



Mapedrill SA1 Powder

Super-absorbent organic polymer in powder form

DESCRIPTION

Mapedrill SA1 Powder is an organic powdered polymer with a high absorbing property, in order to decrease the fluidity of the ground in which it is injected.

Mapedrill SA1 Powder can absorb 200 up to 400 times its initial weight. 60% of hydration is reached in approximately 5 minutes.

PRODUCT APPLICATION

Mapedrill SA1 Powder is especially formulated for ground conditioning in mechanized tunnelling and for civil engineering, such as drilling operations.

Mapedrill SA1 Powder is successfully used as an agent when drilling in presence of water: in fact, the polymer, mixed with the perforating fluid, is conveyed during the drilling phases and distributed on the hole walls and when in contact with water it gives origin to the swelling process. This is the way for avoiding the circulation lack. Moreover, the lubricating quality of **Mapedrill SA1 Powder** reduced the friction between the drilling tools and in general among all the moving parts subjected to wear.

Mapedrill SA1 Powder is employed in mechanized tunnelling when, in presence of water or while drilling in water strata, the water content at the front, in the head chamber or in the screw conveyor needs to be

reduced. The polymer combines with the water acting like a big sponge. Once the required viscosity is achieved tunnelling can commence effectively. This is particularly useful on Earth Pressure Balance Machines where it is necessary to maintain a plug at the base of the screw conveyor.

Mapedrill SA1 Powder can absorb up to 200-400 times its initial weight, restoring again the plastic characteristics of the excavated materials, enabling easier muck transportation and removal. Once water is absorbed, **Mapedrill SA1 Powder** can release water only by a chemical reaction.

DOSAGE

The dosage depends on the application field and on the soil water content. Our technical laboratory is at the customer complete disposal for optimising the right **Mapedrill SA1 Powder** dosage according to the drilling soil characteristics. Please contact our "**Underground Technology Team**" technical service for assistance in product optimisation.

PACKAGING

Mapedrill SA1 Powder is available in 25 kg polyethynate paper bags.

STORAGE

Store the product for maximum 6 months in its original unopened packaging in a dry place.

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TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	white powder
Bulk density (ISO 758) (kg/m³):	900 ± 30 at +20°C
Solubility in water:	not soluble
Storage:	6 months
Hazard classification according to EC 1999/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Custom class:	3906 90 90

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapedrill SA1 Powder is not considered as dangerous according to the European regulation regarding the classification of preparations. It is however recommended to use gloves, eyes protection and to take the usual precaution taken when handling chemical products.

The Safety Data Sheet is available on request for professional users.

FOR PROFESSIONAL USERS.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best

of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications: for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

**All relevant references
for the product are available
upon request and from
www.mapei.com**

