

Oxo-Biodegradable Plastics Association

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UNEP REPORT ON Biodegradable Plastics and Marine Litter Author - Dr Peter Kershaw

The author is correct that PE and PP will not readily biodegrade in marine environments, so oxo-biodegradable versions of these plastics have been invented - because people do not always dispose of their waste responsibly. There is no oxo-biodegradable PVC.

The micro-particles of plastics being found in the oceans are from conventional plastics and there is no evidence that oxo-biodegradable plastics are more harmful. In fact, for the reasons given at <http://www.biodeg.org/marineenvironment.html> they are less harmful. Not least because conventional plastic will float around intact for 50 years or more and then fragment, but the oxo-biodegradable version will last for only 5 years or less. The microbially-susceptible degradation components are derived sooner and will be mineralized faster. Oxo-biodegradables will have lost their strength and be incapable of entangling birds or turtles within an even shorter time-scale.

The OPA will be responding fully to this report in due course. Our initial response is that the author is a geologist with no expertise in oxo-biodegradable plastics and we are disappointed that he did not ask the industry for information before publishing. There are no references to the work of Jacobowicz, Scott, Ojeda and Lemaire or their academic groups, all of whom are experts in the science of oxo-biodegradation. His report relies on the work of Thomas, who also has no expertise in oxo-biodegradable plastics. However, she did say that there was no evidence that biodegradable plastics of any kind would encourage people to litter.

Dr Kershaw's report also relies on a report published by OWS (Organic Waste Systems by Deconinck and De Wilde for Plastics Europe) in June 2013. They have expertise in hydro-biodegradable, but again not in oxo-biodegradable, technology.

Hydro-biodegradable plastics do require high temperatures and composting conditions, but oxo-bio does not. There is quite enough oxygen and bacteria in the oceans for oxo-biodegradable plastics to degrade and biodegrade as intended.

November 2015

w. www.biodeg.org | e. info@biodeg.org

12 Compton Road, London, SW19 7QD | Tel: +44 (0) 845 676 9120
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