

Safety, (eco)toxicology and environmental tests on GreenFill

Emmen, 11th of February 2022

To whom it may concern,

Many players, sports clubs, local governments, parents and other stakeholders are worried regarding the safety, (eco)toxicology and environmental impact of infills used in artificial grass. Senbis has therefore commissioned external 3rd party laboratories to perform extensive tests related to these topics on the infill product called GreenFill. Based on these test results, Senbis can state the following:

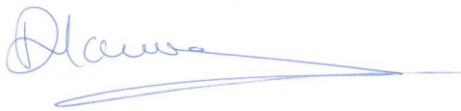
- GreenFill complies with toy norm DIN EN 71-3 (none of the components were detected);
- GreenFill is free of hazardous substances listed in the SVHC candidate list of the REACH-regulation (none of the 205 SVHC were detected, according to Candidate List Annex XIV of 16th January 2020 Full Test);
- GreenFill complies with NF 90-112 regarding DOC, EOX, heavy metals and climatic resistance;
- GreenFill meets the environmental requirements in accordance with standard DIN 18035-7
- GreenFill meets the requirements of the VROM (former Dutch Environment Ministry) for PAH (10);
- None of 18 PAH have been determined (<0.2 mg/ml detection limit) in GreenFill according to AfPS GS 2014-01;
- GreenFill complies on all parameters and maximum values as stated in Annex A, table 1 of the Dutch environmental law 'Wet Bodembescherming' (Besluit Bodemkwaliteit).

Senbis can state the following regarding biodegradation and composting of the GreenFill:

- GreenFill is composed of TÜV certified OK Home Compostable biopolymers. This means the following tests have been completed on the biopolymers and complied with the composting norms:
 - test on disintegration (physically falling apart of the product in small fragments);
 - test on biodegradation (chemical break down of the polymer);
 - test on heavy metals content;
 - test on ecotoxicity (test if the composted product does not exert any negative effect on plants, conform OECD 208 and EN 13432).
- GreenFill is in soil-biodegradable in 6 months in accordance with ISO17556, which was tested by an independent laboratory (OWS). The test results are shared with TÜV Austria and the certification for their OK Soil biodegradable scheme is pending.

On request, customers can visit Senbis and review the details of these test reports that concluded these results.

With kind regards,



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