

Silgan Plastic Food Containers

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 25 August 2021

Reviewed: Brussels, 28 December 2023

DISCLAIMER

RecyClass recognition applies only to Silgan Plastic Food Containers “Perfect Portion” technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific commercial packaging using this technology. Any specific packaging using this label technology would need to be tested individually to demonstrate that the system of resin, adjuvants, label, closure, and printing conforms to the RecyClass Recyclability Evaluation Protocol for PP containers, and that it is sorted in the PP rigid stream at the state-of-art sorting plants in Europe.

Publication of results of testing of this technology MUST clearly include all the conditions listed in the approval letter. Partial reporting of the conditions is forbidden.

Additionally, any change in the formulation of the technology must be communicated to the Technical Committee which will reassess the approval of the technology.

The RecyClass PP Technical Committee was requested to carry out an assessment of the technology ‘Perfect Portion’ by Silgan Plastic Food Containers to verify its impact on the quality of recycled PP containers.

The technology is a white coextruded PP tray, provided unprinted and without lid. The EVOH-barrier layer is 10 % of the total weight, TiO₂ represents 7.5 wt% and PP regrind layers are incorporated in the tray structure.

According to the results that were obtained from the laboratory tests done by the Institut für Kunststofftechnologie und -recycling (IKTR), carried out as per the Recyclability Evaluation Protocol for PP containers, ‘Sheba Perfect Portion’ technology is **limited compatible with coloured PP recycling**.

Based on these results, RecyClass certifies that Silgan Plastic Food Containers’ ‘Perfect Portion’ technology will have a limited impact on the current European coloured PP containers recycling and provided that the full packaging using this tray as the body is designed under the following conditions¹:

- a) The tray is made of white PP;
- b) The tray is provided with an EVOH layer that is 10 % of the total weight or less, compatibilized with more than 5 % PP tie layers grafted with a minimum concentration of 0.05 % of maleic anhydride;

¹ PP Rigid designed under conditions other than those indicated need to be tested to assess their compliance with Recyclass Recyclability Evaluation Protocol for PP containers.

- c) The tray contains PP regrind layers including EVOH, reaching an overall maximum EVOH concentration equal to 19 wt%, and provided with compatibilizer (RG 100);
- d) The amount of mineral fillers represents 7.5 wt%, or less;
- e) The density of the finished tray is lower than 1 g/cm³;
- f) The lidding film is fully removable and does not leave any residue;
- g) Any additional component or features (e.g., inks, adhesives, etc.) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines².

RecyClass concludes that Silgan Plastic Food Containers's 'Perfect Portion' technology as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for coloured PP containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in injection moulding applications up to a concentration of 25 % innovation³.

In regard to RecyClass Recyclability Certification, the present limited compatibility with PP containers recycling approval delivered to Silgan Plastic Food Containers's 'Perfect Portion' technology, means that a packaging containing this technology, as mentioned in the aforementioned conditions, will be penalised with one Recyclability Class deduction. Moreover, the amount of recyclable PP will impact the final Recyclability Class obtained during Recyclability Certification and should be kept above 95 % or 90 % in the final packaging to maximise chances to get a Recyclability Certificate with a Class B or C, respectively⁴. Also, it is noteworthy that the presence of additional packaging features, like inks or barrier material, could impact the certification process.

About RecyClass

RecyClass is a non-profit, cross-industry initiative advancing recyclability, bringing transparency to the origin of plastic waste and establishing a harmonized approach toward recycled plastic calculation & traceability in Europe. RecyClass develops Recyclability Evaluation Protocols and scientific testing methods for innovative plastic packaging materials which serve as the base for the Design for Recycling Guidelines and the RecyClass Online Tool. RecyClass established Recyclability Certifications for plastic packaging, Recycling Process Certification and Recycled Plastics Traceability Certification for plastic products.

[RecyClass – Plastic Future is Circular](#)

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² [Design for Recycling Guidelines - RecyClass](#)

³ [Recyclability Evaluation Protocol for PP containers](#)

⁴ [RecyClass Recyclability Certification](#)

Annex I



Figure 1: 'Perfect Portion' by Silgan Plastic Food Containers.