommodate structural and ground movements
- Self-heals even after dry periods
- Very low viscosity helps in deep penetration of the product into very fine cracks or fissures and long flow paths, even at low pressure
- Harmless when in contact with groundwater, with no emission of dangerous substances

## Technical Data

| MasterRoc MP 300 Part A-Resin | |
|---|---|
| Appearance | Light brown liquid |
| Density, 20°C | 1.15kg/L |
| **MasterRoc MP 300 Part B-Emulsion** | |
| Appearance | White emulsion |
| Density, 20°C | 1.02kg/L |
| **MasterRoc MP 300 Part C-Accelarator** | |
| Appearance | Clear liquid |
| Density, 20°C | 1.10kg/L |
| **MasterRoc MP 300 Part D-Hardener** | |
| Appearance | White powder |
| Density, 20°C | 2.6kg/L |

| Mixed material (Part A & B) | |
|---|---|
| Appearance | Light brown liquid |
| Viscosity, 20°C | 2-5 mPas (cP) depending on mix ratio |
| Density, 20°C | 1.0kg/L |

## Application

Part A (activated resin) and Part B (activated hardener) have to be prepared prior to injection, based on the desired gel time.
To prepare Part A, mix MasterRoc MP 300 Resin with MasterRoc MP 300 Accelerator.
To prepare Part B, dissolve MasterRoc MP 300 Hardener powder in water. Typical Part B solution contains 4% hardener powder by weight. To use hardener solution with different amount of solids, please contact your local Master Builders Solutions Technical Sales Representative.
Alternatively, especially if increased density of the cured gel is required, Part B can also be prepared by replacing all or part of the water with MasterRoc MP 300 Emulsion. Please contact your local Master Builders Solutions Technical Sales Representative for additional information or guidance.

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## Reaction Time

Table 1 below shows the dosage of accelerator in relation to the gel time at different temperatures (Using a 4% hardener solution as Part B).

Table 1: MasterRoc MP 300 Accelerator dosages vs Gel times

| Accelerator Dosage | | Gel Time, mins | |
|---|---|---|---|
| Percent by Mass of Resin | mL/L of Resin | 10°C | 21°C |
| 3.0 | 33.5 | 1:45 | 1:30 |
| 4.0 | 44.7 | 1:05 | 0:55 |
| 5.0 | 55.8 | 0:55 | 0:40 |
| 6.0 | 67.0 | 0:45 | 0:35 |
| 7.0 | 78.1 | 0:35 | 0:30 |
| 8.0 | 89.3 | 0:30 | 0:25 |
| 10.0 | 111.6 | 0:25 | 0:20 |
| 12.0 | 134.0 | 0:20 | 0:18 |
| 15.0 | 167.4 | 0:17 | 0:15 |

Note: Gel time is dependent on the solid content of the hardener solution, amount of accelerator added, temperature of the activated components, and the temperature of the ground or structure.
For information on getting gel times outside of the range shown in Table 1, please contact your local Master Builders Solutions Technical Sales Representative.
The following example illustrates how to prepare Part A and Part B to get a gel time of 30 seconds at a temperature of 21°C), with 20 kg pail of MasterRoc MP 300 Resin.
To prepare Part A, mix one pail 20 kg of MasterRoc MP 300 Resin with 52 fl oz (1.3 L) of MasterRoc MP 300 Accelerator (which is around 7% of the resin by mass).
To prepare Part B, dissolve 0.8 kg of MasterRoc MP 300 Hardener in 18.3 L of water.
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. The activated resin (Part A) and the activated hardener (Part B) have a pot life of approximately 8 hours at 20 °C.

## Cleaning of Injection Equipment

Injection equipment and hoses can be cleaned of uncured material using water (if possible, with a detergent).

## Packaging

| | |
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| MasterRoc MP 300 Part A (Resin) | 20kg |
| MasterRoc MP 300 Part B (Emulsion) | 20kg |
| MasterRoc MP 300 Part (Accelerator) | 1.0kg |
| MasterRoc MP 300 Part D (Hardener) | 1.0kg |

## Storage & Shelf Life

MasterRoc MP 300 product components should be kept in a dry place within a temperature range of 5 °C to 30°C and be protected from direct sunlight. In unopened, tightly closed containers, the components of MasterRoc MP 300 product can be stored for up to 12 months.
Prolonged exposure to sunlight and high temperatures above 30°C may cause the MasterRoc MP 300 product components to solidify.

## Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

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## Disclaimer

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