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MC-Montan Seal ST 11

High-Performance Tail Sealant for shielded tunnel boring machines (TBM).

PRODUCT PROPERTIES:

MC-Montan Seal ST 11 is a high-performance tail sealant developed for EPB and Slurry tunnel boring machines. It provides outstanding brush protection and reliable sealing performance under high groundwater and earth pressures, making it well suited for demanding tunnelling applications, including river crossings:

- Engineered to work seamlessly with the TBM brush sealing system.
- Providing reliable sealing performance.
- Excellent water resistance.
- Excellent adhesion properties even on wet surfaces.
- Excellent pumpability.
- Best brush protrection against wear.
- Based on renewable oil, it is easily biodegradable.
- Free from microplastics.
- REACH compliant.

AREAS OF APPLICATION:

- Tail Sealant for tunnel boring machines (EPB, Slurry, VD, HR).

APPLICATION GUIDE:

- **Consumption:**
  - The consumption of **MC-Montan Seal ST 11** depends largely on the quality of the segment surfaces, the size of the segment gap, the quality of the brushes, the groundwater or backfill mortar pressure, the TBM diameter and the curve radii.
  - The typical consumption rate is 0.8-1.2 kg/m^2 segment surface and increases under unfavorable conditions.
- **Pumping system:**
  - The dimensions of the metal drums supplied are matched to the dimensions of the rams installed on the TBM. **MC-Montan Seal ST 11** can be easily pumped with all pre-installed systems.
  - For minimum maintenance and maximum running time and secure delivery of the desired quantities, MC recommends the use of **MC-Montan Device HDT** press plate pumps. The HDT pumps are designed for 60 litre and for 200 litre drums and can be delivered as pneumatic version as well as hydraulic version. They are all equipped with laser distance control.
- **Application temperature:** To achieve optimum results, the application temperature of **MC-Montan Seal ST 11** should be between 15 and 40°C.
- **Environmental compatibility:** Without compromising on the technical application, **MC-Montan Seal ST 11** is designed to maximize environmental protection:
  - The base oil used is readily biodegradable and is based on renewable raw materials
  - All fibres used are based on renewable raw materials
  - All fillers used are purely mineral and untreated
  - No leaching of ingredients, no aquatic toxicity detectable
- **On-site use:** MC-Underground is available for individual consultation and optimization of the application on site.

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TECHNICAL DATA:

Characteristic	Unit	Value	Comments
Acute toxicity Fish OECD 203	mg/l	> 100,000	NOEC
Density	kg/dm³	approx. 1.45	
Biodegradability Base oil		readily biodegradable	
Fire behaviour		self-extinguishing	
Consumption	kg/m²	approx. 0.8 - 1.2	outer segment surface
Consistency	mm	approx. 220	ASTM D 217
Matsumura water pressure	bar	34.5	pass
Pumpability		passed	
Water spray-off test	%	< 7	ASTM D 4049

PRODUCT INFORMATION:

Form	Pasty.
Colour	Beige.
Storage	Protect from direct sun radiation.
In-company production control	EN ISO 9001.
Packaging	250kg and 70kg metal drums.

Safety instructions: Please note the safety information and advice given on the packaging labels and safety data sheets.

Note: The information provided here is based on our experience and correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual building projects, to the specific application and to non-standard local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. Given these preconditions we shall be liable for the accuracy of the information given as outlined in our sales and delivery terms and conditions. Recommendations by our employees that deviate from this information are only binding for us if they have been confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be adhered.

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