

Berry

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 07 April 2022

DISCLAIMER

RecyClass recognition applies only to Berry 'Airfree Vega Bottle + Ecosolution pump' technology reported in Annex I. It, therefore, does not concern to a recyclability assessment of specific packaging using this bottle.

Any specific packaging using this bottle 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 considered to be **limited compatible with coloured PP recycling**.

Based on these results, RecyClass certifies 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:

- a) The bottle is preferably made of clear or white PP;
- 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) The density of the finished packaging is lower than 1 g/cm³;
- f) No additional printing technology are applied, and in any case, it is the responsibility of the end-user to choose an appropriate combination of inks and printing process to ensure that:
 - i. the inks are non-bleeding;
 - ii. the inks comply with the European Legislation (e.g. Packaging and Packaging Waste Directive on the heavy metal concentration levels) and are EUPIA compliant;
 - iii. direct printing is limited as much as possible;

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% concentration¹.

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.

About RecyClass

RecyClass is a comprehensive cross-industry initiative that works to advance plastic packaging recyclability and to establish a harmonized approach towards recycled content calculation and its traceability in Europe. Activities within RecyClass include the development of Recyclability Evaluation Protocols and scientific testing methods for innovative materials which serve as the base for the Design for Recycling Guidelines and the Recycling Online Tool. RecyClass offers Recyclability Certifications for plastic packaging and Recycled Content Traceability Certification for plastic products.

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¹ [Recyclability Evaluation Protocol for PP containers](#)

Annex I



Figure 1 Airfree Vega Bottle and Ecosolution Pump by Berry