

MATERIAL FACT SHEET

Material selection

To this date, the most suitable materials for hygienic cleaning tools are plastics. Our cleaning tools are produced from plastic materials that meet all regulatory requirements, ensure the best possible functionality, and long-term durability. Due to the outstanding material properties of polypropylene (PP) (good temperature and chemical resistance), this is our preferred material for producing the plastic blocks used in our brooms, brushes, dustpans, and food handling tools.

What is “green” plastic”?

‘Green plastic’ is used as an umbrella term as ‘green plastic’ often includes and/or refers to several other terms such as bio-based, biodegradable, recycled, regenerated and recyclable. Below we try to explain the difference between the various terms.

Bio-based and biodegradable plastic

Traditional plastic is made from fossil-based oil. The term ‘bio-based plastic’ refers to plastic that has been produced from renewable sources. Examples of these renewable sources include sugar cane, corn, and cellulose. Bio-based plastic can also be composite materials with e.g., wooden fibres.

‘Bio-degradable plastic’ refers to plastic that’s designed to break up when exposed to the presence of microorganisms under specified conditions. Biodegradable plastics are commonly produced with renewable raw materials, micro-organisms, petrochemicals, or combinations of all three and therefore bio-based and biodegradable materials are not necessarily the same. Some plastic types can be biodegradable, but the ‘bio-degradation’ requires specific conditions. No standards for plastics labelled as biodegradable or compostable today make them suitable for disposal in the open environment. The Danish Plastic Federation

recommends avoiding the use of biodegradable plastic for packaging, since the properties required for biodegradability degrade the quality of recycled plastic.

As of 2021, Vikan does not have access to food-compliant bio-based PP with acceptable properties.

Recycled and generated plastic

The term ‘recycled plastic’ can cover post-consumer waste, meaning that the plastic has been discarded for disposal or recovery after use of a final consumer however the EU is still discussing an official definition of the term.

‘Regenerated plastic’ can be pre-consumer waste such as industrial scrap from the production of plastic parts. In our case, this can include excess plastic material from the injection moulding process or scrapped parts from the transition from one plastic colour to another.

Recyclable plastic

Most plastics can be recycled and are thus recyclable. Products made from mono-materials, such as pure PP and PE, are more easily recycled than those made from multi-materials, as the materials in a multi-material product often require separating prior to recycling.

Which “green plastic materials” can Vikan use?

Transport segment:

The plastic used in our Transport range of cleaning tools must comply with REACH¹ but don’t need to be food contact compliant plastic (technical grade). This means we can use recycled or regenerated plastic for these tools, and we are doing this today.

Hygiene range:

The materials used for our Hygiene range of cleaning tools are the most strictly regulated, as these materials can come into direct or indirect contact with food. Therefore, the materials need to comply with FDA 21 CFR and (EU) 10/2011 where migration testing is required.

We monitor the development in this area closely and we are always on the lookout for completely safe ways to use recycled or regenerated plastic in these tools, but regulations only allow for the following limited options within this area:

1. Use recycled post-consumer plastic which has undergone an EU EFSA-safety assessed decontamination process.

This is possible for Polyethylene terephthalate (PET) products (recycling of bottles), where at least 95% of the PET material involved is certain to be food contact compliant. As of early 2020, there is no EU EFSA-approved decontamination process for PP.

2. Use a functional barrier of virgin (new) plastic to cover the recycled plastic.

A functional barrier is a layer of material that prevents the migration of substances into food products. A functional barrier is often applied for single-use packaging materials made from PET, as PET has effective barrier properties. PP has not proven to possess the same barrier properties. Combining a PET layer with a PP block is not an option due to the different chemical composition of the two materials

3. Regenerate pre-consumer waste (industrial scrap that is food-contact-compliant plastic) from a process with full traceability.

This is an option for Vikan if we ensure that the material in question has the right properties. An example is PP scrap from injection moulding of the plastic blocks used to make our cleaning tools. This works because the material is mechanically ground on site and returned to the process as regenerated material.

¹ EU regulation 1907/2006 and subsequent amendments regarding REACH (Registration Evaluation Authorisation and restriction of Chemicals).