

Silgan Dispensing

RECYCLASS TECHNOLOGY APPROVAL

Brussels, 24 September 2021

DISCLAIMER

RecyClass recognition applies only to Silgan Dispensing 'Pearl 2' technology reported in Annex I. It, therefore, does not concern to a recyclability assessment of specific packaging using this jar. Any specific packaging using this jar would need to be tested individually to demonstrate that the system of resin, adjuvants, label, 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 'Pearl 2' by Silgan Dispensing to verify its impact on the quality of recycled HDPE containers.

The technology is an injected molded white HDPE jar provided with a cap and a lotion pump. All pieces are made by HDPE, except the spring made by PP and counting for 8% of the total weight of the packaging. The nozzle and the base were provided black-coloured.

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, 'Pearl 2' technology is considered to be limited compatible with coloured HDPE recycling.

Based on these results, RecyClass certifies that Silgan Dispensing 'Pearl 2' technology will not have a negative impact on the current European coloured HDPE containers recycling and provided that the packaging using this dispenser is designed under following conditions:

- a) The jar and the cap are made of clear or white PE;
- b) Apart the spring, all parts of the lotion pump are made of clear or white PE;
- c) PP represents 8 % of the total packaging weight, or less;
- d) The density of the finished packaging is lower than 1 g/cm³;
- e) 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. direct printing is limited as much as possible, using preferably light colours.

RecyClass concludes that Silgan Dispensing 'Pearl 2' 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 application such as injected molded parts up to 25% concentration¹.

In order to reach higher recycling quality standards and to achieve the full compatibility, RecyClass recommends to revise the following features of the packaging:

- to replace the black nozzle and base with clear or transparent ones;
- to replace the rigid jar with flatten one, as rigid round shapes may prevent the good sorting of packaging;
- to replace in the medium term the HDPE injection grade of the jar with a blow moulding grade.

About

RecyClass is a comprehensive cross-industry initiative that works to advance plastic packaging recyclability and to establish a harmonized approach towards recycled content calculation and traceability in Europe. Activities within RecyClass include the development of Recyclability Evaluation Protocols and scientific testing of innovative materials which serve as the base for the Design for Recycling guidelines and the free online tool. RecyClass offers Recyclability Certifications and Recycled Content Traceability Certification for plastic packaging.

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

Annex I



Figure 1 Pearl 2 by Silgan Dispensing