

## Cebo Drill-Grout

### Description

Cebo Drill-Grout is a hardening suspension for horizontal directional drilling operations. It hardens into a plastic, non permeable material and is therefore ideal to fill up annular spaces.

### Application/function

Stabilize annular spaces to avoid subsidence and water flow by filling up the complete annular space with a self hardening suspension.

### Advantages

- Subsidence is avoided
- No erosion
- Steel pipes are protected against corrosion
- Can use standard mixing system
- Compatible with ground water as confirmed by the Hygiene Institut in Gelsenkirchen

### Typical properties

Appearance	Powder
pH (standard suspension)	11

### Typical results

Test	Test in accordance with:	18% suspension	20% suspension
Marsh funnel (initially)	DIN V 4126-100	40 s/l	50 s/l
Marsh funnel (after 4 h.)	API RP 13I	43 s/l	60 s/l
Yield point	API RP 13I	17 lb/100 ft <sup>2</sup>	30 lb/100 ft <sup>2</sup>
Specific gravity	API RP 13I	1110 kg/m <sup>3</sup>	1120 kg/m <sup>3</sup>
Shear strength after 7 days (20°C)	Vane shear tester T174	5 kPa	14 kPa
Shear strength after 21 days (20°C)	Vane shear tester T174	75 kPa	125 kPa
Shear strength after 28 days (20°C)	Vane shear tester T174	90 kPa	140 kPa

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In so far as we can ascertain the above-stated information is correct. However, we are unable to provide any guarantees with regard to the results that you will achieve with this. This specification is provided on the condition that you determine yourself to what degree it is suitable for your purposes.

**Recommended:** Use a standard mixing unit.

**Treatment:** Before adding, test the pH and the hardness of the water. pH should be between 7 and 10 and hardness as low as possible. Add between 180 or 200 kg Cebo Drill-Grout to 1 m<sup>3</sup> of water.

Cebo Drill-Grout is designed to add at the same time as the pipe is pulled in. In this way, Cebo Drill-Grout will drive out the existing slurry. Therefore it is advised to test the density of the suspension in the borehole before pulling in. This should not be higher than s.g. 1080 kg/m<sup>3</sup>. When higher, make a clean run first.

Use a barrel reamer with 2 nozzles on the machine side and a minimum of 6 nozzles on the pipe side. This will help you to replace the slurry with the Cebo Drill-Grout.

**Volume:** The volume of the Cebo Drill-Grout must be 15 % more than the calculated volume to be sure that the drilling fluid is fully replaced with Cebo Drill-Grout.

**Packaging:**

- 1050 kg packed in 25 kg bags on a pallet with shrink film
- 1000 kg big bags

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