

All4Labels

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 15 September 2025

DISCLAIMER

RecyClass recognition applies only to All4Labels 'STARFLAKE + STARSHINE' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this pressure sensitive adhesive and metallic embellishment 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 PET bottles, and that it is sorted in the PET bottle 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 PET Technical Committee was requested to carry out an assessment of the technology 'STARFLAKE + STARSHINE' by All4Labels to verify its impact on the quality of recycled PET bottles.

The 'STARFLAKE' technology is a permanent wash-off acrylic pressure sensitive adhesive, applied with a PP-based label on a clear transparent PET bottle, without cap. The 'STARSHINE' technology is a metallic embellishment technology applied on the label, using aluminium pigment, adhesive, inks and a varnish. The label facestock coating basis is 47 gsm and the pressure sensitive adhesive coating weight is 18 gsm. The 'STARSHINE' technology represents about 0.1 wt% of the total weight of the packaging

According to the results that were obtained from the laboratory tests done by Circpack, carried out as per the Recyclability Evaluation Protocol for Labels & Adhesives applied on PET bottles (version 1.0), 'STARFLAKE + STARSHINE' technology is **fully compatible with PET bottles recycling.**

Based on these results, RecyClass acknowledges that All4Labels 'STARFLAKE + STARSHINE' technology will have no impact on the current European PET bottles recycling and provided that the full packaging using this pressure sensitive label is designed under the following conditions¹:

- a) The packaging is made of PET;

¹ PET bottles designed under conditions other than those indicated need to be tested to assess their compliance with RecyClass Recyclability Evaluation Protocol for PET bottles.

- b) The 'STARFLAKE' label technology contains an acrylic adhesive that has a coating weight of 18 ± 2 gsm;
- c) The 'STARFLAKE' label technology contains a PO (density below 1 g/cm³) facestock;
- d) The 'STARSHINE' technology contains aluminium pigments, adhesives, inks and varnished that together represent 0.2 wt% of the total weight of the packaging, or less;
- e) The 'STARSHINE' technology must not hamper the NIR and colour sorting of the PET bottle;
- f) Any additional component or features (e.g. inks) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines².

RecyClass concludes that All4Labels 'STARFLAKE + STARSHINE' technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for PET bottles.

In regard to RecyClass Recyclability Certification, the present full compatibility with PET bottles recycling approval delivered to All4Labels 'STARFLAKE + STARSHINE' 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 PET 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 A or B, respectively³. 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 PET TC will evaluate the reassessment of this technology or the potential extension of the validity period.

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 [RecyClass Recyclability Certification](#)

Annex I



Figure 1. 'STARFLAKE + STARSHINE' by All4Labels used on a PET bottle.