Brussels, 18 May 2020

The Technical Committee of the European PET Bottle Platform (EBPB) was requested to evaluate the effect of the use of Glycol-modified polyethylene terephthalate (PETG) on the quality of recycled PET.

PETG is a common modification of PET polymer. This modified PET is targeted at applications that require a greater melt strength and impact resistance. PETG is commonly thermoformed into trays and clamshells for medical and food packaging or used for extrusion blow moulding to produce clear containers with handles. PETG films are also used as a substrate for labels and sleeves.

After extensive evaluation of the data available, the Technical Committee of the EPBP decided not to endorse this solution. The use of PETG bottles, as well as any component part made with PETG polymer, such as labels, sleeves, seals, closures, in combination with PET bottles is actively discouraged as PETG will have a negative impact on current European PET recycling.

- PETG is visually very similar to PET bottles and has a density of around 1.27 g/cm³ and is not possible to separate from PET in a conventional water-based density separation process. Even when using ultra-modern NIR identification separating PETG from PET is very difficult.
- PETG has a much lower softening point than PET and as a consequence, PETG flakes tends to soften and become tacky during PET flake drying at 160°C for 4-6 hours. PETG flakes stick to the metal surface of the dryer, to each other and to other PET flakes and form large agglomerates in the dryer. This will lead to lower production rates due to breaks for dryer cleaning or flake flow blocking in a dryer. PETG agglomerates can result in severe blockages of outlets and in restricted areas such the feed throats of extrusion systems.

The EPBP reserves the right to update and change the conditions of this opinion at any time in accordance to the most recent technologies, assessments and experience.

The European PET Bottle Platform EPBP is a voluntary industry initiative that provides PET bottle design guidelines for recycling, evaluates PET bottle packaging solutions and technologies and facilitates understanding of the effects of new PET bottle innovations on recycling processes. This initiative fully supports the economic and environmental sustainability of the European PET value chain.