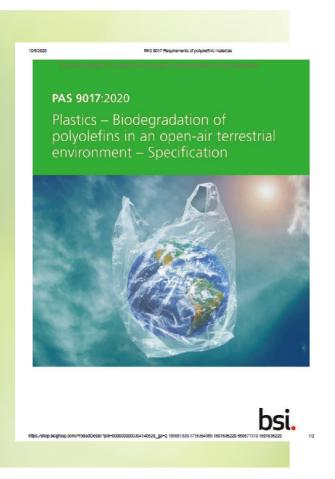


### **Background:**

Degradation is the process by which a chemical substance is broken down into smaller molecules by Abiotic means (hydrolysis, photolysis or oxidation). Biodegradation is the process by which organic substances are broken down by living organisms such as bacteria and fungi. Additives from Polymateria revolutionize the biodegradability of plastic. With patented technology and proprietary formulations, this new standard of biodegradability - or biotransformation - provides a natural solution to the irresponsible disposal of plastic products (i.e. littering). Unlike previous technologies that have been promoted for the biodegradation of plastics in the open environment, Polymateria's technology does not rely simply on oxygen to fragment the polymer. Biotransformation does much more than just oxidation. It involves radical reactions linked to chain scission, hydrolysis, higher level of analysis of chemical transformation, prebiotics to attract microbes in the environment and new methods of analyzing resin / additives within specific applications.



## **Globally Certified & Tested**

Food Safety Approved in US & EU Markets

#### **FDA & EU Approved**

FDA approved for food contact under GRAS statement in the US market and also under EU Migration certification 1 (EU Regulation 10/2011) for foodcontact materials and articles.

#### **Eco-Toxicity Tested**

Tested for land acute and chronic effects on earthworms and plants (complies with the requirements of the OECD 207 & 222 standards), and for fresh water acute and chronic toxicity on Daphnia (complies with the requirements of the OECD 202 & 211 standards)

#### **Compliant With Biodegradation Standards**

Complies with British Standard Institution BSI PAS 9017:2020 - Biodegradation of polyolefins in an open-air terrestrial environment and can be recycled.

- Eco-Toxicity Tested
- ♥ Compliance with Biodegradable
- FDA & EU Approved Food Contact Plastic Packaging



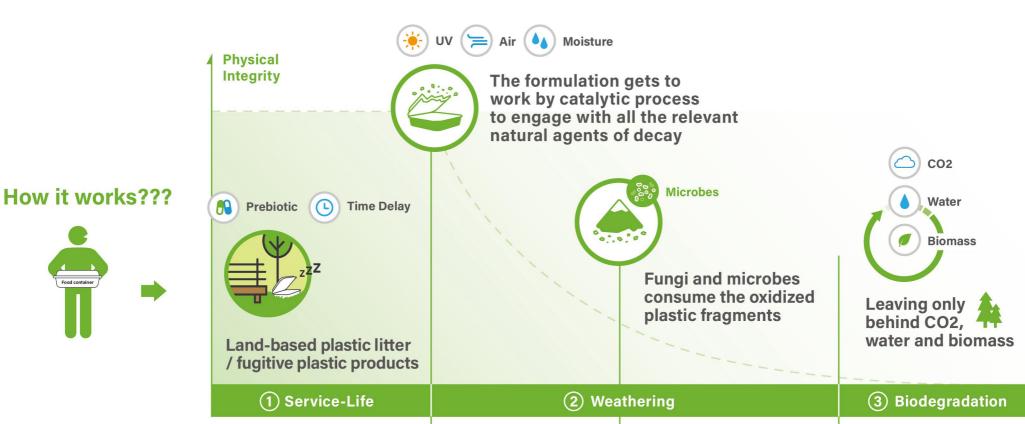




# **Sustainable Environment**

Zero Toxic, Zero Compost, Zero Incineration





The innovative Biotransformation technology can ensures the complete stability of the packaging material for a fixed time without losing any original strength and performance. This can be from six months to three years depending on customers' requirements.

Once the service lift is over and if the Cycle+ product is left on land in open environment, the air, sunlight and moisture will start the degradation process and break down and transform the plastic to bio-available wax.

The product is not a plastic anymore but is completely transformed into bio-compatible residues whose very low molecular size and hydrophilic nature makes it possible for naturally occurring bacteria and fungi to colonize, eat and digest.

The microbes, bacteria and fungi will consume the bio-available wax and convert it into water, carbon dioxide and biomass to return to the nature safely.

Time