

*Leonhard Kurz*

RECYCLASS TECHNOLOGY APPROVAL

*Brussels, 18 November 2020*

The RecyClass HDPE Technical Committee was requested to carry out an assessment of the Cold Transfer 'InLine Foiling' decoration technology by Leonhard Kurz to verify its impact on the quality of recycled HDPE containers.

The cold transfer 'InLine Foiling' decoration is applied on HDPE tubes and bottles, and consists in transferring the decoration layer to the packaging by depositing few microns of several layers: top coats, metallization (about 15 nanometres) and UV curable adhesive. The technology was tested on HDPE tubes with a surface coverage of 30% (i.e. 1.5% of the total weight).

According to the results that were obtained from the laboratory test by the Institut für Kunststofftechnologie und -recycling (IKTR), carried out as per the Recyclability Evaluation Protocol for HDPE containers, the cold transfer 'InLine Foiling' technology is considered to be fully compatible with HDPE recycling.

Based on these results, RecyClass certifies that Leonhard Kurz cold transfer 'InLine Foiling' technology will not have a negative impact on the current European HDPE containers recycling under the following conditions:

- a) The packaging is designed preferably in white;
- b) The density of the finished packaging is lower than 1 g/cm<sup>3</sup>;
- c) Cold transfer 'InLine Foiling' decoration represents up to 30% of the total surface coverage of the packaging; and the decoration is preferably silver coloured, or light color shade (such as light gold colours);
- d) 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 (see Annex I);

RecyClass concludes that Leonhard Kurz cold transfer 'InLine Foiling' technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for HDPE containers. The plastic generated by the recycling process may be used in high quality applications such as HDPE bottles up to 25% concentration<sup>1</sup>.

RecyClass recognition applies only to Leonhard Kurz cold transfer 'InLine Foiling' technology reported in Annex I and is not a recyclability assessment of specific packaging using this technology. Any specific packaging using this technology would need to be tested individually to demonstrate the system of resin, adjuvants, label, and closure conformed to the RecyClass Recyclability Evaluation Protocol for HDPE containers, and that it is sorted in the HDPE stream at the state of art sorting plants in Europe.

Any change on the formulation of the technology must be communicated to the Technical Committee which will reassess the approval of the technology.

#### *About*

**RecyClass** is a comprehensive cross-industry initiative that works to advance plastic packaging recyclability within Europe. RecyClass assesses recyclability and provides specific recommendations on how to improve packaging design to fit current recycling technologies. Activities within RecyClass include the development of Recyclability Evaluation Protocols and testing of innovative materials. Findings are used to update the RecyClass Design for Recycling guidelines and the online free tool.

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

## Annex I



*Figure 1 Tested cold transfer 'InLine Foiling' technology by Leohnard Kurz*