

MasterRoc[®] MP 355

Highly reactive, two component polyurethane injection foam to stop high volume water in-gress and for ground consolidation

Material Description

MasterRoc MP 355 is a two component, solvent-free polyurethane injection resin specifically designed for rapid water stopping and ground consolidation.

Areas of Application

- Permanent stopping of high-volume water ingress in underground structures
- Also suitable for cold water
- Ground consolidation

Characteristics and Benefits

- On contact with water, the product forms a rigid foam
- Without the presence of water, the product also reacts and forms a hard substance. This is a significant safety advantage, as the material never remains uncured
- On contact with water the reaction is completed within a short period of time
- Provides structural strength and rigidity

Packaging

Part A: 25 kg cans and 205 kg drums

Part B: 30 kg cans and 250 kg drums

Technical Data

(at 20° C)	Color	Viscosity mPa.s	Density kg/l
PART A	Yellowish	320	1.00
PART B	Dark brown	240	1.23
Accelerator 10	Yellowish	500	1.00
Accelerator 15	Yellowish	1000	1.00

Application Procedure

Part A and B are delivered ready to use. They are injected in the proportion of 1:1 by volume using a two-component injection pump equipped with a static in-line mixer nozzle, as shown below:



example of a two-component injection pump

Please note: The foaming reaction time is dependent on the temperature of the product, and the ground water.

MasterRoc MP 355's properties can be altered by the use of three different accelerators:

- MasterRoc MP 355 Accelerator 10
- MasterRoc MP 355 Accelerator 15
- MasterRoc MP 355 Accelerator 25

For a high foaming factor (approximately 20-25) and a rapid reaction for water stopping: Add the Accelerator 10 to PART A by 0.5 - 2% dosage (by weight of PART A).

For a dense foam (factor 7-9) with high mechanical strength for ground consolidation: Add the Accelerator 15 to PART A by 0.5 - 2% dosage (by weight of PART A).

Accelerator 25 combines the functions of Accelerator 10 and Accelerator 15. If a big amount of water is expected in soil or rock and a strong foam with a low expansion factor is needed, Accelerator 25 should be added to PART A by 0.1 - 1% dosage (by weight of PART A).

If a particularly rapid reaction is required, one can additionally pre-mix water to PART A, 2% by volume of PART A.

After the addition of accelerator (and water if added) to Part A, the can should be shaken vigorously to ensure even dispersion throughout the resin prior to injection works.

To achieve the best mixing of the components during injection, the inclusion of a static in-line mixer in connection with the mixing head is strongly advised. The length of the static mixer should be approximately 32 cm.

Note: MasterRoc MP 355 is not suitable for large volume void filling.

Cleaning of Injection Equipment

For short breaks in the injection procedure, pump Part A through the in-line static mixer nozzle. After the injection

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process pump an appropriate cleaning and maintenance agent (MasterRoc MP 230 CLN) or oil containing no water, through the pump and injection hoses until MasterRoc MP 355 is completely washed out. Store the pump and hoses with the cleaning agent inside and seal all openings.

Storage

If stored in dry conditions in unopened, tightly closed original containers and within a temperature range of +5°C and +35°C, the components of MasterRoc MP 355 have a shelf life of 24 months.

Precautions

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 an eyebath filled with boracic solution and seek medical advice. Refer to the Safety Data Sheet for safety measures. The cured product is harmless and inert.

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.

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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