RecyClass

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Essity

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 31 January 2023
Reviewed: Brussels, 30 August 2023

DISCLAIMER

RecyClass recognition applies only to Essity 'Single Unit Wrapper for Hanky Tissue Products' 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 PE films, and that it is sorted in the PE flexible 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 PO films Technical Committee was requested to carry out an assessment of the technology 'Single Unit Wrapper for Hanky Tissue Products' by Essity to verify its impact on the quality of recycled PE flexible packaging.

The technology is a water-based non-permanent adhesive coated on a PP sticker applied on a LDPE film. The PP sticker represents around 4.1% of the total weight of the packaging. The water-based reclosable adhesive represents 0.8% of the total weight of the packaging. The film has been tested with a red line printed on the PP sticker, with inks representing less than 0.1wt%.

According to the results that were obtained from the laboratory test performed by Aimplas, carried out as per the Recyclability Evaluation Protocol for PE films, the 'Single Unit Wrapper for Hanky Tissue Products' technology is considered to be fully compatible with coloured and natural PE flexibles recycling. Additionally, the sortability of the packaging has been evaluated by Circpack following the RecyClass Sorting Protocol and showed that about 86% of the packaging was sorted as PE Flexibles[1].

Based on these results, RecyClass acknowledges that Essity 'Single Unit Wrapper for Hanky Tissue Products' technology will have no impact on the current European PE flexibles recycling provided that PE flexible films using this technology are designed only under the following conditions:

a) The density of the PE film is below 0,97 g/cm^3;

[1] Sorting Recyclability Evaluation Protocol for Plastic Packaging

b) The packaging is made of at least 95% of PE;

c) The PP represents 4.1% of the total weight of the packaging, or less;

d) The water-based reclosable adhesive represents 0.8% of the total weight of the packaging, or less;

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) and are EUPIA compliant;

   iii. direct printing is limited as much as possible;

RecyClass concludes that Essity 'Single Unit Wrapper for Hanky Tissue Products' technology as per current market conditions and knowledge, is fully 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%[2].

In regard to RecyClass Recyclability Certification, the present full compatibility with coloured PE flexibles recycling approval delivered to 'Single Unit Wrapper for Hanky Tissue Products' technology, means that a coloured package based on PE film containing the 'Single Unit Wrapper for Hanky Tissue Products' technology, as mentioned in the aforementioned conditions, will not be penalised with a Recyclability Class downgrade. Nevertheless, the amount of recyclable PE will impact the final Recyclability Class obtained during Recyclability Certification[3]. Also, it should be noteworthy that the presence of additional packaging features, like printing inks could impact the certification process.

[2] Technology tested according to the RecyClass Recyclability Evaluation Protocol for PE films

[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

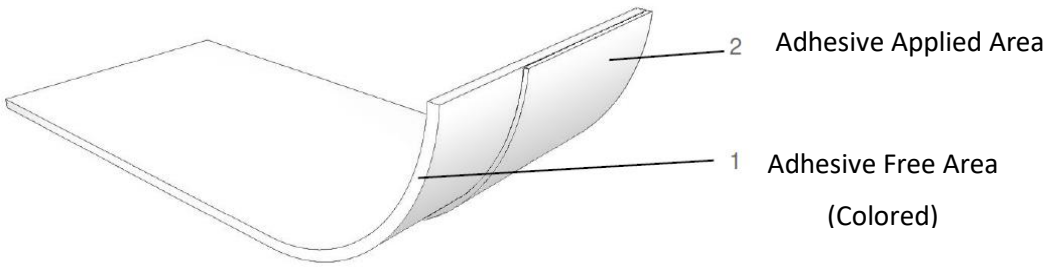

Figure 1 'Single Unit Wrapper for Hanky Tissue Products' *technology by Essity*