RecyClass

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RECYCLASS TECHNOLOGY APPROVAL

Brussels, 25 October 2024

DISCLAIMER

RecyClass recognition applies only to Avery Dennison 'PP60 TOP CAVITATED S7000/S7000ER' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this pressure sensitive label. Any specific packaging using this pressure sensitive label 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 *'PP60 TOP CAVITATED S7000/S7000ER'* by Avery Dennison to verify its impact on the quality of recycled HDPE containers.

The technology is a white PP pressure sensitive label applied printed on a white HDPE bottle, without cap. The pressure sensitive label is composed by a 58 µm PP facestock and an acrylic emulsion adhesive, *'S7000' or 'S7000ER'* from Avery Dennison. The PP facestock counts for less than 2.40 wt% and the adhesive represents 0.75 wt% of the total weight of the tested bottle.

According to the results that were obtained from the laboratory tests done by the Nationaal Testcentrum Circulaire Plastics (NTCP), carried out as per the Recyclability Evaluation Protocol for Labels & Adhesives applied on HDPE containers (version 1.0), *'PP60 TOP CAVITATED S7000/S7000ER'* technology is fully compatible with HDPE recycling. The label removability rate is 97 %, exceeding the required 90 %.

Based on these results, RecyClass acknowledges that Avery Dennison *'PP60 TOP CAVITATED S7000/S7000ER'* technology will have no impact on the current European HDPE containers recycling

and provided that the full packaging using this pressure sensitive label is designed under the following conditions[1]:

a) The packaging is made of PE, with a prevalence of HDPE;
b) The facestock of the pressure sensitive label applied on the packaging is made of clear or white PP and represents 2.40 wt% of the total weight of the packaging, or less;
c) The acrylic emulsion is 'S7000' or 'S7000ER' from Avery Dennison and the amount of adhesive represents 0.75 wt% of the total weight of the packaging, or less;
d) The final density of the packaging is lower than 1 g/cm^3;
e) Any additional components, such as closure system are made of PE, preferably clear or white;
f) Any additional component or features (e.g. inks) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines[2].

RecyClass concludes that Avery Dennison *'PP60 TOP CAVITATED S7000/S7000ER'* technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for HDPE containers.

In regard to RecyClass Recyclability Certification, the present full compatibility with HDPE containers recycling approval delivered to Avery Dennison *'PP60 TOP CAVITATED S7000/S7000ER'* technology, means that a packaging containing this technology, as mentioned in the aforementioned conditions will not be penalised with a recyclability class deduction. 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[3]. Also, it is noteworthy that the presence of additional packaging features could impact the certification process.

This approval letter is valid for 2 years from the date mentioned in this document. After this time, RecyClass HDPE TC will evaluate the reassessment of this technology or the potential extension of the validity period.

[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.

[2] Design for Recycling Guidelines - RecyClass

[3] RecyClass Recyclability Certification

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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

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Annex I

Figure 1. 'PP60 TOP CAVITATED S7000/S7000ER' by Avery Dennison.

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