



Technical data sheet - TERRAquell

Application

TERRAquell is used as a flushing additive for flushing boreholes. As a result of its swelling properties, TERRAquell stabilises the borehole walls and also seals any crevasses in it.

TERRAquell must not be used as the sole backfilling material for ground heat sensors. It may only be used for this application if the ingredient specifications of VDI 4640 are satisfied (for example mixture of TERRAquell, blast-furnace cement, quartz sand and water). The ready-mixed pressing material Calidutherm® is more suitable for use as the sole pressing material for ground heat sensors.

Usage

At the place of use, TERRAquell is mixed in a flushing tank or the like with a hand-held mixer until it is completely dissolved to produce a suspension that can flow and be pumped. After placing the appropriate volume of water in the vessel, the corresponding quantity of TERRAquell must be added whilst the mixer is running, depending on the crevasse formation in the geology concerned. The time-dependent increase in the thixotropy of the material (increase in rigidity over time) should be observed.

Material details

TERRAquell is made up predominantly of active swelling clay minerals (Smectites).

Properties for health and water protection

TERRAquell contains only natural ingredients. It complies with the specifications of TRGS 613 and DIN EN 196-10 of < 2ppm in soluble Cr VI. This means that TERRAquell can be described as chromate-free.

All the relevant properties are set out in the safety data sheet that complies with 91/155/EEC.

A chemical safety test has been conducted (eluate).

How the product absorbs water

TERRAquell is made up predominantly of the clay mineral Smectites. Smectites are capable of absorbing a multiple of their volume in water.

The water is not chemically bound, such as in cement, for example, but is only physically stored in the intermediate layers of the clay mineral and held there by low surface forces. Just like Bentonite, it can be dissipated back into the ambience if it dries or is subjected to mechanical stresses. This may result in shrinkage.