General

Geolock cutoff wall is a waterproof barrier which consists of a patented lock construction, made of extruded HDPE, welded to 2.0 mm thick HDPE liner panels which are installed vertical in the subsoil. The lock system is equipped with a hydrophilic cord to guarantee water blockage, even at high depths / pressures.

The system is used to block (potentially) polluted groundwater flow at for instance waste disposal, factory- and mining sites. In civil applications the system is used to block waterflow through dykes, dams and polder constructions. In cement-bentonite diaphragm walls it can be used in the top section to assure water tightness when deformations of wall are to be expected.
As the material can be seen as gastight, one can keep this application in mind as well.

HDPE material is resistant to a wide range of chemicals, including acids, salts, alkalis, alcohol, oils and hydrocarbons. It contains a proportion of carbon black, anti-oxidants and stabilizers.

Cofra is an experienced manufacturer and installer of Geolock. Over the years we have executed projects in Europe, North America and Asia. There are several ways to install the system, depending on project- and soil conditions. We all know them and our technicians are happy to inform and assist you on this, in pre-tender as well as installation phase.

**Quality control**

Cofra’s way of working complies with high standards on quality and safety. Our in-house laboratory is equipped to perform all tests required on manufacture and installed the material. Manufacture of Geolock panels takes place in a conditioned environment to assure quality. Welding the lock system to the liner requires a high level of expertise, both with regards to the welding process itself as well as to quality control.

Starting the manufacture, as well as part of daily startup, both the competence of the technicians and the function and set-up of the welding machines are checked by doing test welds, which are checked in a daily in our laboratory.

Apart from Cofra’s own inspection procedure, our work can also be verified by an independent accredited inspection agency.

**Characteristics**

We see the following specific Geolock related characteristics:

- Water- and/or gas tightness
- Long lasting performance
- Flexibility of liner in relation to possible soil settlement
- Suitable for installation in all soil types
- Resistant to cracking and a wide range of chemicals
- Suitable for installation up to more than 30 meters of depth