RecyClass

c/o Plastics Recyclers Europe
Avenue de Broqueville 12
1150 Brussels, Brussels

Phone: +32 2 786 39 08
info@recyclass.eu
www.recyclass.eu

Huhtamaki & ZALESI

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 02 February 2021
Reviewed: Brussels, 5 April 2024

DISCLAIMER

RecyClass recognition applies only to Huhtamaki & ZALESI 'PBL 240' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this technology. Any specific packaging using this technology 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 'PBL 240' by Huhtamaki & ZALESI to verify its impact on the quality of recycled HDPE containers.

The technology is a laminated tube, provided with HDPE shoulders, excluding cap and presenting light direct printing. The EVOH barrier concentration is 2.8 % of the total weight of the packaging, with 1.7 % PE tie layers (maleic anhydride grafted). Printing inks represent 0.1 wt% of the packaging and are acrylic-based.

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 'PBL 240' technology is fully compatible with HDPE recycling.

Based on these results, RecyClass acknowledges that Huhtamaki & ZALESI 'PBL 240' technology will not have a negative impact on the current European HDPE containers recycling and provided that the full packaging using this tube as the body is designed under the following conditions[1]:

a) The tube and its shoulders are made of clear or white PE;
b) The maximum EVOH concentration is below 2.8 wt% and provided by 1.72 wt% PE tie layers;
c) The density of the finished tube is lower than 1 g/cm^3;

[1] **HDPE containers designed under conditions other than those indicated need to be tested to assess their compliance with RecyClass Recyclability Evaluation Protocol for HDPE containers.**

d) The UV acrylic-based printing inks represent 0.1 wt% or less;

e) Closures, liners, seals and valves, as well as any other components are made of PE;

f) Any additional component or features (e.g. inks, adhesives, etc) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines[2].

RecyClass concludes that Huhtamaki & ZALESI 'PBL 240' technology 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 % concentration[3].

In regard to RecyClass Recyclability Certification, the present full compatibility with HDPE containers recycling approval delivered to Huhtamaki & ZALESI 'PBL 240' technology, means that a packaging containing this technology as mentioned in the aforementioned conditions will not be penalised with any Recyclability Class downgrade. Moreover, the amount of recyclable PE will impact the final Recyclability Class obtained during Recyclability Certification and should be kept above 95 % or 90 % in the final packaging to maximise chances to get a Recyclability Certificate with a Class A or B, respectively[4]. Also, it is noteworthy that the presence of additional packaging features could impact the certification process.

About RecyClass

RecyClass is a non-profit, cross-industry initiative advancing recyclability, bringing transparency to the origin of plastic waste and establishing a harmonized approach toward recycled plastic calculation & traceability in Europe. RecyClass develops Recyclability Evaluation Protocols and scientific testing methods for innovative plastic packaging materials which serve as the base for the Design for Recycling Guidelines and the RecyClass Online Tool. RecyClass established Recyclability Certifications for plastic packaging, Recycling Process Certification and Recycled Plastics Traceability Certification for plastic products.

RecyClass – Plastic Future is Circular

[2] Design for Recycling Guidelines - RecyClass

[3] Recyclability Evaluation Protocol for HDPE containers

[4] RecyClass Recyclability Certification

RecyClass

c/o Plastics Recyclers Europe
Avenue de Broqueville 12
1150 Brussels, Brussels

Phone : +32 2 786 39 08
info@recyclass.eu
www.recyclass.eu

Follow the latest news on RecyClass channels: LinkedIn | Twitter | YouTube

Contact : Jean-Emile.Potaufeux@plasticsrecyclers.eu, www.recyclass.eu

RecyClass

c/o Plastics Recyclers Europe
Avenue de Broqueville 12
1150 Brussels, Brussels

Phone : +32 2 786 39 08
info@recyclass.eu
www.recyclass.eu

RecyClass

c/o Plastics Recyclers Europe
Avenue de Broqueville 12
1150 Brussels, Brussels

Phone: +32 2 786 39 08
info@recyclass.eu
www.recyclass.eu

Annex I

Figure 1: PBL 240 tube without cap by Huhtamaki and ZALES.I