

*Viva packaging*

RECYCLASS TECHNOLOGY APPROVAL

*Brussels, 20 September 2022*

## DISCLAIMER

*RecyClass recognition applies only to Viva Packaging 'IML tube' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this tube. Any specific packaging using this tube 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 PP containers, and that it is sorted in the PP rigid 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 PP Technical Committee was requested to carry out an assessment of the technology 'IML tube' by Viva Packaging to verify its impact on the quality of recycled PP containers.

The technology is a decorated PP tube with a printed BOPP In-Mould-Label (IML). The decoration of the tube is made of direct printing, matt varnish and gold cold stamping. The tube was provided with a PP flip-top cap containing a white masterbatch representing less than 0.6% of the total packaging weight. The BOPP IML and the inks (ink + varnish + cold stamp) respectively represent less than 5.7% and 0.7% of the total weight of the packaging

According to the results that were obtained from the laboratory tests done by the Institut für Kunststofftechnologie und -recycling (IKTR), carried out as per the Recyclability Evaluation Protocol for PP containers<sup>1</sup>, 'IML tube' technology is considered to be **limited compatible with coloured PP recycling**. Additionally, the sortability of the packaging has been tested by CIRCPACK following the RecyClass Sorting Protocol<sup>2</sup>. The results showed that 90% of the tubes were successfully sorted in the PP rigid stream.

Based on these results, RecyClass acknowledges that Viva Packaging 'IML tube' technology will have limited impact on the current European coloured PP containers recycling and provided that the full packaging using this tube is designed under the following conditions:

- a) The tube main body and cap are made of PP;

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<sup>1</sup> [RecyClass Recyclability Evaluation Protocol for PP containers](#)

<sup>2</sup> [Sorting Evaluation Protocol for Plastic Packaging](#)

- b) The In-Mould label is made of PP;
- c) The amount of inks represent 0.7% or less of the total weight of the packaging;
- d) The density of the final packaging is lower than 1 g/cm<sup>3</sup>;
- e) There are no laminating adhesives in the tube structure;
- f) There are no functional barriers present in the structure (i.e. EVOH, PA, PVDC);
- g) No additional printing technology are applied, and in any case, it is the responsibility of the end-user to choose an appropriate combination of inks and printing process to ensure that:
  - i. the inks are non-bleeding;
  - ii. the inks comply with the European Legislation (e.g. Packaging and Packaging Waste Directive on the heavy metal concentration levels) and are EUPIA compliant;
  - iii. direct printing is limited as much as possible;

RecyClass concludes that Viva Packaging 'IML tube' technology as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for coloured PP containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in injection moulding applications up to a concentration of 50% innovation<sup>1</sup>.

In regard to RecyClass Recyclability Certification, the present limited compatibility with coloured PP containers recycling approval delivered to Viva Packaging 'IML tube' technology, means that a packaging containing the Viva Packaging 'IML tube' as mentioned in the aforementioned conditions will be penalised with one Recyclability Class downgrade. Moreover, the amount of recyclable PP present in the packaging will impact the final Recyclability Class obtained during Recyclability Certification<sup>3</sup>. Also, it should be noteworthy that the presence of additional packaging features could 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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<sup>3</sup> [RecyClass Recyclability Certification](#)

Annex I



*Figure 1. 'IML tube' by Viva Packaging*