

Avient

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 12 June 2024

Reviewed: Brussels, 26 November 2024

DISCLAIMER

RecyClass recognition applies only to Avient 'Cesa™ Light FEA0050148' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this UV absorber additive. Any specific packaging using this UV absorber additive would need to be tested individually to demonstrate that the system of resin, adjuvants, label, closure, and printing conforms to the 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 (TC) was requested to carry out an assessment of the technology 'Cesa™ Light FEA0050148' by Avient to verify its impact on the quality of recycled PET packaging.

The technology is a UV absorber blended in a PET bottle grade. The amount of UV absorber represents 0.15 wt% of the total weight of the packaging. The test was carried with no decoration or printing.

According to the results that were obtained from the laboratory test performed by Institut für Kunststofftechnologie und -recycling e. V. (IKTR), carried out as per an adapted version of the Recyclability Evaluation Protocol for PET bottles¹, the UV absorber technology 'CESA™ light FEA0050148-LF' is considered to be **limited compatible with the recycling of PET bottles.**

Based on these results, RecyClass acknowledges that Avient 'CESA™ light FEA0050148-LF' will have a limited impact on the current European PET bottles recycling and provided that the full packaging using this UV absorber is designed under the following conditions²:

- a) The bottle is made of PET;
- b) The UV absorber 'Cesa™ Light FEA0050148' represents 0.15 wt% of the total weight of the packaging, or less;
- c) The UV absorber 'Cesa™ Light FEA0050148' is used with a PET-based carrier;

¹ [RecyClass Recyclability Evaluation Protocol for PET bottles](#)

² PET bottle designed under conditions other than those indicated need to be tested to assess their compliance with RecyClass Recyclability Evaluation Protocol for PET bottles.

- d) Any additional component or features (inks, adhesives, ...) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines³.

RecyClass concludes that Avient 'Cesa™ Light FEA0050148' technology as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for PET bottles.

In regard to RecyClass Recyclability Certification, the present limited compatibility with PET bottles recycling delivered to 'Cesa™ Light FEA0050148' technology, means that a packaging based on PET bottle containing this technology, as mentioned in the aforementioned conditions, will be penalized with one 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 90 % in the final packaging to maximise chances to get a Recyclability Certificate with a class B or C, respectively⁴. Also, it is noteworthy that the presence of additional packaging features, like inks or barrier material, could additionally impact the certification process.

Note that, in addition to the 'Cesa™ Light FEA0050148', Avient developed other similar grades, such as 'Cesa™ Light FEA0050249', 'Cesa™ Light NEA0050339' and 'ColorMatrix UV Blocker Ultimate 390-1' that are also considered as **limited compatible with the PET bottles recycling** stream under the similar conditions aforementioned for 'Cesa™ Light FEA0050148'.

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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³ [Design for Recycling Guidelines of RecyClass](#)

⁴ [RecyClass Recyclability Certification](#)

Annex I



Figure 1. 'Cesa™ Light FEA0050148' technology by Avient.