



# OXO-BIODEGRADABLE PLASTICS ASSOCIATION

An Incorporated not-for-profit Association limited by Guarantee.

Website [www.biodeg.org](http://www.biodeg.org) E-mail [info@biodeg.org](mailto:info@biodeg.org)

## EUROPEAN PARLIAMENT AMENDMENTS

to

### Directive 94/62/EC on Packaging and Packaging waste

There is no Resolution of the European Parliament that amends the Directive on Packaging and Packaging Waste. This is because the European Parliament does not have power to amend the Directive unless it has the support of the Commission and the Council, which it does not.

The legislative procedure in the European Union is for the Commission to make a Proposal, which it did on 4th November 2013. The Proposal was to reduce the number of plastic shopping bags, but it contained no proposals at all relating to oxo-biodegradable or bio-based plastics. The principal objective of the Proposal is “to limit negative impacts on the environment, in particular in terms of littering.” The Commission did not propose that member states should encourage the use of bio-based compostable plastic, as this would not achieve that objective. This point has been made very well by the Deutsche Umwelthilfe environmental organisation in their letter of 3rd March 2014 to the Commission<sup>1</sup>.

The Commission’s Proposal then came before the European Parliament and it is clear that key members of the Parliament had been lobbied by the bio-based plastics industry in favour of amendments to promote their product, and to ban oxo-biodegradable plastic. They are seeking to use the Parliament to give their product an advantage in the marketplace which it has not been able to achieve on its merits. This is because bio-based plastics are too expensive and have very limited usefulness.

They have not therefore been accepted in the marketplace except for some niche applications for composting. Even this application is questionable because the applicable standards require the plastic to convert into CO<sub>2</sub> gas within 180 days – so it cannot be made into compost but only into a greenhouse gas. (See “Why bio-based is the wrong technology” [http://www.biodeg.org/files/uploaded/Why%20Bio-based%20is%20the%20wrong%20technology\(1\)%20-%2023-4-14.pdf](http://www.biodeg.org/files/uploaded/Why%20Bio-based%20is%20the%20wrong%20technology(1)%20-%2023-4-14.pdf))

These amendments to the Commission’s Proposal were introduced by the Environment Committee of the European Parliament with no relevant scientific evidence and without hearing representatives of the oxo-biodegradable plastics industry. The lobbyists have made the Committee look amateurish and undemocratic.

Oxo-biodegradable plastic is seen by the bio-based “compostable” industry as a threat to their market share and they have spent millions campaigning against it in Europe and around the world – often making allegations which they know to be untrue eg that oxo-bio plastics contain “heavy metals.” Their latest attempt to mislead is by calling it “oxo-fragmentable” when they know that it causes the plastic to convert at the end of its useful life in the presence of oxygen into a biodegradable material, and does not therefore leave fragments of plastic behind.

<sup>1</sup> <http://www.biodeg.org/files/uploaded/German%20tr%20to%20Potocnik%203.3.14.pdf>

They were disappointed when the Environment Commissioner addressed the European Parliament on 16th April. He said “We believe that we should not touch in these proposals on issues that are broader than plastic bags. For example broader provisions relating to specific types of plastics such as the proposed ban on oxo-biodegradable plastics .... are not part of our proposals.”

In fact, the Commissioner made the case for oxo-biodegradable plastic when he added: “Plastic bags easily escape waste management streams and accumulate in our environment in the form of marine litter e.g. plastic bags accounted for 73% of the plastic waste collected by travellers along the Tuscany coast. Once discarded they can last for 100’s years often as harmful micro particles which can damage the environment worldwide, especially the marine environment.”

The European Council has not yet ruled on the matter, but is clear from the position of its Presidency that they support the Commission and oppose any amendments from the Parliament relating to specific types of plastic such as oxo-biodegradable or bio-based plastics.

Oxo-biodegradability of plastics is defined by CEN<sup>2</sup> as “as “degradation resulting from oxidative and cell-mediated phenomena, either simultaneously or successively.” This technology adds little or nothing to the cost of plastic products and can be manufactured with existing machinery. It is used for a wide range of applications without affecting the strength or weight of the product.

Oxo-biodegradability is recognised by the British<sup>3</sup> French<sup>4</sup> and American<sup>5</sup> Standards Organisations, who have published methods for testing oxo-biodegradability. If these plastics just fragmented in the environment there would be no official definition of oxo-biodegradability, and there would be no standards for testing these plastics for biodegradability.

