



# OXO-BIODEGRADABLE PLASTICS ASSOCIATION

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## STATEMENT BY OXO-BIODEGRADABLE PLASTICS ASSOCIATION REGARDING BIODEGRADABILITY OF PLASTICS CONTAINING OXO- BIODEGRADABLE ADDITIVES

**FEBRUARY 2010**

### **Oxo-biodegradable and compostable plastics**

Oxo-biodegradable plastic is created by incorporating an additive into normal polyethylene, polypropylene or polystyrene. The additive massively accelerates the process that causes the plastic to completely biodegrade in natural environments. Until the plastic has degraded it has the same strength, impermeability, printability and other characteristics of normal plastic.

The Oxo-Biodegradable Plastics Association (OPA) is the trade organisation representing the oxo-biodegradable additive industry.

Compostable plastic is an entirely different product. Compostable plastic is made from corn or other materials that can be converted to agricultural compost in a specialised industrial composting facility. Very few such facilities presently exist. For example, an environmental study commissioned by Los Angeles County reported that there are no facilities able to compost such bags in the Los Angeles County area at the present time. In the absence of such composting facility, the product will not turn into compost.

The SPI Bioplastics Council (SPIBC) is a trade organisation representing the compostable plastic industry.

The oxo-biodegradable plastic industry competes with the compostable plastics industry for market share in the field of degradable plastics.

### **The compostable plastic industry's misleading Statement about Oxo-biodegradable plastics**

In January 2010, SPIBC issued a statement in which it took the position that the main effect of oxo-biodegradable additives is "fragmentation, not biodegradation, into small particles, which remain in the environment for an undetermined amount of time, becoming uncontrollable in terms of their final disposition." SPIBC acknowledged that "there is chemical theory to support a very slow biodegradation process" but added the proposition that "the absence of light, presence of moisture or very low temperature act as a dimmer switch for the process, resulting in a very slow or absent chemical process."

All plastics fragment as they degrade. Oxo-biodegradable additives greatly expedite the fragmentation. The fragmentation process is accelerated by heat and ultra-violet light, but they are not essential. The process is not inhibited by moisture.

Nature's wastes such as twigs and straw may take ten years or more to completely biodegrade, but oxo-biodegradable plastics will do so more quickly, and much more quickly than normal or recycled plastic.

The fragments created by oxo-biodegradation do not remain in the environment for extended periods. This is because the molecular weight of the material is reduced below 40,000 Daltons at which point it no longer has the molecular structure of a plastic. The fragments are consumed by bacteria and fungi. Therefore, oxobiodegradation is an excellent answer to the residual problems of litter and marine debris that have not been collected for recycling.

SPIBC refers to Standards for compostable plastic as if they were intended to apply to oxo-biodegradable plastics. SPIBC is comparing apples and oranges. ASTM D6400 expressly states that it only applies to "plastics and products made from plastics that are designed to be composted in municipal and industrial aerobic composting facilities."

Oxo-biodegradable plastic can be re-cycled with normal plastic during its service-life, but compostable plastic cannot.

<http://www.biodeg.org/position-papers/recycling/?domain=biodeg.org>

### **Conclusion**

We are disappointed that a commercial competitor has issued an erroneous statement about oxo-biodegradable plastics. It is important to clarify the advantages of compostable and oxo-biodegradable products based on correct information, rather than confusing the issues.