

Holland Colours

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 15 September 2025

DISCLAIMER

RecyClass recognition applies only to Holland Colours 'LightGuard 400' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this UV absorber additive masterbatch. 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 'LightGuard 400' by Holland Colours to verify its impact on the quality of recycled PET packaging.

The technology is a solid UV absorber additive masterbatch in a clear transparent PET bottle. The masterbatch carrier is a biobased wax. An equivalent masterbatch with a PET carrier also exists. The UV absorber masterbatch represents 0.17 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 Plastics Forming Enterprises (PFE), carried out as per the Recyclability Evaluation Protocol for PET bottles (version 1.1)¹, the UV absorber technology 'LightGuard 400' is considered to be fully compatible with PET bottles recycling.

Based on these results, RecyClass acknowledges that Holland Colours 'LightGuard 400' will have no negative 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;

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.

- b) The UV absorber 'LightGuard 400' masterbatch represents 0.17 wt% of the total weight of the packaging, or less;
- c) The organic UV blockers represent 0.1 wt% of the total weight of the packaging, or less;
- 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 Holland Colours 'LightGuard 400' technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for PET bottles. The plastic generated by the recycling process may be used in high quality applications such as PET injected preform up to 12.5 % concentration⁴.

In regard to RecyClass Recyclability Certification, the present full compatibility with PET bottles recycling delivered to 'LightGuard 400' technology, means that a PET packaging using this technology, as mentioned in the aforementioned conditions, will not be penalized 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, respectively⁵. 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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³ [Design for Recycling Guidelines of RecyClass](#)

⁴ Technology tested according to the RecyClass [Recyclability Evaluation Protocol for PET bottles](#)

⁵ [RecyClass Recyclability Certification](#)

Annex I



Figure 1. 'LightGuard 400' technology by Holland Colours.