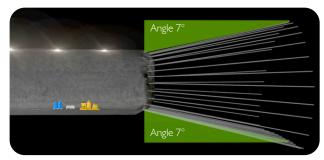


MasterRoc® MP 650 microcement: Systematic Pre-Injection

Water ingress and poor ground conditions during underground construction usually escalate costs, can have a negative influence on the environment, and inevitably cause significant delays. To counteract these risks, an economical approach is to pre-inject the ground ahead of the advancing face to avoid water ingress occurring, and to stabilize the ground.

Microcement MasterRoc MP 650 allows a cost-effective approach and improves working safety with minimal environmental consequences.

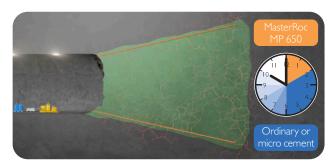


Pre-injecting approx. 24 meters into the rock ahead of the the tunnel face

MasterRoc MP 650 - Fast setting micro fine Portland cement for rock and soil injection

MasterRoc MP 650 is a well graded cement milled from pure Portland cement clinker with a Blaine value of 650 m²/kg. Due to its small particle size (d95 - 16 microns), it penetrates tight joints, fissures and pores very well to provide a water-tight grouted rock or soil mass.

It achieves initial and final setting faster than standard micro fine cements. This increases the productivity in injection operations. The short open time of I to 11/2 hours and a very short setting time of 2½ hours (at about 20° C) reduces the waiting time for the next excavation round to a minimum.



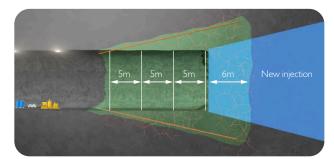
Faster setting time with MasterRoc MP 650 than ordinary cement or micro cements



Master Builders Solutions Sverige AB

www.master-builders-solutions.com

Metallvägen 42, 195 72 Rosersberg, Sweden Telephone +46 (0)8 732 29 37



Blasting

Fields of application

- Pre-injection in underground structures
- Post injection
- Water ingress reduction
- Ground stabilization
- Contact injection

Benefits

- Excellent penetration in tight joints, fissures and pores
- Fast setting
- Durable
- Better working environment no hazardous components
- Economical solution
- Standard cement injection equipment can be used

Technical support

Master Builders Solutions provides more than simply a range of products. Assisting customers in selecting the right injection system and setting out the injection method, as well as providing initial supervision and site training of the customer's personnel, is an essential part of our concept. Master Builders Solutions works together with suppliers of equipment and injection accessories to provide the best, most cost-effective and complete technology solution.

