

Essity

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 22 February 2022

DISCLAIMER

RecyClass recognition applies only to Essity 'Tork Refill Bottle' 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 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 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 HDPE Technical Committee was requested to carry out an assessment of the technology 'Tork Refill Bottle' by Essity to verify its impact on the quality of recycled HDPE containers.

The technology is a natural HDPE bottle with an HDPE-based pump as closure system. Valve and housing of the pump are made of ethylene-based plastomers and represents approximately 11% 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 HDPE containers, the 'Tork Refill Bottle' technology is considered to be **fully compatible with HDPE recycling**.

Based on these results, RecyClass certifies that Essity 'Tork Refill Bottle' will have no negative impact on the current European HDPE containers recycling and provided that the packaging is designed under the following conditions:

- a) The bottle is made of clear HDPE;
- b) Apart the valve and housing, the closure system is made of clear or white PE;
- c) The maximum ethylene-based plastomer concentration is below 11 wt% respect to the total weight of the packaging;
- d) The density of the finished packaging is lower than 1 g/cm³;
- e) 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 Essity 'Tork Refill Bottle' as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for HDPE containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in high-value application such as HDPE bottles up to 25% concentration¹.

It should be noteworthy that application of non-separable decorations such as direct printing, or permanent printed labels will reduce the quality of recycled plastic generated by the container, and limit its compatibility with HDPE natural stream.

About

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 Tork Refill Bottle with cap by Essity