



Brussels, March 15<sup>th</sup>, 2017

The Technical Committee of the European PET Bottle Platform (EPBP) was requested to conduct an evaluation of the effect of Synvina's Poly(ethylene 2,5-furandicarboxylate), or PEF, on the PET recycling stream. PEF is a polyester resin chemically similar to PET but comprising Furandicarboxylic Acid (FDCA) instead of Terephthalic Acid (PTA) in the polyester backbone. Due to its possible use as an alternative material for bottles, PEF requires a thorough assessment of the impact on PET recycling activities.

Data supplied by near-infrared (NIR) sorting equipment manufacturers demonstrates that PEF has a different near-infrared profile compared to PET, and can be distinguished and sorted by commercial NIR sorting equipment. However, sorting efficiencies will be affected by the design aspects of PEF based articles.

PEF has a higher density than PET and cannot be separated from PET by a traditional washing or sink-float step. For this reason, EPBP requests that PEF manufacturers develop a separate recycling stream for collected and sorted PEF based bottles.

For cases of no or inefficient sorting, the contamination of the rPET stream by PEF was studied using an experimental PEF grade and according to the EPBP protocol. Commercial PEF grade(s) are still under development. Data from these tests demonstrate no negative impact on haze, colour and other properties of the resulting rPET products at least up to 2% of PEF.

Based on the assessment's outcome but taking into account the variable performance of European sorting and recycling plants, the novelty of this packaging solution and its potential market penetration, **EPBP has awarded interim approval to Synvina's PEF polyester resin** in a test market (up to 50kt) and for an interim period, expiring 30 June 2020.

The interim approval is awarded under the following conditions:

- A maximum allowed market penetration of 2%
- PEF-based articles are designed to allow detection and ejection by NIR sorting equipment, to minimize contamination of the PET bottle stream
- Synvina will provide EPBP with additional data on the targeted end-products, PEF commercial grade(s) and sales regions as they become available
- Synvina will continue to cooperate with EPBP in order to carry out additional tests, to be conclusive to decide if the approval can become permanent
- Synvina will work to develop a separate recycling stream for PEF based bottles when larger quantities will come to market
- **The word "interim" is quoted in any reference to the EPBP approval**

An updated technical opinion will be based on additional test data and market information supplied to the EPBP prior to any market introduction of PEF based products.