RecyClass

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SCGC

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 30 June 2025

DISCLAIMER

RecyClass recognition applies only to SCGC 'SCGC BWO1502G barrier coating' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this barrier coating. Any specific packaging using this barrier coating 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 'SCGC BWO1502G barrier coating' by SCGC to verify its impact on the quality of recycled PE flexible packaging.

The technology is a PVOH/PU-based barrier coating. The tested structure consisted in a MDO-PE/barrier coating/laminating adhesive/LLDPE film with the 'SCGC barrier coating BWO1502G' as barrier coating, representing 3.8 wt% of the total weight of the film, and the 'Loctite Liofol LA 7102 RE/LA 6902 RE' as a laminated layer, representing 0.6 wt% of the total weight of the film. This laminating adhesive was previously approved by RecyClass as fully compatible with PE films recycling for concentration inferior to 1.6 wt%. The film has been tested unprinted.

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 (version 5.0), the 'SCGC barrier coating BWO1502G' technology is limited compatible with coloured PE flexibles recycling.

Based on these results, RecyClass acknowledges that SCGC 'SCGC barrier coating BWO1502G' technology will have a limited impact on the current European coloured 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 laminating adhesive is a PU-based solvent free laminating adhesive considered as fully or limited compatible with PE flexibles recycling and represents 0.6 wt% of the total weight of the film, or less;
c) The PVOH/PU-based barrier coating 'SCGC BWO1502G barrier coating' represents 3.8 wt% of the total weight of the packaging, or less;
d) Any components or attachments to the packaging should be preferably made of clear PE;
e) Any additional component or features (inks, adhesives, …) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines[2].

RecyClass concludes that SCGC 'SCGC BWO1502G barrier coating' technology as per current market conditions and knowledge, is limited 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 % concentration[3].

In regard to RecyClass Recyclability Certification, the present limited compatibility with PE flexibles recycling delivered to 'SCGC BWO1502G barrier coating' technology, means that a package based on PE film containing this 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 95 % or 80 % in the final packaging to maximise chances to get a Recyclability Certificate with a Class B or C, respectively[4]. Also, it is noteworthy that the presence of additional packaging features, like inks or adhesives, could additionally 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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[2] Design for Recycling Guidelines - RecyClass

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

[4] RecyClass Recyclability Certification

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Annex I

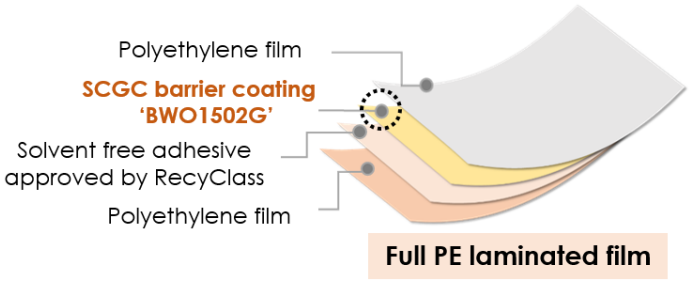

Figure 1. 'SCGC BWO1502G barrier coating' *technology by SCGC.*