RecyClass

c/o Plastics Recyclers Europe
Avenue de Broqueville 12
1150 Brussels, Brussels

Phone: +32 2 786 39 08
info@recyclass.eu
www.recyclass.eu

Berry

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 07 April 2022
Reviewed: Brussels, 28 December 2023

DISCLAIMER

RecyClass recognition applies only to Berry 'Airfree Vega Bottle + Ecosolution pump' 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 'Airfree Vega Bottle + Ecosolution pump' by Berry to verify its impact on the quality of recycled PP containers.

The technology is a white multilayer PP bottle with an PP-based pump as closure system. The bottle contains a barrier layer made of EVOH and PA with a 1:1 ratio that represents approximately 4.6 % of the total weight of the packaging. PE-based components are present in both the multilayer bottle and in specific parts of the pump (bellow and plug), and represent 15.5 % of the total weight of the packaging. The packaging has been tested undecorated.

According to the results that were obtained from the laboratory test by the Institut für Kunststofftechnologie und -recycling (IKTR), carried out as per the Recyclability Evaluation Protocol for PP containers, the 'Airfree Vega Bottle + Ecosolution pump' technology is limited compatible with coloured PP recycling.

Based on these results, RecyClass acknowledges that Berry 'Airfree Vega Bottle + Ecosolution pump' will have limited negative impact on the current European coloured PP containers recycling and provided that the packaging is designed under the following conditions[1]:

a) The bottle is preferably made of clear or white PP;

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

b) Elements of the the closure system are preferably made of clear or white PP;
c) The different grades of PE represents overall 15.5 % or less of the total weight of the packaging;
d) The barrier layer is made of EVOH and PA, each of them representing 2.3 % or less of the total weight of the packaging;
e) TiO_2 represents 3.9 wt% of the total packaging or less;
f) The density of the finished packaging is lower than 1 g/cm^3;
g) No additional printing technology are applied, and in any case, any additional component or features (e.g., inks, adhesives, etc.) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines[2].

RecyClass concludes that Berry 'Airfree Vega Bottle + Ecosolution pump' 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 high-value application such as PP bottles up to 25 % concentration[3].

In regard to RecyClass Recyclability Certification, the present full compatibility with PP containers recycling delivered to Berry 'Airfree Vega Bottle + Ecosolution pump' technology, means that a packaging containing this technology, as mentioned in the aforementioned conditions will not be penalised with any Recyclability Class deduction. Nevertheless, 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, respectively [4]. Also, it is noteworthy that the presence of additional packaging features, like inks or barrier material, could impact the certification process.

In order to reach higher recycling quality standards, the RecyClass Technical Committee for PP containers recommends to replace the green bellow with a white or transparent one and to replace PE parts with PP when possible.

[2] Design for Recycling Guidelines - RecyClass

[3] Recyclability Evaluation Protocol for PP containers

[4] RecyClass Recyclability Certification

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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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Contact : Jean-Emile.Potaufeux@plasticsrecyclers.eu, www.recyclass.eu

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Annex I

Figure 1: Airfree Vega Bottle and Ecosolution Pump by Berry.