RecyClass

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Siegwerk

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 26 March 2026

DISCLAIMER

RecyClass recognition applies only to Siegwerk 'UR74 ink series gravure' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this ink binder. Any specific packaging using this ink 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 'UR74 ink series gravure' by Siegwerk to verify its impact on the quality of recycled PE flexible packaging.

The technology is a solvent-based PU-based ink, used for surface printing (gravure). The tested structure consisted in an LDPE film surface printed in white with PU-based ink representing 5 wt% of the total weight of the film. The dry ink contains 60 wt% of TiO_2 pigment, meaning that TiO_2 pigment represents 3 wt% of the total weight of the film.

According to the results that were obtained from the laboratory test performed by Proplast, carried out as per the Recyclability Evaluation Protocol for PE films (version 6.0) used for RecyClass NC-free inks test campaign[1], the 'UR74 ink series gravure' technology is considered to be fully compatible with coloured PE flexibles recycling.

Based on these results, RecyClass acknowledges that Siegwerk 'UR74 ink series gravure' technology will have no negative impact on the current European coloured PE flexibles recycling provided that PE flexible films using this technology are designed only under the following conditions[2]:

a) The density of the PE film is below 0.97 g/cm^3:
b) The solvent-based PU-based ink or varnish represents 5 wt% of the total weight of the film, or less;

[1] RecyClass Technical Review

[2] **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) Any components or attachments to the packaging should be preferably made of clear PE;
d) 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 Siegwerk 'UR74 ink series gravure' technology as per current market conditions and knowledge, is fully 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 25 %[4].

In regard to RecyClass Recyclability Certification, the present full compatibility with coloured PE flexibles recycling delivered to 'UR74 ink series gravure' technology, means that a coloured package based on PE film containing this technology, as mentioned in the aforementioned conditions, will not be penalised with a 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 A or B, respectively[5]. Also, it is noteworthy that the presence of additional packaging features, like inks or barrier material, could additionally impact the certification process.

Under the condition that the film is transparent, with no use of coloured masterbatch, the 'UR74 ink series gravure' technology is also considered to be fully compatible with natural PE flexibles recycling. The packaging using this technology must be designed according to the conditions previously mentioned, and be compliant with the RecyClass Design for Recycling Guidelines for natural PE flexible packaging[6].

About RecyClass
RecyClass is a non-profit, cross-industry initiative advancing recyclability, bringing transparency to the origin of plastic waste,

[3] Design for Recycling Guidelines - RecyClass

[4] Technology tested according to the RecyClass Recyclability Evaluation Protocol for PE films

[5] RecyClass Recyclability Certification

[6] Design for Recycling Guidelines - RecyClass

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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

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Annex I

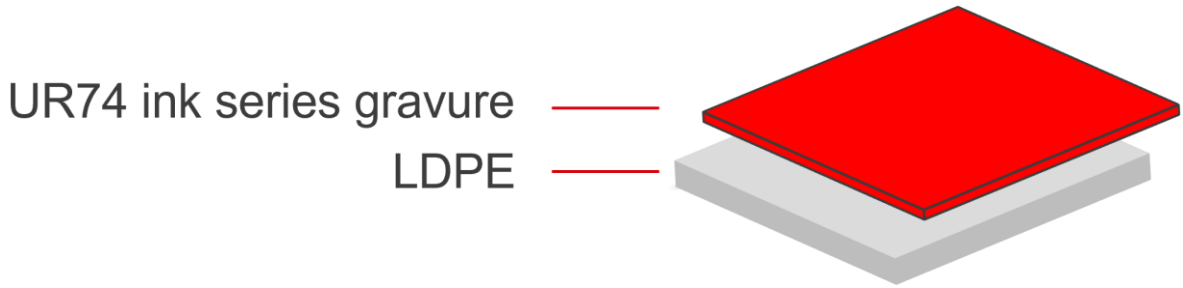

Figure 1. 'UR74 ink series gravure' *technology by* Siegwerk.