

*Milliken*

RECYCLASS TECHNOLOGY APPROVAL

*Brussels, 13<sup>th</sup> October 2020*

The RecyClass PP Technical Committee was requested to carry out an assessment of the 'Millad® NX™ 8000' technology by Milliken to verify its impact on the quality of recycled PP containers.

The 'Millad® NX™ 8000' technology is a clarifying agent used in PP containers to make PP transparent. The technology was tested in a random grade injection copolymer polypropylene resin and accounted for 0,4% of the total weight (4000ppm).

According to the results that were obtained from the laboratory tests done by Plastics Forming Enterprise and carried out as per the APR PP Critical and Application Guidance testing protocols, the 'Millad® NX™ 8000' technology is considered to be fully compatible with PP recycling.

Based on these results, RecyClass certifies that Milliken 'Millad® NX™ 8000' technology will not have a negative impact on the current European PP containers recycling under the following conditions:

- a) The container is made of clear PP;
- b) The density of the finished packaging is lower than 1 g/cm<sup>3</sup>;
- c) 'Millad® NX™ 8000' clarifying agent accounts for 0,4% of the total weight, or less.

RecyClass concludes that Milliken 'Millad® NX™ 8000' technology as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for PP containers. Recyclates generated via the recycling of packaging containing this clarifying agent can be used in high-quality injection moulding applications. In this protocol<sup>1</sup> a concentration limit of 50% is tested in an injection moulding application.

RecyClass recognition applies only to Milliken's 'Millad® NX™ 8000' 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 PP containers, and that it is sorted in the PP stream at the state of art sorting plants in Europe.

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<sup>1</sup> APR PP Critical and Application Guidance testing protocols

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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Annex I



*Figure 1 Tested resin containing the 'Millad® NX™ 8000' technology by Milliken*