

Neopac

RECYCLASS PRODUCT APPROVAL

Brussels, 16 November 2021

Reviewed: Brussels, 5 April 2024

DISCLAIMER

RecyClass recognition applies only to Neopac 'Polyfoil® MMB Tube PF528' reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific artwork or size of this packaging. Any changes in the formulation of this packaging, not falling under the scope of this approval letter, 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 product 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 product must be communicated to the Technical Committee which will reassess the approval of the product.

The RecyClass PP Technical Committee was requested to carry out an assessment of the product 'Polyfoil® MMB Tube PF528' by Neopac to verify its impact on the quality of recycled PP containers.

The product is a PP laminated tube, provided with PP shoulders and PP cap. The tube body has metallic appearance with direct printing and is lacquered representing less than 1 % of the total weight of the packaging. The EVOH barrier concentration is 2 % of the total weight of the packaging, provided with 2 % combined PP and PE tie layers grafted with maleic anhydride. The metallization layer has an optical density up to 2.4 (about 0.02 µm in thickness) representing less than 0.02 %. Laminated adhesive is PU based, solvent free and counts for less than 1 wt%. The tube structure is completed by a MDO-PE barrier film, where PE represents 3 % of the total packaging weight.

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, 'Polyfoil® MMB Tube PF528' is **limited compatible with coloured PP recycling**.

Based on these results, RecyClass acknowledges that Neopac 'Polyfoil® MMB Tube PF528' will have a limited impact on the current European PP containers recycling and provided that the full packaging is designed under the following conditions¹:

¹ PP Rigid designed under conditions other than those indicated need to be tested to assess their compliance with Recyclass Recyclability Evaluation Protocol for PP containers.

- a) The tube, the shoulder and the capare made of clear or white PP;
- b) EVOH-barrier represents 2 wt%, or less, and is provided with more than 1.4 wt% PP tie layers, grafted with at least 0.1 % of maleic anhydride;
- c) PE is 3 %, or less, of the total packaging weight;
- d) The metallized layer has an optical density of 2.4, or less, representing 0.02 wt%, or less.
- e) The laminated adhesive is PU based, solvent free and represents less than 1 wt%;
- f) The density of the finished tube is lower than 1 g/cm³;
- g) The acrylic-based UV crosslinked inks used for direct printing represents less than 1 wt% combining both inks and lacquer;
- h) Any additional component or features (e.g., inks, adhesives, etc.) of the packaging must be compliant with the corresponding RecyClass Design for Recycling Guidelines².

RecyClass concludes that Neopac 'Polyfoil® MMB Tube PF528' as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for PP containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in high-value application such as PP bottles up to a concentration of 25 % innovation³.

According to the RecyClass Recyclability Methodology⁴, 'Polyfoil® MMB Tube PF528' corresponds to a class ranking **C**. The packaging is indeed penalized by the amount of PP (being between 90 % and 95 % of the total packaging weight) and by the presence of metallization. An additional penalty may be applied in the case of an Easy-to-Empty index (EtEi) above 5 %. However, this letter is not a certification and does not allow the use of the RecyClass class ranking logo. Therefore, Neopac is invited to contact one of the recognized Certification Bodies to get 'Polyfoil® MMB Tube PF528' product certified.

Similar executions of 'Polyfoil® MMB Tube PF528' product with the only modification of artworks would not have to be tested again as long as the decoration amount and the components proportion remain the same.

² [Design for Recycling Guidelines - RecyClass](#)

³ [Recyclability Evaluation Protocol for PP containers](#)

⁴ [Recyclability Methodology of RecyClass](#)

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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Annex I



Figure 1: Polyfoil® MMB Tube PF528 by Neopac.