

MasterRoc[®] MP 355 Thix

Highly Reactive, Two Component Polyurethane Injection Resin / Foam to Stop Very High-Volume Water Ingress

Material Description

MasterRoc[®] MP 355 Thix is a two component, solvent-free polyurethane injection resin specifically designed for rapid water stopping under difficult conditions (flowing water).

Areas of Application

- Stopping of high-volume water ingress in underground structures
- Also suitable for cold water

Characteristics and Benefits

- On contact with water, the reaction is completed within a short period of time
- Thixotropic properties which give increased stability and anti-diluting properties when exposed to high water flows
- Suitable when structural strength is required immediately (see Part A of MP 355 Thix)
- When in contact with water, the product forms rigid foam
- Without the presence of water, the product also reacts and forms a stiff, rubber-like material. This is a significant safety advantage as the material will be cured in any conditions
- Very fast viscosity increase: > 2000 mPa.s at 10 seconds, > 4000 mPa.s at 20 seconds (20°C)

Technical Properties

(taken at 20° C)	Color	Viscosity (mPa.s)	Denisty (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
Accelerator 25	Yellowish	250	0.90

Reaction Data (typical)

System variations and conditions	Time to start foaming	Time to end foaming	Expansion factor
Part A + B + water	60 (10 °C)	80 (10 °C)	8
	40 (20 °C)	60 (20 °C)	15
	20 (30°C)	40 (30 °C)	20

Processing Method

Parts A and B are always to be injected at the volumetric ratio of 1:1 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 and foaming factor is dependent on the temperature of the product and the ground water.

It is possible to modify properties of cured MasterRoc[®] MP 355 Thix by the use of different accelerators:

- MasterRoc[®] MP 355 Accelerator 10
- MasterRoc[®] MP 355 Accelerator 15
- MasterRoc[®] MP 355 Accelerator 25

For a high foam expansion factor (approximately 15-20) 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).

For an extremely rapid foaming reaction and a high

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early strength of the foam, add Accelerator 25 to part A by 0.1 – 1 % dosage (by weight of part A). A foam expansion factor of 12-15 can be achieved. This foaming property is particularly suitable for extremely high-water inflow situations.

If a particularly rapid reaction is required, one can additionally premix 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 is required. The length of the static mixer should be approximately 50cm.

Packaging

MasterRoc[®] MP 355 Thix is available in the following packaging:

Part A: 25 kg cans and 205 kg drums

Part B: 30 kg cans and 250 kg drums

Cleaning of Tools

For short breaks in the injection procedure, pump Part A through the in-line static mixer nozzle. After the injection 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 Thix is completely washed out. Store the pump and hoses with the cleaning agent in-side and seal all openings.

Storage and Shelf Life

MasterRoc[®] MP 355 Thix has a shelf life of 24 months if stored in original, unopened packaging between +5°C to +35°C. The storage area must be kept dry.

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 vapor 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.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

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