

*Aegis Packaging*

RECYCLASS TECHNOLOGY APPROVAL

*Brussels, 19 February 2026*

## DISCLAIMER

*RecyClass recognition applies only to Aegis Packaging 'O<sub>2</sub>X™' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this process barrier coating. Any specific packaging using this barrier coating 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 PE films, and that it is sorted in the PE 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 'O<sub>2</sub>X™' by Aegis Packaging to verify its impact on the quality of recycled PE flexible packaging.

The technology is a water-based silicate polymer suspension barrier coating. The tested structure consisted in a PE/barrier coating/laminating adhesive/LLDPE film with the 'O<sub>2</sub>X™' as barrier coating, representing 0.32 wt% of the total weight of the film, and the 'Novacote® NC 560 A + CA 101' as a laminated layer, representing 3.4 wt% 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 the Recyclability Evaluation Protocol for PE films (version 6.0), the 'O<sub>2</sub>X™' technology is **limited compatible with coloured PE flexibles recycling**.

Based on these results, RecyClass acknowledges that Aegis Packaging 'O<sub>2</sub>X™' technology will have a limited impact on the current European coloured PE flexibles recycling provided that PE flexible films using this technology are designed only under the following conditions<sup>1</sup>:

- a) The density of the PE film is below 0.97 g/cm<sup>3</sup>;
- b) The water-based silicate polymer suspension barrier coating 'O<sub>2</sub>X™' represents 0.32 wt% of the total weight of the packaging or less;

---

<sup>1</sup> PE films designed under conditions other than those indicated need to be tested to assess their compliance with Recyclass Recyclability Evaluation Protocol for PE films.

- c) The laminating adhesive is a solvent-based two-components aliphatic polyurethane laminating adhesive and represents 3.4 wt% of the total weight of the film, or less;
- d) Any components or attachments to the packaging should be preferably made of clear PE;
- e) Any additional component or features (inks, laminating adhesives, ...) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines<sup>2</sup>.

RecyClass concludes that Aegis Packaging 'O<sub>2</sub>X™' technology as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for coloured PE flexibles. The plastic generated by the recycling process may be used in high quality applications such as PE blown films up to 50 % concentration<sup>3</sup>.

In regard to RecyClass Recyclability Certification, the present limited compatibility with coloured PE flexibles recycling delivered to 'O<sub>2</sub>X™' technology, means that a coloured packaging containing this technology, as mentioned in the aforementioned conditions, will be penalised with one recyclability class downgrade. Nevertheless, the amount of recyclable PE 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<sup>4</sup>. Also, it is noteworthy that the presence of additional packaging features, like inks or adhesives, 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 harmonised approach toward recycled plastic calculation & traceability in Europe. RecyClass develops Recyclability Evaluation Protocols and scientific testing methods for innovative plastic materials which serve as the base for the Design for Recycling Guidelines and the RecyClass Online Tool. RecyClass established Recyclability Certifications for plastic packaging, Sorting Process, Recycling Process, and Recycled Plastics Traceability Certifications for plastic products.

[RecyClass – Plastic Future is Circular](#)

Follow the latest news on RecyClass channels: [LinkedIn](#) | [YouTube](#)

Contact : [Carolane.Gerbehayex@plasticsrecyclers.eu](mailto:Carolane.Gerbehayex@plasticsrecyclers.eu), [www.recyclass.eu](http://www.recyclass.eu)

---

<sup>2</sup> [Design for Recycling Guidelines - RecyClass](#)

<sup>3</sup> Technology tested according to the RecyClass [Recyclability Evaluation Protocol for PE films](#)

<sup>4</sup> [RecyClass Recyclability Certification](#)

## Annex I

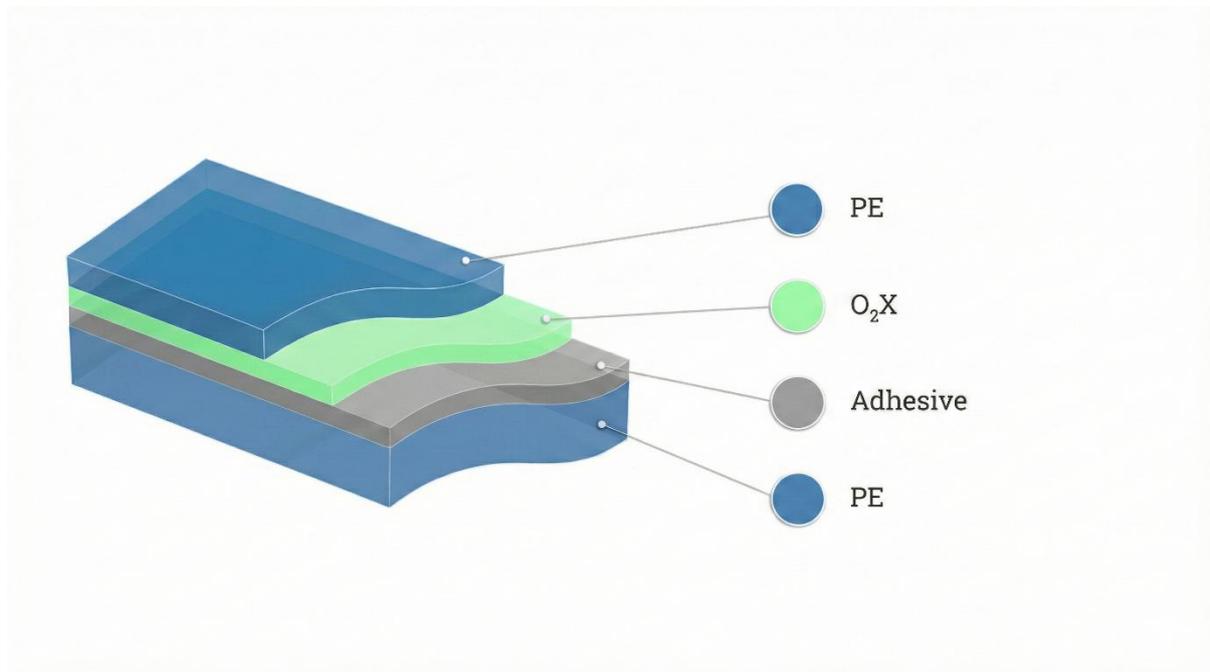


Figure 1. 'O<sub>2</sub>X<sup>TM</sup>' technology by Aegis Packaging.