

Geomembrane structure for infrastructure

“Dry installation”



In the civil engineering infrastructure sector the access roads to underpasses, aqueducts and below ground level locations are often built using a foil structure as a water barrier for the groundwater. The waterproof geomembranes for these projects have to be installed at such a level that the vertical equilibrium is guaranteed in order to prevent the structure from floating. Installing the geomembranes below ground can be undertaken in two ways: in the wet, which is known as submerging of geomembrane structures, and installation in dry conditions (for under water installation: see the factsheet ‘Geomembrane Structures for Infrastructure – under water installation).

For the dry installation of a geomembrane structure this usually involves using a (LLD) PE foil which has to be unrolled and welded on site because this type of foil cannot be prefabricated into large sheets and cannot be folded. Rolls of around 7 metres wide are processed on site to create the required size of geomembrane structure.

Joints with concrete structures are undertaken using a modified PE foil, which is better known as MP 950-20 foil, which can be folded and therefore fitted with a rope edge and/or prepressed holes for clamping profiles.

A protective geotextile is often used as protection against the substrate and/or backfill sand. The choice for the type of protective geotextile depends on the contamination in the sand. Our preference is a 500gr/m² non-woven protective geotextile which has more than proven itself in previous projects