

EMS-Grivory

RECYCLASS/EPBP TECHNOLOGY APPROVAL

Brussels, 08 May 2023

DISCLAIMER

RecyClass and EPBP recognition applies only to EMS-Grivory 'Grivory HB 7187 natural' technology reported in Annex I. The recyclability assessment therefore does not refer to the testing of a specific packaging using this barrier. Any specific packaging using this barrier would need to be tested individually to demonstrate that the system of resin, adjuvants, label, closure, and printing conforms to the Recyclability Evaluation Protocol and Quick Tests for PET bottles, and that it is sorted in the PET bottle 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 PET Technical Committee (TC) and EPBP TC were requested to carry out an assessment of the technology 'Grivory HB 7187 natural' by EMS-Grivory to verify its impact on the quality of recycled PET bottles.

The technology is a polyamide MXD6/MXDI barrier layer present as internal layer in a PET bottle, covering the entire base of the preform/bottle until the support ledge of the neck. The polyamide layer represents about 5wt% of the total weight of the packaging. The PET multilayer bottle tested was not decorated or printed.

According to the results that were obtained from the laboratory test performed by Plastic Technologies Inc. (PTI), carried out as per the Recyclability Evaluation Protocol for PET bottles¹, the 'Grivory HB 7187 natural' technology is considered to be **fully compatible with transparent coloured PET bottle recycling.**

Based on these results, RecyClass and EPBP acknowledge that EMS-Grivory 'Grivory HB 7187 natural' will have no negative impact on the current European transparent coloured PET bottles recycling and provided that the packaging is designed under the following conditions:

- a) The bottle is made of PET;
- b) The polyamide MXD6/MXDI must be used **only in transparent coloured bottles** (i.e. bottles that are neither clear nor light blue) that are not likely to enter the PET bottle stream that is recycled into food contact applications.

¹ [Recyclability Evaluation Protocol for PET bottles](#)

- c) The polyamide MXD6/MXDI represents 5% of the total weight of the packaging, or less;
- d) The bottle is a multilayer structure with polyamide MXD6/MXDI as internal layer;

RecyClass and EPBP conclude that EMS-Grivory 'Grivory HB 7187 natural' as per current market conditions and knowledge, is fully compatible with the existing European industrial recycling processes for transparent coloured PET bottles.

EPBP will continue to monitor any effect of the resins listed above on European recycling streams. All ingredients used in these formulations must be compliant with regulation 10/2011 and its subsequent amendments and any rPET used must comply with EFSA or DG Santé requirements.

In regard to RecyClass Recyclability Certification, the present full compatibility with coloured transparent PET bottles recycling approval delivered to EMS-Grivory 'Grivory HB 7187 natural' technology, means that a transparent coloured PET bottle containing the EMS-Grivory 'Grivory HB 7187 natural' as mentioned in the aforementioned conditions will not be penalised with a Recyclability Class downgrade. Nevertheless, the amount of recyclable PET and POs 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.

RecyClass PET TC and EPBP TC clarified that the coloration of pellets obtained using this technology were the main limiting factor to deliver an approval for the transparent clear PET bottle stream.

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.

[RecyClass – Plastic Future is Circular](#)

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About EPBP

EPBP is a Platform that consists of technical experts in the field of PET production, design and recycling, whose only objective is the evaluation of new technologies and providing an independent and confidential assessment of their impact on the PET

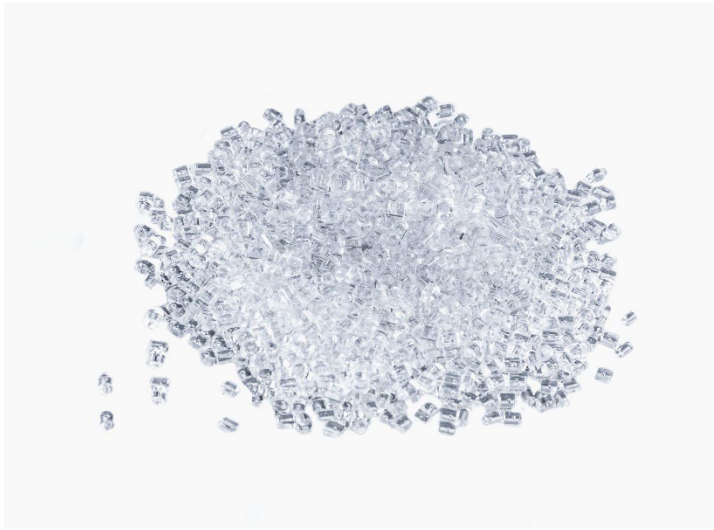
² [RecyClass Recyclability Certification](#)

recycling processes across Europe. EPBP has established several test procedures in order to assess the impact on recycling of new packaging technologies. Products that pass the tests should not cause any problems during recycling.

www.epbp.org;

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Annex I



Grivory® HB

EMS
EMS-GRIVORY

Figure 1. 'Grivory HB 7187 natural' developed by EMS-Grivory