

Biodegradable Additive or PLA? Understanding the difference...

Three important facts to know:

- Biodegradable and Compostable are NOT the same.
- PLA means Compostable. These bags are ONLY biodegradable in an ORGANIC composting facility. They do not address litter, marine debris or landfill issues.
- Plastic bags with biodegradable additives will biodegrade ANYWHERE that degradation occurs, addressing litter, marine debris and landfill issues.

Definitions

Encore Biodegradable Additive: Command has found that the Encore's biodegradable additive created by ECM Biofilms can help plastic start biodegrading at 9 months in environments where other materials would biodegrade - with the additive, the plastic biodegrades into its natural elements of carbon dioxide, water, and humus (elements found in soil).

PLA: Polylactic acid (PLA) is derived from corn, sugar beets, wheat and other starch-rich products. Polylactic acid exhibits similar properties to petroleum-based plastic and are often confused for plastics. **Created from diverting crops that were once used to feed the people.**

Reusable-Biodegradable	Polylactic Acid (PLA)
100% Recyclable	Not Recyclable
Made with recycled material	Derived from corn, wheat, starch...
Strong	Unstable
Breaks down in soil, water & commercial composting	Requires commercial composting
Less Expensive	Costly

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Biodegradable additives are the environmental solution because they are:

1. 100% Recyclable

- Encore-biodegradable additive allows bags to be recycled.
- PLA bags are NOT recyclable. They contaminate the recycling stream, destroying the recycling effort and changing consumer behavior back to disposing instead of recycling.
- Paper is the highest recycled material due to commercial efforts, but requires significant more energy and water waste to produce, destroying billions of trees. Tree replanting efforts cannot keep up with the world's demand.
- PLA will consume a greater percentage of the landfill mass than plastic bags. Removing plastic from the world will only escalate the landfill problem with the rise in compostable bag use because very few cities offer organic composting and collection.

2. Contains (PCR) