

Development of test and evaluation methods to determine the functional service life of biodegradable geosynthetics

Objective

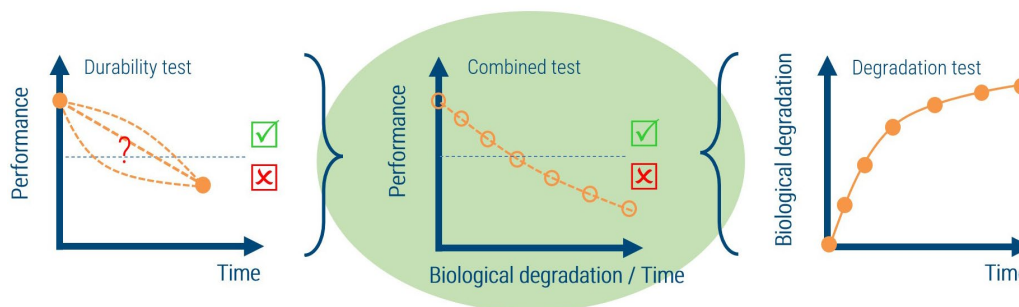
The aim of the project was the development of new working methods and criteria for determining and evaluating the functional life of biodegradable geosynthetics. The starting point was the lack of specifications for products with functional service lives of less than five years given in the product standards which were applicable at the time the project was carried out.

Approach and results

Based on selected test standards for determining both biodegradation and resistance to environmental impacts, methodological harmonisations were developed for the use cases "water" and "soil". As well, two test setups were developed.

Due to the freely determinable shape of the test specimen and the freely customisable test procedure, data describing the progressive biological degradation can be combined and correlated with data regarding the changing performance of the test specimens. This enables simultaneous statements to be made about the visual appearance, the progress of biological degradation and the resistance of the test specimens.

The test setups developed are well suited for product development in the environmental sector. The variation of test environment parameters allows a wide range of degradation scenarios (dry, moist, warm, cold), which can be compared with each other with regard to degradation time, level of degradation and resulting performance.



Combination of test methods: Determining the service life of biodegradable geobuilding materials

INNO-KOM

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The final report on this project is available on request.

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