HOHENSTEIN

Biodegradation

Product. Test. Label.

Biodegradable textile products should degrade completely in the soil. Residues from dyeing or finishing processes should have no negative impact on the environment. Therefore, we take a closer look at what happens when various fibre-based materials rot in the soil - how quickly or how slowly they degrade and what remains of them.

This test is particularly suitable for

- Textile manufacturers and finishers
- Producers of automotive components
- Chemical industry
- Recycling companies

Description

In standardized test soil under aerobic conditions, the biological activity is monitored over the entire test period by means of various parameters (temperature, soil moisture). The tests can be carried out either under defined laboratory conditions or under outdoor conditions relevant to practice. The evaluation of the tests is carried out after a specified test period using the degradation rate of products as well as the environmental compatibility or pollution caused by biodegrading products (on ecotoxicological tests or chemical analysis). Standardized procedures are used for these parameters.

Customer benefit

- Advice on the disposal / recycling of your products
- Determination of benefits and risks of your products for the environment
- Certifications

Testing standards

The Hohenstein test setup was developed on the basis of the following standards:

- Textiles - Determination of resistance of cellulose-containing textiles to micro-organisms - Soil burial test - Part 1: Assessment of rot-retardant finishing (ISO 11721-1:2001); German version EN ISO 11721-1:2001
- Plastics - Evaluation of the action of microorganisms (ISO 846:2019); German version EN ISO 846:2019
- Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging; German version EN 13432:2000

Marketing Instruments – Labels and Certificates

On passing the test the product may be awarded certificate and/or the Hohenstein quality label (validity: 1 year).

Test sample requirements

General

Detailed description (material composition, article number, etc.) of the test sample

Quantity of material

- Assembled products (outdoor): at least 6 test samples
- Laboratory : at least 5 m^2
- Fibers : approx. 40 g of the test sample respectively 2 yarn coils

Duration of the test

Generally between 4 weeks and 12 months, depending on the request and material

Test criteria

- The mass reduction in % of the test sample is assessed according to a defined time period and the ecotoxicological safety.
- In order to obtain a label or certificate, a reduction of at least 90 % must be demonstrable after 12 months. In addition, passing the cress test is a prerequisite.