RecyClass

c/o Plastics Recyclers Europe
Avenue de Broqueville 12
1150 Brussels, Brussels

Phone: +32 2 786 39 08
info@recyclass.eu
www.recyclass.eu

H.B. Fuller

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 22 January 2024

DISCLAIMER

RecyClass recognition applies only to H.B. Fuller 'Flextra® SBA 5250 + XA 3350' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this laminating adhesive. Any specific packaging using this two-components laminating adhesive 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 PP films, and that it is sorted in the PP 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 'Flextra® SBA 5250 + XA 3350' by H.B. Fuller to verify its impact on the quality of recycled PP in flexible packaging.

The technology is a two-component solvent-based aliphatic polyurethane laminating adhesive that was used to produce a PP//PP laminate. The tested structure consisted of PP/laminating adhesives/PP film with the 'Flextra® SBA 5250 + XA 3350' as a laminated layer, and representing 4.5 % of the total weight of the film. The film has been tested unprinted.

According to the results that were obtained from the laboratory test performed by Aimplas, carried out as per a simplified version of the Recyclability Evaluation Protocol for PP films used for RecyClass laminating adhesives test campaign[1], the 'Flextra® SBA 5250 + XA 3350' technology is considered to be fully compatible with PP flexibles recycling.

Based on these results, RecyClass acknowledges that H.B. Fuller 'Flextra® SBA 5250 + XA 3350' technology will have no negative impact on the current European PP flexibles recycling provided that PP flexible films using this technology are designed only under the following conditions[2]:

a) The density of the PP film is below 0.97 g/cm^3:

[1] Technical Review – Laminating adhesives Test campaign

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

b) The solvent-based aliphatic polyurethane laminating adhesive 'Flextra® SBA 5250 + XA 3350' represents 4.5 % of the total weight of the film, or less;

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

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 H.B. Fuller laminating adhesive 'Flextra® SBA 5250 + XA 3350' technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for PP flexibles. The plastic generated by the recycling process may be used in high quality applications such as PP cast films up to 25%[3].

In regard to RecyClass Recyclability Certification, the present full compatibility with PP flexibles recycling approval delivered to 'Flextra® SBA 5250 + XA 3350' technology, means that a package based on PP film containing the 'Flextra® SBA 5250 + XA 3350' technology, as mentioned in the aforementioned conditions, will not be penalised with a Recyclability Class downgrade. Nevertheless, the amount of recyclable PP 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[4]. Also, it is noteworthy that the presence of additional packaging features, like inks or barrier material, 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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Contact : Jean-Emile.Potaufeux@plasticsrecyclers.eu, www.recyclass.eu

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

[4] RecyClass Recyclability Certification

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Annex I

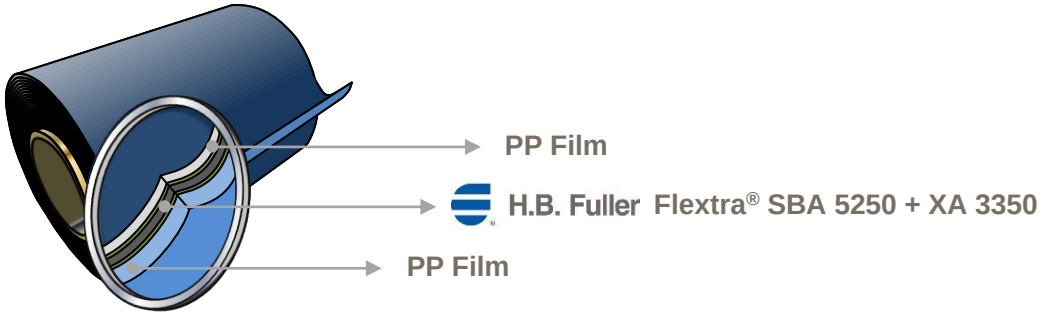

Figure 1. 'Flextra® SBA 5250 + XA 3350' *technology by H.B. Fuller used as laminating adhesives*