



# Sustainability Statement

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## 1. Circularity

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**Source document:** [1. Circularity – SGS.pdf](#)

**Auditing Party:** SGS

**Document Title:** Testing Circularity LimeGreen

**Abstract:** The product can be reused in high value applications such as new artificial grass but not limited to. This product therefore fully envisions the process of maintaining high value in concurrence with the EU sustainability strategy for 2030 and other EU sustainability goals and are identified as 100% circular. All samples tested have been clear of substances of very high concern and passed EN 71-3, the safety for toys norm. Products are clear of polycyclic aromatic hydrocarbons.

All tested samples have an MFI within the normal range for HDPE. Thus, all samples would give normal machinability when used to produce new HDPE products. In the DSC analysis it becomes clear that backing has higher enthalpy of melting and thus has higher crystallinity, providing more strength to resist wear and tear. The higher crystallinity of backing is confirmed by the MFI data. When both are mixed enthalpy will drop, but not below the enthalpy of the fiber. The fiber on its own has sufficient quality to be recycled, which will increase when mixed with the backing. This proves mixing of fiber and backing to be beneficial in both material sense and in sustainability.

## 2. Aging

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**Source document:** [2. Aging – SGS.pdf](#)

**Auditing Party:** SGS

**Document Title:** Durability of artificial grass after accelerated aging

**Abstract:** The tests equals 10 years

The influence on the LimeGreen products Play and Landscape by accelerated aging is tested after weathering (by UV-radiation, increasing temperature and water spraying) at fixed time-intervals. The test was performed after 2500 hours and 5000 hours and the product properties were compared to the properties at start of the original product.

After each interval a piece of the product was cut out of the original sample for testing. The remaining sample was being tested for the additional aging time. The properties of the fibres: length, diameter and colour were analysed. The specimens of both LimeGreen products (mix of backing and fibres) were analysed for Melt Flow Index (MFI) and Differential Scanning Calorimetry (DSC) for polymer assessment.

**Conclusion:** The results of the aging tests demonstrated the exceptional durability of LimeGreen®'s ONE-DNA™ artificial grass products. SGS INTRON observed only a slight change in the Melt Mass-Flow Rate (MFR) of the tested properties. Considering the lifetime of LimeGreen® products, this slight decrease in MFR after a decade of outdoor exposure is negligible and does not compromise the overall quality and performance of the artificial grass. LimeGreen® ONE-DNA™ products retained their original characteristics remarkably well, reaffirming their ability to withstand environmental conditions and maintain their aesthetic appeal over extended periods of time.



### 3. SVHC (incl. PFAS) / REACH

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**No SVHC components are detected in Products.**

A number of PFAS are on the REACH Candidate List of substances of very high concern (SVHC), for example PFOA, perfluorinated carboxylic acids (C9-14 PFCAs) and PFHxS.

In June 2019, January 2020 and January 2023, three groups of PFAS were identified as SVHCs. These groups are:

- 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (HFPO-DA), a short-chain PFAS substitute for PFOA in fluoropolymer production, was the first substance added to the Candidate List. Its ammonium salt is commonly known as GenX. [[General Court judgment](#)];
- perfluorobutane sulfonic acid (PFBS) and its salts, a replacement of PFOS; and
- perfluoroheptanoic acid (PFHpA) and its salts.

Based on the provided information, it can be concluded that there are no PFAS (per- and polyfluoroalkyl substances from the REACH-list (PFOA,C9-14 PFCAs, PFHxS, PFBS, PFHpA)) detected in the tested LimeGreen products.

The SVHC analysis, which checks for the presence of 223 substances of very high concern (SVHC), has shown that all tested materials are below the limit of 0.1% w/w or 0.01% w/w.

Furthermore, the test results indicate that the tested values are below 0.01% or 0.001%, indicating the absence of SVHC components, including most common PFAS (PFOA,C9-14 PFCAs, PFHxS, PFHxS, PFBS, PFHpA), in the LimeGreen products.

**Source document:** [5. SVHC Report One-DNA.pdf](#)

**Auditing Party:** SGS

**Document Title:** SVHC Report One-DNA

### 4. EN 71-3 - Safety of toys:

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Products comply fully with the requirements for toys

**Source document:** [1. Circularity – SGS.pdf](#)

**Auditing Party:** SGS

**Document Title:** Testing Circularity LimeGreen

### 5. Polycyclic Aromatic Hydrocarbons (PAH):

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Products are proven to be clear of polycyclic aromatic hydrocarbons

**Source document:** [1. Circularity – SGS.pdf](#)

**Auditing Party:** SGS



**Document Title:** Testing Circularity LimeGreen

## **6. Fourier-transform infrared spectroscopy (FTIR):**

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Polymers in fibres and backing are identical and are all polyethylene

**Source document:** [1. Circularity – SGS.pdf](#)

**Auditing Party:** SGS

**Document Title:** Testing Circularity LimeGreen

## **7. Melt Flow Index (MFI):**

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MFI is within the normal range for high density polyethylene (HDPE)

**Source document:** [1. Circularity – SGS.pdf](#)

**Auditing Party:** SGS

**Document Title:** Testing Circularity LimeGreen

## **8. Leaching**

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**Source document:** [3. Leaching – SGS.pdf](#)

**Auditing Party:** SGS

**Document Title:** Uitloogonderzoek

**Abstract:** Based on the leaching tests conducted on Limegreen Landscape 1-DNA and Play 1-DNA products, it has been determined that the emission of heavy metals and salts is negligible. The tests revealed minimal leaching of sulphate and molybdenum in the 3rd eluate fraction, while all other components leached below the detection limit. No leaching was detected in the 7th eluate fraction. These results indicate that the products meet the maximum emission values specified in the Dutch Soil Quality Decree. Therefore, it can be concluded that the emission of heavy metals and salts from Limegreen Landscape 1-DNA and Play 1-DNA is insignificant.

## **9. Recycled content**

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(not relevant for current Australian products, but will be possible in the near future)

**Source document:** [4. Recycled content – TCG.pdf](#)

**Auditing Party:** TenCate Grass

**Document Title:** Proportion of Recycled material

**Abstract:** Declaration by TenCate Grass Holding:

Product	Declaration
LimeGreen Play 24®	<ul style="list-style-type: none"><li>The product consists of &gt; 99,8% out of PE</li></ul>



	<ul style="list-style-type: none"><li>• The Yarns consist on average for a minimum of 51% out of recycled content under EN 15343</li><li>• The percentage of recycled content will be under the ambition of increasing this with a minimum of 10% per year.</li></ul>
LimeGreen Play 20®	<ul style="list-style-type: none"><li>• The product consists of &gt; 99,8% out of PE</li><li>• The Yarns consist on average for a minimum of 51% out of recycled content under EN 15343</li><li>• The percentage of recycled content will be under the ambition of increasing this with a minimum of 10% per year.</li></ul>

Disclaimer: Above percentage of recycled content is depending on availability of high quality recycled PE materials, but on average over several production batches a minimum of 51% under EN 15343 is guaranteed.