RecyClass

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Sherwin Williams

RECYCLASS TECHNOLOGY APPROVAL

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DISCLAIMER

RecyClass recognition applies only to Sherwin Williams 'ValOR A400' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this oxygen barrier additive. Any specific packaging using this additive would need to be assessed individually to demonstrate that the system of resin, adjuvants, label, closure, and printing conforms to the RecyClass Design for Recycling Guidelines or 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 'ValOR A400' by Sherwin Williams to verify its impact on the quality of recycled PET packaging.

The technology is a nylon-free oxygen scavenger barrier used in a clear transparent PET monolayer bottle. The amount of oxygen barrier represents 2 wt% of the total weight of the packaging. The test was carried with no decoration nor printing.

According to the results that were obtained from the laboratory test performed by PTI Europe, carried out as per an adapted version of the Recyclability Evaluation Protocol for PET bottles (version 1.1)[1], the oxygen barrier technology 'ValOR A400' is considered to be limited compatible with transparent coloured PET bottles recycling.

Based on these results, RecyClass acknowledges that Sherwin Williams 'ValOR A400' will have a limited impact on the current European transparent coloured PET bottles recycling and provided that the full packaging using this oxygen barrier is designed under the following conditions[2]:

a) The bottle is made of PET;
b) The oxygen barrier 'ValOR A400' represents 2.0 wt% of the total weight of the packaging, or less;

[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.

c) Any additional component or features (inks, adhesives, …) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines[3].

RecyClass concludes that Sherwin Williams 'ValOR A400' technology as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for transparent coloured 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 % concentration[4].

In regard to RecyClass Recyclability Certification, the present limited compatibility with PET bottles recycling delivered to 'ValOR A400' technology, means that a transparent coloured PET bottle packaging using 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 80 % in the final packaging to maximise chances to get a Recyclability Certificate with a class B or C, respectively[5]. 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

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Annex I

Figure 1. 'ValOR A400' technology by Sherwin Williams.