

Procter & Gamble

RECYCLASS PRODUCT APPROVAL

Brussels, 01 June 2022

DISCLAIMER

RecyClass recognition applies only to Procter & Gamble 'Pantene Hair Biology' product reported in Annex I. The recyclability assessment therefore does not refer to the testing of a 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 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 product 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 product.

The RecyClass HDPE Technical Committee was requested to carry out an assessment of the product 'Pantene Hair Biology' by Procter & Gamble to verify its impact on the quality of recycled HDPE containers.

The product is a HDPE bottle, provided with a PP closure and a printed LDPE label. The bottle body contains a masterbatch giving a golden appearance to the packaging. The closure consists in a golden screw cap made of PP and representing 15.5 % of the total packaging weight, with a white HDPE push mechanism to open the bottle. The transparent LDPE label is covering approximately 80 % of the packaging surface and is printed with white, golden, blue and black tones. The permanent acrylic-based adhesive is representing less than 0.1 % of the total packaging weight. Overall, inks and lacquers represents less than 0.5% of the total weight of the packaging.

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 HDPE containers, 'Pantene Hair Biology' product is considered to be **limited compatible with coloured HDPE recycling**. Additionally, the sortability of the packaging has been successfully tested by Suez.Circpack® following the RecyClass Evaluation Sorting Protocol for Plastic Packaging¹.

¹ [RecyClass Evaluation Sorting Protocol for Plastic Packaging](#)

Based on these results, RecyClass acknowledges that *Procter & Gamble 'Pantene Hair Biology'* product will have a limited impact on the current European HDPE containers recycling and provided that the full packaging is designed under the following conditions:

- a) The bottle is made of HDPE;
- b) The density of the finished bottle is lower than 1 g/cm³;
- c) The facestock of the Pressure-Sensitive Label applied on the packaging is made of clear PE;
- d) The amount of acrylic-based adhesive represents less than 0.1% of the total packaging weight;
- e) The amount of PP represents 15.5 % of the total packaging weight, or less;
- f) The amount of inks and lacquers represents 0.5% of the total packaging weight, or less;
- g) Applied printing technology is compatible with recycling; since several printing options are possible, 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 *Procter & Gamble 'Pantene Hair Biology'* product as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for HDPE containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in blow moulding applications up to a concentration of 25 % innovation².

According to the RecyClass Recyclability Methodology³ developed by RecyClass, '*Pantene Hair Biology*' corresponds to a class ranking C. **The penalisation is mainly due to the amount of PP (>10% of the total packaging weight) that leads to a 2 classes deduction.** However, this letter is not a certification and does not allow the use of the class ranking logo. Therefore, *Procter & Gamble* is invited to contact one of the recognized Certification Bodies to get '*Pantene Hair Biology*' product certified.

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

³ [Recyclability Methodology of RecyClass](#)

Similar executions of 'Pantene Hair Biology' product with the only modification of artworks and/or modification of the bottle size would not have to be tested again as long as the proportion of the components, including inks, lacquer, adhesives, remains the same.

In order to reach higher recycling quality standards and to achieve a better compatibility with the HDPE recycling stream, RecyClass recommends to replace the PP cap with a HDPE one⁴.

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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⁴ [Design for Recycling Guidelines for HDPE containers](#)

Annex 1.



Figure 1. Pantene Hair Biology by Procter & Gamble