



15th February 2021

Re: The EU Unfounded Ban on Oxo-biodegradable Plastic

Central to the corporate vision of EPI is the development of cost-effective degradable plastic additive (TDPA™) to mitigate the negative environmental impacts of plastics, which have a propensity to pollute due to their durability. Thus, EPI supports the EU ban on certain single-use plastics to reduce plastic waste pollution. However, it is evident that the EU has been alarmingly misinformed about oxo-biodegradable plastic (OBP) technology. Indeed, their decision to ban OBP represents a disgraceful triumph for a disingenuous propaganda campaign featuring baseless conjecture led by the bioplastic/compostable plastic industry (referred here as bioplastic industry) over objective scientific evidence.

The purpose of this article is to explain how the EU unjustly bans oxo-biodegradable plastic through Article 5 of the Single-Use Plastic Directive (EU) 2019/904.

1. What is the Directive (EU) 2019/904?

The Directive bans some conventional single-use plastics and oxo- degradable plastic. Oxo-degradable plastic was hastily added without consultation and in contravention to the EU's own well-established procedures for determining whether substances should be banned, as set out in the REACH Regulation 2006/1907.

On 22nd December 2017, in compliance with Article 69 of REACH, the EU Commission asked the European Chemicals Agency (ECHA) to investigate its concerns regarding microplastics. EPI, through its trade association, Oxo-Biodegradable Plastics Federation (OBPF), submitted scientific evidence to ECHA on the safety of oxo-biodegradable plastics. On Oct 30, 2018, ECHA stated that they were not convinced that OBP created microplastics. EPI and OBPF remain convinced that there is no scientific evidence to suggest that OBP creates microplastics, and regard the ban by the EU of oxo-degradable plastic as a political move. This position is further developed in this statement: <http://www.obpf.org/european-parliament-ban-oxo-degradable-plastics-non-science-based-political-move/> .

In banning OBP, the EU legislation circumvented the REACH process, and ignored the scientific advice of their scientific experts at ECHA. Their failure to accord due process prompted Symphony Environmental (another oxo additive supplier) to take legal action against the EU, For further information, see: <https://www.plasticstoday.com/legislation-regulations/symphony-environmental-sues-eu-over-single-use-plastics-directive> .



Certified Quality System ISO 9001:2015/
Environmental System ISO 14001:2015



2. Why did the Directive not distinguish ‘oxo-degradable’ from ‘oxo-biodegradable’?

The Directive did not apply the definitions specified by the European Standards organisation, CEN, in TR15351 which distinguish between oxo-degradable and oxo-biodegradable plastics:

‘Oxo-degradable’ plastic breaks up into fragments which can lie or float around in the environment for decades, but “oxo-biodegradable” technology causes ordinary plastic to degrade if it gets into the open environment and to biodegrade in the same way as nature’s wastes, being recycled back into nature.

By failing to recognise these fundamental differences, the EU legislation has incorrectly inferred that oxo-biodegradable products form microplastics. The EU ban on oxo-biodegradable products is consequently, unfounded scientifically.

3. How does conventional plastic incorporating TDPA™ become oxo-biodegradable?

TDPA™ is an additive, which when incorporated at very small concentrations during manufacturing, converts conventional into oxo-biodegradable plastics. They are tested in accordance to international standards; ASTM D6954 and BS8472 which define the test requirements for degradation, biodegradation and ecotoxicity.

Conventional plastics are durable and accumulate without degradation in the environment, hence resulting in plastic pollution. Oxo-biodegradable plastics, on the contrary, biodegrade rapidly and can be used as carbon sources by bacteria and fungi, allowing them to return to the carbon cycle.

4. Do oxo-biodegradable plastics form microplastics?

The degradation products of oxo-biodegradable plastics are assimilated by naturally occurring microorganisms, which use them as carbon sources. Hence, oxo-biodegradable plastics fully re-enter the natural carbon cycle. Substantial scientific evidence has been accumulated and published in high-quality, peer-reviewed scientific papers in support of this incontrovertible fact. For a list of these publications, see: <https://epi-global.com/tdpa-oxo-biodegradable/scientific-publications/>.

It is entirely untrue that the end-products of oxo-biodegradable plastics are fragments of secondary microplastics, as fragmentation merely represents the first step in oxo-biodegradation. The literature supporting oxo-biodegradable plastics technology is uncontroversial and recognized by international standards bodies. Oxo-biodegradable plastic additives such as EPI’s TDPA™, which conform to BS8472 (UK) and ASTM D6954 (USA) are consequently, products of high integrity.

Notably, in their 2018 report, the European Chemicals Agency (ECHA) found no evidence that oxo-biodegradable plastics form microplastics.

5. Why did the EU ban oxo-biodegradable plastics if the technology works?

Before oxo-biodegradable plastic technology was introduced commercially in the early 1990s, some large European multinational corporations, based primarily in Germany and Italy, had introduced a plastic described as compostable. Not only are compostable plastics expensive, they are further disadvantaged by poor mechanical and functional properties. These multinationals perceive oxo-biodegradable plastic technology as a threat and have made a concerted effort spanning greater than two decades, to lobby and exert political pressure on Parliaments to ban oxo-biodegradable plastics.

The EU decision to ban oxo-biodegradable plastics is in breach of its own procedures, and contradicts the advice of their own scientific advisors, the ECHA. We believe the EU decision to ban oxo-biodegradable plastic was politically-driven due to pressure from lobbyists acting for rival bioplastic companies.

It is clear that the oxo-biodegradable plastic industry is a victim of misrepresentation in the EU. Oxo-biodegradable plastics should rightly be an ally in the fight against plastic pollution, yet it is now being unjustly ostracized despite the glaring need for proven technologies to help us deal with our progressively worsening problem with plastic pollution.

If you are interested to find out more about the EU ban, please visit our website at: <https://epi-global.com/frequently-asked-questions/eu-and-microplastics/>.

To learn about the science behind TDPA™ technology, please see: <https://epi-global.com/tdpa-oxo-biodegradable/how-tdpa-works/>.

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