

Motorway M7 in Hungary

- based on Fibertex Geotextiles

M7 Ordacsehi-Balatonkeresztúr section

- 25.7 km motorway section on soils with very low bearing capacity
- Construction of a 9-11 m embankment to carry the motorway
- 1.2 million m² of Fibertex Geotextiles was installed in combination with geogrid to stabilize the subsoil.



Motorway M7 in Hungary

The project

The motorway M7 in the western region of Lake Balaton from Budapest to Croatia had to be constructed over thick peat layers with very low bearing capacity.

The peat layers were typically 3-4 m deep, but in some areas as much as 6-8 m deep. The underground water level was close to the ground surface. The expected settlement of the embankment was 70 cm on the average, but in some places up to 100 cm. The height of the embankment was 9-11 m.

Key soil figures: Top soil removal 186,960 m³, base of the embankment 526,985 m³, embankment 2,943,945 m³ and dynamic soil exchange 281,563 m³.

The Fibertex solution

To stabilize the soft subsoil, Fibertex Geotextiles were installed between the construction layers

as a separator. On extremely poor subsoil, Fibertex Geotextiles were used in combination with geogrid. In total 1.2 million m² Fibertex Geotextiles were installed and 500,000 m² geogrid.

Geotextile functions



Filtration



Separation

To stabilize the subbase and improve the bearing capacity of the subsoil, a geotextile is placed between the construction layers to prevent mingling and migration of materials, yet allowing free movement of water.

High puncture resistance and high tensile strength to resist the strains of installation and use in general are decisive for the load-bearing capacity of the construction.

Fibertex F-2B and F-320 were chosen for the project.

