

Procter & Gamble

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 2 December 2020

The RecyClass PO films Technical Committee was requested to carry out an assessment of the 'Automatic Dish-Washing' (ADW) pouch by Procter & Gamble to verify its impact on the quality of recycled PE flexible packaging.

The technology is a laminated multilayer film, consisting of three PE layers and a vacuum deposited metallized layer as middle layer. Laminating adhesive between the layers is PU-based solvent free and represents less than 3wt% of the total film structure. The pouch technology tested is as well partially decorated by reverse printing.

According to the results that were obtained from the laboratory test by Proplast, carried out as per the Recyclability Evaluation Protocol for PE films, the ADW pouch technology is considered to be **compatible with PE flexibles recycling**. Also, the sortability of the packaging has been successfully tested by Suez.Circpack® following the RecyClass sorting protocol.

Based on these results, RecyClass certifies that Procter & Gamble ADW pouch technology will not have a negative impact on the current European coloured PE flexibles recycling provided the product is designed under the following conditions:

- a) The density of the printed film is below 1 g/cm³;
- b) The laminating adhesive is PU-based solvent free and represents less than 3wt% of the total structure;
- c) The vacuum deposited metallized layer counts 0,1 wt%, or less, of the total structure;
- d) 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 (see Annex I);

RecyClass concludes that Procter & Gamble ADW pouch technology as per current market conditions and knowledge, is compatible with the existing European industrial recycling processes for coloured PE flexibles. The plastic generated by the recycling process may be used in high quality applications such as PE blown films up to 25%¹, and providing that the package market penetration is limited to 10% maximum of the whole European LDPE flexible film market².

RecyClass recognition applies only to Procter & Gamble ADW pouch technology reported in Annex I and is not a recyclability assessment of specific packaging using this film as body. Any specific packaging using this film as body would need to be tested individually to demonstrate the system of resin, adjuvants, label, closure, and printing conformed to the RecyClass Recyclability Evaluation Protocol for PE films, and that it is sorted in the PE flexible stream at the state of art sorting plants in Europe. However, similar executions with the only modification of artworks and/or modification of the pouch sizes would not have to be tested again as long as the ink amount and the components proportion remain the same.

Any change on the formulation of the technology 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.recyclass.eu

¹ Product tested according to the RecyClass Recyclability Evaluation Protocol for PE films

² The market penetration is not specific to the brands, but is related to the overall PE laminated pouches market:

$$\text{Market penetration} = \frac{\Sigma_{vol} PE \text{ laminated pouches}}{\Sigma_{vol} PE \text{ flexible packaging EU market}}$$

Annex I



Figure 1 ADW pouch by Procter & Gamble