



BioBadge Holders

Reduce your carbon footprint with
BioBadge

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Lets explain the science.....

Our range of biodegradable ID card holders contain the oxo-biodegradable additive which is mixed into the PVC plastic during production. Once the holder is no longer required, place it in your recycling bin. Oxo-biodegradable will let air into the plastic, which breaks down the carbon bonds in the polymer chain – until chemically, it's no longer plastic. It's microbe food. It'll dissolve into nothing but water, biomass and carbon dioxide. No toxic residue. No guilty conscience.



What is Oxo-biodegradable?

This is a hybridisation of two words, oxidation and biodegradability. It's a two-step process initiated to degrade the plastic chain and make it available for biodegradability within the environment when a treated item has finished its useful life.

The phase of oxidation reduces the molecular weight and introduces oxygen into the structure. This process transforms the polypropylene plastic from long strands to much smaller lengths. By decreasing the chain length of the plastic, the material loses its physical strength and elongation properties, making it brittle and none 'plastic'.

How does it work?

A very small amount of pro-degradant additive is put into the manufacturing process. This breaks the molecular chains in the polymer, and at the end of its useful life the product degrades. It will be consumed by bacteria and fungi after the additive has reduced the molecular weight to a level which permits them access to the carbon and hydrogen.



Does oxo-biodegradable plastic biodegrade or does it just fragment?



Oxo-biodegradable plastic does just what it says, the clue is in the name – It is called oxo-biodegradable plastic because it is biodegradable. Oxo-biodegradable technology converts plastic products into biodegradable materials at the end of their useful life, and it does this by oxidation in the presence of oxygen.



Oxo-biodegradable plastic degrades and biodegrades in the open environment in the same way as nature's wastes, only quicker. What's more, it does so without leaving any toxic residues or fragments of plastic behind. If oxo-biodegradable plastic merely fragmented without biodegrading, CEN (European Committee for Standardization) would not have defined oxo-biodegradability as "degradation resulting from oxidative and cell-mediated phenomena, either simultaneously or successively" and the American, British and French standards organisations would not have included tests for biodegradability in ASTM D6954, BS8472 and ACT51-808

Is Oxo-Biodegradable Eco-Friendly?

It is a common misconception that plastic containing oxo-biodegradable additives break down into smaller pieces of plastic, this is not the case. The molecular weight has dropped, and oxygen has been introduced into these species. These lower molecular weight entities are not polymeric (they do not have sufficient repeating units to be classed as a polymer) and the material does not have any of the plastic properties which we associate with the polymer. It has therefore, irreversibly changed beyond recognition. In essence, the plastic has been altered into a group of materials which are both available for bio digestion and are biodegradable.



These materials can now be safely biodegraded into the environment.



Can BioBadge holders be recycled?

Yes, however, we would like to make it clear that BioBadge holders should not be placed into standard compost (Green) bins or plastic recycling schemes (pp) to protect the environment and the risk of cross plastic contamination.

It is our responsibility that the holders are recycled ethically.

How Does it Work?

BioBadge holders can be stripped down and recycled, here's how:

