HOHENSTEIN

DIN SPEC 35808

Requirements and test methods for biodegradable tree shelters

Tree shelters protect young trees, but are meant to degrade completely and leave no residue once they are no longer needed. DIN SPEC 35808 is the first standard to define uniform requirements and test methods for this degradation behaviour. Left in the forest, conventional tree shelters break down into micro- and macroplastics over the years – bio-based products with proven degradability leave the soil clean.

Foto: ©Marco Reetz

Description

DIN SPEC 35808 brings together standardized testing methods that identify environmental impacts caused by tree shelters after their use in forests. The forestry sector, industry and research institutions have jointly developed this specification to protect forests.

DIN SPEC 35808 builds on established standards and conducts testing in three stages:

I. **Bio-based content and composition:** The test verifies whether the tree shelter is 100% bio-based and whether defined limit values for inorganic components, heavy metals, fluorine, and other substances of particular concern are met.

II. **Biodegradability and Ecotoxicity:** The test verifies whether the tree shelter is basically fully biodegradable in the soil test medium within max. 24 month and leaves no toxic residues for plants and soil organisms.

III. **Degradability under forest conditions:** It is verified whether the tree shelter, when tested in forest soil under naturally occurring conditions that slow down degradation, exhibits a mass loss of at least 10% within 12 months and can therefore also be biodegraded in the forest.

Particularly suitable for

Tree shelters (forestry devices that protect young trees and promote their growth) made of bioplastics, natural materials, and textiles, as well as associated fastening elements. The tree shelters are tested in new (unused) condition.

Your benefits as a client

- Objective measurement of environmental aspects of your product: bio-based content and the absence of harmful substances; verification of complete biodegradability and ecotoxicological potential; verification of the biodegradation of the tree shelter material under relevant forest conditions.
- Independent verification that your product meets the requirements of DIN SPEC 35808
- marketing advantage

Test Standards

DIN SPEC 35808 was developed based on the following standards:

- ASTM D 6866a:2024 or DIN EN 16785-1:2016-03 (Bio-based content)
- DIN EN ISO 17294-2 und DIN EN ISO 12846 (Heavy metals)
- DIN EN 14582:2016-12 (Total fluorine)
- DIN EN 17033:2018-03 and ISO 23517:2021-07 (limit values for heavy metals and total fluorine)
- DIN EN ISO 17556:2019-09 (Biodegradability in soil)
- OECD 207 oder DIN EN ISO 11268-1 und OECD 208 oder DIN EN ISO 11269-1, -2 (Ecotoxicity)
- DIN EN ISO 846:2020-11, Method D (Biodegradability under forest conditions)

Test objective

We assess whether the requirements of DIN SPEC 35808 are met.

Requirements for the test samples

- Specification of the exact product name, article number and material composition of the test sample.
- Permanently attached fastening elements are tested along with the tree shelter; fastening elements that are not permanently attached are tested separately.
- At least one tree shelter in new condition is required, along with any associated fastening elements, if applicable.

Test duration

Typically 15 – 27 month

Marketing tool – comprehensive test report

If a declaration of conformity, a list of ingredients and all individual test reports with results compliant with DIN SPEC 35808 are available, Hohenstein will prepare the comprehensive test report “Compliant with DIN SPEC 35808” for your communication with customers and regulatory authorities.