

## DISCLAIMER

*RecyClass recognition applies only to Siegwerk 'SICURA Nutriflex NT26' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this ink. 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 'SICURA Nutriflex NT26' by Siegwerk to verify its impact on the quality of recycled PE flexible packaging.

The technology is an acrylic UV/LED-curable ink. The tested structure consisted in an LDPE film surface printed in white with acrylic UV/LED-curable ink representing 4.8 wt% of the total weight of the film.

According to the results that were obtained from the laboratory test performed by the Centre Technique Industriel de la Plasturgie et des Composites (IPC), carried out as per the Recyclability Evaluation Protocol for PE films (version 6.0), the 'SICURA Nutriflex NT26' technology is considered to be fully compatible with coloured PE flexibles recycling.

Based on these results, RecyClass acknowledges that Siegwerk 'SICURA Nutriflex NT26' 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<sup>1</sup>:

- a) The density of the PE film is below 0.97 g/cm<sup>3</sup>;
- b) The acrylic UV/LED-curable ink or varnish represents 4.8 wt% of the total weight of the film, or less;
- c) Any components or attachments to the packaging should be preferably made of clear PE;

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

- d) 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 Siegwerk ‘SICURA Nutriflex NT26’ 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 %<sup>3</sup>.

In regard to RecyClass Recyclability Certification, the present full compatibility with coloured PE flexibles recycling delivered to ‘SICURA Nutriflex NT26’ 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<sup>4</sup>. 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 ‘SICURA Nutriflex NT26’ 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<sup>5</sup>.

Note that, in addition to ‘SICURA Nutriflex NT26’, Siegwerk developed other similar acrylate UV/LED-curable inks/varnishes, such as ‘SICURA Nutriflex NT25’, ‘SICURA Nutriflex 10’, ‘SICURA Nutriflex LEDtec’, ‘SICURA Nutriflex OPV’, ‘SICURA Flex Dual Cure’, ‘SICURA Flex OPV’, ‘SICURA Litho Pack’, ‘SICURA Litho Pack DC’, ‘SICURA Nutriplast 2N’, ‘SICURA Nutriplast 2DC’ and ‘SICURA Nutri GTR’, that are also considered as fully compatible with coloured PE flexibles recycling stream under the similar conditions aforementioned for ‘SICURA Nutriflex NT26’.

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

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

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

<sup>5</sup> [Design for Recycling Guidelines - RecyClass](#)

#### ***About RecyClass***

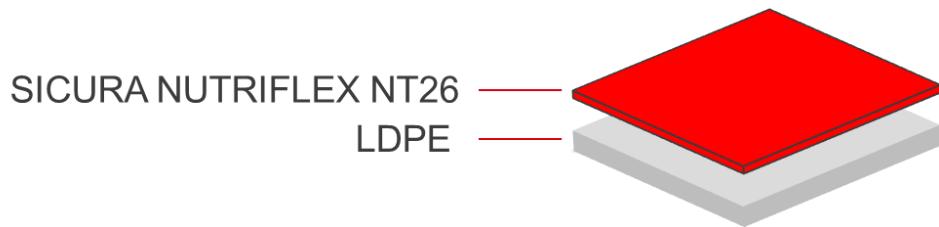
RecyClass is a non-profit, cross-industry initiative advancing recyclability, bringing transparency to the origin of plastic waste, and establishing a harmonised approach toward recycled plastic calculation & traceability in Europe. RecyClass develops Recyclability Evaluation Protocols and scientific 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)

## Annex I



*Figure 1. 'SICURA Nutriflex NT26' technology by Siegwerk.*