Recognition of oxo-biodegradability by the Standards Organisations is based on peer-reviewed scientific evidence of biodegradability published over many years<sup>6</sup> – the most recent being from the Technical Research Institute of Sweden and the Swedish University of Agricultural Sciences, published in Vol. 96 of the journal of Polymer Degradation & Stability (2011) at pages 919-928.

There is no official definition of “oxo-fragmentable plastic” and no such description is recognised by the European Standards Organisation (CEN), nor by the Standards Organisation of any Member State or any other country. This description should not be used.

The government of the United Arab Emirates realised that they are not able to collect all the plastic waste which escapes into the environment, so they carried out extensive due diligence on oxo-bio technology, involving a review of the scientific literature and auditing of the suppliers’ laboratories and production facilities. They then legislated to require all short-life plastic products to be oxo-biodegradable instead of banning them altogether. Pakistan and other countries, with a combined population of 200 millions, have followed their example.

The OPA supports legislation of this kind, for which there is a clear environmental case, but does not support legislation of the kind proposed by the European Parliament, for which there is no such case. The oxo-biodegradable plastics industry is committed to working with the EU Commission, the Council, the Parliament, and Member-States to

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<sup>2</sup> TR15351

<sup>3</sup> BS8472

<sup>4</sup> AC 751-808

<sup>5</sup> ASTM D6954

<sup>6</sup> <http://www.biodeg.org/files/uploaded/Bibliography.pdf>

provide them with all the scientific, technical, economic, and environmental information which they will need.

The UAE and all of the other countries rejected bio-based plastics for the reasons mentioned above, and because they would not solve the litter problem. This is because those plastics are tested according to EN13432 or ASTM D6400 to biodegrade only in the special conditions found in an industrial composting unit, not in the open environment.

If we are concerned about litter in the environment which cannot realistically be collected, there is no point in choosing “compostable” plastics, which obviously have to be collected before they can be composted. By contrast, oxo-biodegradable plastics can be re-used and recycled during their useful life,<sup>7</sup> and only if they do not get collected will they ultimately degrade and biodegrade in the open environment.

The Commission’s proposal to amend the Packaging Waste Directive is aimed at shopping bags. “Compostable” plastic is not useful for shopping bags because it is much weaker than conventional plastic and too expensive, and the bags are unlikely to be sent for composting. An LCA conducted by Intertek<sup>8</sup> found that the bio-based shopping bag was the worst option in 10 of the 11 environmental impact categories due to its higher weight and thickness, increased energy consumption, greater transportation and higher end-of-life impacts.

Bio-based plastic is useful for sacks intended for transporting organic material to an industrial composting or biogas facility, and it is already available for that purpose. However, these sacks cannot be recycled,<sup>9</sup> nor can they be made into useful compost (because they are designed to convert to CO<sub>2</sub> gas within 180 days<sup>10</sup>) so it is misleading to describe them as compostable. If they get into landfill they can generate methane (a powerful greenhouse gas) deep in the landfill, but oxo-bio cannot.

The Commission’s proposal also seeks to promote more efficient use of resources, but huge amounts of fossil fuel, land, and fresh water are used in the agricultural production of bio-based “compostable” plastics, which ought to be used for growing food.<sup>11</sup> The European Parliament itself<sup>12</sup> has resolved not to encourage the use of land and water resources for producing bio-fuels (and the same reasoning applies to bio-plastics). The UN has issued a report to the same effect on 31st March 2014.

By contrast the production of oxo-biodegradable plastics does not use agricultural land and water. They do not cause oil depletion because the same amount of oil would be extracted to make fuels even if the by-products of refining were not used to make conventional and oxo-biodegradable plastics.

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<sup>7</sup> <http://www.biodeg.org/files/uploaded/RECYCLING%20Jan%202014.pdf>

<sup>8</sup> [http://www.biodeg.org/files/uploaded/Intertek\\_Final\\_Report\\_15.5.12\(9\).pdf](http://www.biodeg.org/files/uploaded/Intertek_Final_Report_15.5.12(9).pdf)

<sup>9</sup> <http://www.biodeg.org/files/uploaded/Roediger%20on%20EuPC%205%20Dec%20'13.pdf>

<sup>10</sup> EN13432

<sup>12</sup> (P7\_TA-PROV(2013)0357)