

MEYCO[®] MP 355 A3

Highly reactive, two component polyurethane injection foam

Product description

MEYCO[®] MP 355 A3 is a two component, solvent-free polyurethane injection resin specifically designed for rapid water stopping and ground stabilisation.

Fields of application

- Control of high volume water ingress
- Stabilisation of fractured rock, sands and gravels and land-fill materials
- Void filling (observe maximum amounts to be injected in dry ground)
- Repair of concrete structures

Features and benefits

- Fast reacting material where structural strength or rigidity is required
- MEYCO[®] MP 355 A3 always reacts with and without water. This is a significant safety advantage as the material will always be cured
- 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
- Fast reaction with water and reaction completed within a short period of time
- Modification of the reaction can be achieved using a separately supplied accelerator and / or thixotropic agent added to Component A.

Packaging

MEYCO[®] MP 355 A3 is available in the following packaging:

Component A: 25kg cans, or 200kg drums

Component B: 30kg cans, or 240kg drums

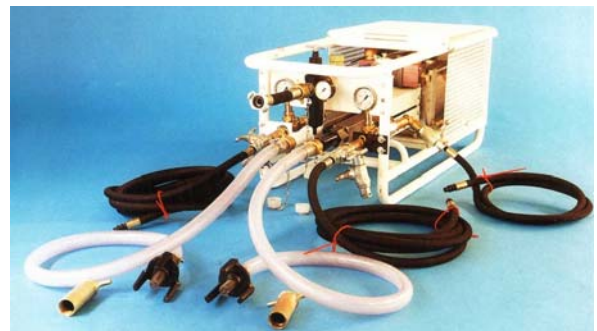
Technical data

Taken at 20°C

	Color	Viscosity mPas	Density kg/l
Component A	Brown	320	1.00
Component B	Dk brown	240	1.24
Accelerator 10	Yellowish	500	1.00
Accelerator 15	Yellowish	1000	1.00
Accelerator 25	Transparent	20	0.90

Application procedure

Components 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.



Special Requirements

Please Note: The foaming reaction time is significantly dependant on the temperature of the PU resin, the rock and the ground water.

The resin MEYCO[®]MP 355 A3 can be given three fundamentally different properties by the use of three different accelerators:

- MEYCO[®] MP 355 A3 ACCEL 10
- MEYCO[®] MP 355 A3 ACCEL 15
- MEYCO[®] MP 355 A3 ACCEL 25

For a high foaming factor (approximately 20-25) and a rapid reaction for water cut-off injection:

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Add the Accelerator 10 to component A by 0.5 - 1% dosage (by weight of component A)

For dense foam (foam factor 7-9) with high mechanical strength for ground improvement: Add the Accelerator 15 to component A by 0.5 - 1% dosage (by weight of component A).

Accelerator 25 combines functions of Accelerator 10 and Accelerator 15.

If big amount of water is expected in soil or rock and strong foam with low expansion factor is needed, Accelerator 25 should be premixed in Component A in amount of 0.1 - 0.5%.

If there is no water in the ground, or a particularly rapid reaction is required, one can premix water to component A, 2% by volume of component A.

After the addition of either Accelerator or water to the Component 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 for correct mixing.

Cleaning of injection equipment

For short breaks in injection, pump only Component A through the in-line static mixer nozzle. After finishing the injection and storage of the equipment, pump clean engine or hydraulic oil through pump and injection lines.

For cleaning, the use of a flushing agent for polyurethane resin should be used.

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 MEYCO[®] MP 355 A3 have a shelf life of 12 months.

Safety precautions

Refer to the Material Safety Data Sheet for safety measures.

Avoid contact with skin and eyes by using the required personal protective equipment, such as overalls, gloves and eye goggles.

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.

The cured products are harmless.

Uncured products should be prevented from entering local drainage system and water courses. Spillage must be collected using absorbent materials such as sawdust and sand, and dispose of in accordance with local regulations.

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Safety precaution for void filling and ground improvement

Large single volumes of resin in the ground will generate a significant amount of heat due to the exothermic reaction between the two components. Particularly during void filling and ground improvement injections one should always determine maximum amounts to be injected in order to avoid too large single volumes close to the tunnel which can cause overheating of the reacting resin, with a potential risk of smoke development and/or melting and boiling of the resin.

For these types of injections one should always apply the resin in a foaming mode (with 2% water pre-mixed to component A)

The following general recommendation is given:

Drill-hole lengths 9 m or more: Max. 400 kg / hole

Drill-hole length 4 – 9 m: Max. 250 kg / hole

If need for larger amounts of resin to resolve the issue, one can re-drill and re-inject 24 hours later.

For drill-hole lengths shorter than 4 m one should always avoid any single concentrations or volumes of resin larger than 150 kg. Should backflow occur, the injection must be terminated (or pumping speed significantly reduced) until the backflow is blocked.

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