

Unilever

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 19th August 2020

The RecyClass HDPE Technical Committee was requested to carry out an assessment of the 'PARKES-A220' tube by Unilever to verify its impact on the quality of recycled HDPE containers.

The tube is a un-decorated laminated toothpaste tube excluding cap, made by HDPE and LDPE. The EVOH barrier concentration is below 5% of the total weight of the packaging and it is provided with more than 3% PE tie layers grafted with at least 0,1% maleic anydryde (MAH).

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 tube is considered to be compatible with HDPE recycling.

Based on these results, RecyClass certifies that Unilever 'PARKES-A220' tube will not have a negative impact on the current European HDPE containers recycling if the concentration of this tube in the feedstock of HDPE waste packaging attaining the gate of a European recycler is not exceeding 5%, and provided the full packaging using this tube as body is designed under the following conditions:

- a) The tube and its shoulders are made of PE and are designed in white;
- b) The EVOH concentration is lower or equal to 6% by weight respect to the total tube weight and provided with a minimum 3% PE-g-MAH tie layers ;
- c) The density of the finished tube is lower than 1g/cm³;
- d) Closures, liners, seals and valves, as well as any other components are made of PE;
- e) 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);
 - iii. direct printing is limited as much as possible;

RecyClass concludes that Unilever 'PARKES-A220' tube as per current market conditions and knowledge, is compatible with the existing European industrial recycling processes for HDPE containers. The recycled plastic generated after the recycling process may be used in high quality applications such as HDPE bottles up to 25%.

RecyClass recognition applies only to Unilever 'PARKES-A220' tube reported in Annex I and is not a recyclability assessment of a specific packaging using this tube as body. Any specific packaging using this tube as body 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 the packaging is sorted in the HDPE stream at the state of the art sorting plants in Europe.

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 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.

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Annex I

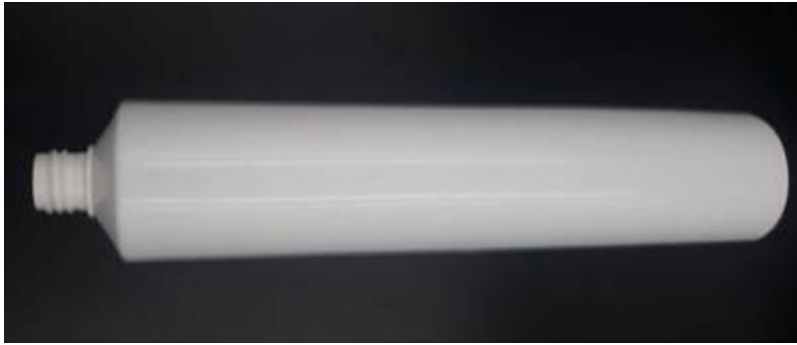


Figure 1 'PARKES-A220' un-decorated tube without cap by Unilever