

## Degradable Plastics

PlasticsEurope's member companies produce standard as well as bio-based and/or biodegradable plastics. To avoid confusion and add clarity to the terms "biodegradable" and "oxo-degradable" plastics, PlasticsEurope has commissioned a comparative literature study\*. While (bio)-degradable plastics were originally developed in order to solve specific problems related to agricultural films and to address the issue of separate collection and treatment of food waste., it is claimed that oxo-degradable plastics, have been developed in order to provide a potential solution to littering issues. For such a solution to be viable, however, oxo-degradable plastics should not only fragment in the environment into small pieces which are no longer visible to the naked eye, but should also be entirely metabolized by bio-assimilation or conversion to CO<sub>2</sub> and H<sub>2</sub>O.

As this is a very complex topic with various parameters such as raw materials, application sector and end-of-life questions, PlasticsEurope has commissioned a comparative literature study on the "benefits and challenges of bio- and oxo-degradable plastics".\*

The main results can be summarised as:

1. The majority of biodegradable plastics meet the requirements of well-recognised standards of industrial composting;
2. Solid proof of biodegradation is available through certification by accredited laboratories and institutes for biodegradable plastics;
3. The very few positive biodegradation results obtained with oxo-degradable plastics were achieved in unrealistic testing environments and could not be repeated.
4. Oxo-degradable plastics do not meet the requirements of industrial and/or home compostability set out in various established standards;
5. In light of the above, the study recommends to use the term *'thermo- or photofragmentable plastics'* instead of "oxo-degradable" plastics.

PlasticsEurope supports and encourages innovation that is based on scientifically proven results and that guarantees environmental protection by complying with recognised standards, be it for bio-degradable or for thermo- and photo-fragmentable plastics.

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\* BENEFITS AND CHALLENGES OF BIO- AND OXO-DEGRADABLE PLASTICS - A COMPARATIVE LITERATURE STUDY,  
Sam Deconinck & Bruno De Wilde, OWS N.V., B-9000 Gent, August 2013

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