

Fedrigoni

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 27 September 2022

DISCLAIMER

RecyClass recognition applies only to Fedrigoni 'FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this self-adhesive label. Any specific packaging using this self-adhesive label 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 HDPE containers, and that it is sorted in the HDPE 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 HDPE Technical Committee was requested to carry out an assessment of the technology 'FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62' by Fedrigoni to verify its impact on the quality of recycled HDPE containers.

The technology is a white PE self-adhesive label applied unprinted on a HDPE bottle, without cap. The self-adhesive label is composed by a PE facestock and a water-based acrylic adhesive, covering about 12% of the total surface of the bottle. The adhesive represents about 0.2% of the total weight of the tested bottle.

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 HDPE containers, 'FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62' technology is considered to be **limited compatible with coloured HDPE recycling.**

Based on these results, RecyClass acknowledges that Fedrigoni 'FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62' technology will have a limited impact on the current European coloured HDPE containers recycling and provided that the full packaging using this self-adhesive label is designed under the following conditions:

- a) The packaging is made of PE, with a prevalence of HDPE;
- b) The facestock of the self-adhesive label applied on the packaging is made of clear or white PE;
- c) The amount of acrylic adhesive represents 0.2% of the total weight of the packaging, or less;

- d) The final density of the packaging is lower than 1 g/cm³;
- e) Any additional components, such as closure system are made of PE, preferably clear or white;
- f) Applied printing technology is compatible with recycling; since several printing options are possible, 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. printing is limited as much as possible, using preferably light colours.

RecyClass concludes that Fedrigoni '*FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62*' technology as per current market conditions and knowledge, is limited compatible with the existing European industrial recycling processes for coloured HDPE containers. Indeed, the recycled plastic generated after the recycling process was successfully tested in high-value application such as HDPE bottles up to 50% concentration¹.

In regard to RecyClass Recyclability Certification, the present limited compatibility with coloured HDPE containers recycling approval delivered to Fedrigoni '*FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62*' technology, means that a packaging containing the Fedrigoni '*FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62*' as mentioned in the aforementioned conditions will be penalised with one Recyclability Class deduction. Moreover, the amount of recyclable PE will impact the final Recyclability Class obtained during Recyclability Certification². Also, it should be noteworthy that the presence of additional packaging features could impact the certification process.

It should be noteworthy that application of extensive printing on the non-separable self-adhesive label reduces the quality of recycled plastic generated by the container, by limiting its compatibility with HDPE recycling. This approval is granted for a period of 2 years, during which the applicant will endeavor to improve the self-adhesive label construction to allow its removal during the recycling process, based on RecyClass HDPE Technical Committee recommendation.

¹ [Recyclability Evaluation Protocol for HDPE containers](#)

² [RecyClass Recyclability Certification](#)

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.

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Annex I



Figure 1. FLM 1339 – PE TC8 GLOSS WHITE 85 / AP901 / WG62 by Fedrigoni.