

Berry

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 9 April 2024

DISCLAIMER

RecyClass recognition applies only to Berry 'HDPE/TPO-PP 250 ml bottle' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this technology. Any specific packaging using this 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 HDPE containers, and that it is sorted in the HDPE 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 HDPE Technical Committee was requested to carry out an assessment of the technology 'HDPE/TPO-PP 250 ml bottle' by Berry to verify its impact on the quality of recycled HDPE containers.

The technology is a natural HDPE bottle with a soft touch finish, without cap. The bottle is made via extrusion blow moulding. The bottle is composed of 90 wt% of HDPE and 10 wt% of TPO-PP with a full olefinic or aliphatic structure. The bottle was tested unprinted.

According to the results that were obtained from the laboratory tests performed by the Institut für Kunststofftechnologie und -recycling (IKTR), carried out as per the Recyclability Evaluation Protocol for HDPE containers used for RecyClass TPO test campaign, 'HDPE/TPO-PP 250 ml bottle' technology is **fully compatible with HDPE recycling.**

Based on these results, RecyClass acknowledges that Berry 'HDPE/TPO-PP 250 ml bottle' technology will have no impact on the current European HDPE containers recycling and provided that the full packaging using is designed under the following conditions:

- a) The packaging is made of HDPE:
- b) The amount of TPO-PP with full olefinic or aliphatic structure represents 10 % of the total weight of the bottle, or less;
- c) The final density of the packaging is lower than 1 g/cm³;
- d) Any additional components, such as closure system are made of HDPE, preferably clear.

- e) If TPO-PP is over moulded and covers more than 70 % of the packaging (volume ≤ 500 ml) or 50 % (volume > 500 ml), a sorting test must be conducted.
- f) Any additional component or features (e.g. inks) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines¹.

RecyClass concludes that Berry ‘HDPE/TPO-PP 250 ml bottle’ technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for HDPE containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in high-value application such as HDPE bottles up to 50 % concentration².

In regard to RecyClass Recyclability Certification, the full compatibility with HDPE containers recycling delivered to Berry ‘HDPE/TPO-PP 250 ml bottle’ technology, means that a packaging containing this technology as mentioned in the aforementioned conditions will not be penalised with any recyclability class deduction. Moreover, the amount of recyclable PE 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 A or B, respectively³. Also, it is noteworthy that the presence of additional packaging features 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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¹ [Design for Recycling Guidelines - RecyClass](#)

² [Recyclability Evaluation Protocol for HDPE containers](#)

³ [RecyClass Recyclability Certification](#)

Annex I



Figure 1. 'HDPE/TPO-PP 250 ml bottle' by Berry.