

Procter & Gamble

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 02 December 2020

The RecyClass HDPE Technical Committee was requested to carry out an assessment of 'Wood-effect' decoration technology by Procter & Gamble to verify its impact on the quality of recycled HDPE containers.

The 'Wood-effect' technology is a decoration applied on HDPE bottles, and consists of less than 2% brownish-coloured masterbatch. The 'Wood-effect' technology was tested on a white HDPE bottle without label nor closure system.

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 HDPE containers, 'Wood-effect' technology is considered to be fully compatible with HDPE recycling.

Based on these results, RecyClass certifies that Procter & Gamble 'Wood-effect' technology will not have a negative impact on the current European HDPE containers recycling provided that the full packaging using this bottle as body is designed under the following conditions:

- a) The body is made of white HDPE;
- b) The concentration of the brownish-coloured masterbatch is below 2%;
- c) The density of the finished bottle is lower than 1g/cm³;
- d) 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 Procter & Gamble ‘Wood-effect’ technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for HDPE containers. The plastic generated by the recycling process may be used in high quality applications such as HDPE bottles up to 25% concentration¹.

However, RecyClass recommends reviewing the brownish-coloured masterbatch to opt for a transparent preferably, or a light-coloured design.

RecyClass recognition applies only to Procter & Gamble ‘Wood-effect’ technology reported in Annex I and is not a recyclability assessment of specific packaging using this technology. Any specific packaging using this technology would need to be tested individually to demonstrate the system of resin, adjuvants, label, and closure conformed to the RecyClass Recyclability Evaluation Protocol for HDPE containers, and that it is sorted in the HDPE stream at the state of art sorting plants in Europe.

Any change on the formulation of the product must be communicated to the Technical Committee which will reassess the approval of the technology.

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 traceability in Europe. Activities within RecyClass include the development of Recyclability Evaluation Protocols and scientific testing of innovative materials which serve as the base for the Design for Recycling guidelines and the free online tool. RecyClass offers Recyclability Certifications and Recycled Content Traceability Certification for plastic packaging.

Contact : Alice.Wallon@plasticsrecyclers.eu, www.recyclclass.eu

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

Annex I



Figure 1 'Wood-effect' decoration technology colouration by Procter & Gamble