RecyClass™

c/o Plastics Recyclers Europe
Avenue de Cortenbergh 71
1000 Brussels - Belgium

Phone: +32 2 742 96 82
recyclass@plasticsrecyclers.eu
www.recyclass.eu

VOID Technologies

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 18 November 2019
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DISCLAIMER

RecyClass recognition applies only to VOID Technologies 'VO+ LLDPE' 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 film 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 'VO+ LLDPE' by VOID Technologies to verify its impact on the quality of recycled PE flexible packaging.

The innovative structure is a cavitated PE film made with a blend of metallocene LLDPE and VO+ masterbatch from VOID Technologies. This film contains 'VO+ LLDPE' in the internal layer alongside additional LLDPE resin, with the internal layer comprising 70% of the structure. In this film, the masterbatch represents 10% of the total weight of the film. The masterbatch contained 40 wt% of LLDPE and 60 wt% of VO+ additives. In total, the amount of additive represents 6.0wt% of the total film structure. The film has been tested unprinted.

According to the results that were obtained from the laboratory test performed by Proplast, carried out as per the Recyclability Evaluation Protocol for PE films, the 'VO+ LLDPE' technology is considered to be limited compatible with PE flexibles recycling.

Based on these results, RecyClass acknowledges that VOID Technologies 'VO+ LLDPE' technology will have a limited impact on the current European PE flexibles recycling provided that PE flexible films using this technology are designed only under the following conditions[1]:

a) The density of the PE film is below 0.97 g/cm^3;

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

b) The VO+ additives represent 6.0 % of the total weight of the film, or less;

c) Any components or attachments to the packaging should be preferably made of clear PE;

d) Any additional component or features (inks, adhesives, …) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines.

RecyClass concludes that VOID Technologies 'VO+ LLDE' technology, as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for PE flexibles. The plastic generated by the recycling process, for a structure respecting the aforementioned conditions, may be used in high quality applications such as PE blown films up to 25%[2].

In regard to RecyClass Recyclability Certification, the present limited compatibility with PE flexibles recycling approval delivered to 'VO+ LLDPE' technology, means that a package based on PE film containing the 'VO+ LLDPE' technology, as mentioned in the aforementioned conditions, will be penalised with one Recyclability Class downgrade. Nevertheless, the amount of recyclable PE will impact the final Recyclability Class obtained during Recyclability Certification and should be kept above 90% to maximise chances to get a Recyclability Certificate with a Class B to C[3]. Also, it is noteworthy that the presence of additional packaging features, like the amount and the chemistry of the inks for example, 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

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

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

[3] RecyClass Recyclability Certification