

## First Filling Grease For Shielded Tunnel Boring Machines

### Product description

FFG-10 is a tail sealant for FIRST FILLING for new brush system in tunnel boring machines. It effectively healthily in drilling period and seals the brush of water; group or soil. It is formulated to resist high water and ground pressures, and has excellent pumping properties and adhesion to all surfaces.

FFG-10 is designed for use in conditions where the ambient temperature will usually remain above 5°C.

### Field of application

Tunneling with shielded TBM equipped with a brush seal system.

### Consumption

The average consumption for filling a 3 row brush system is 45+10 kg per meter shield circumference.

### Features and benefits

- Excellent sealing properties
- Excellent adhesion to any metal or concrete surface
- Excellent pumping properties

### Packaging

FFG-10 is packaged in standard 270 kg metal drum.

### Storage

FFG-10 should be stored in unopened, original Containers, preferably at 5-45 °C .Shelf life is expected to be 12 month.

### Safety precautions

FFG-10 is an inert material and is not hazardous. It is ecologically and environmentally friendly and poses no threat to worker safety or the environment. However .it is recommended that all normal precaution be taken when handling the product. Such as the use of eye protection and gloves.

An independent environmental risk assessment report is available on request

<b>Form:</b>	Homogenous paste, fibrous
<b>Color:</b>	Green
<b>Odor:</b>	None
<b>Density[kg/m<sup>3</sup>]20°C:</b>	1600±50
<b>Consistency: ISO 2137[1/10mm]</b>	3-4 NLGI Grade
<b>Oil dropping point: ASTM D566</b>	350 °C
<b>Water wash out (79 C 1 hrs):</b>	<5%
<b>Water spray off: ASTM D4049 [%]</b>	<2%
<b>PENETRATION DEGREE(25 C)</b>	Unworked: 233 Worked: 220
<b>Flash point (base oil):</b>	>250 °C
<b>Fire point</b>	300 °C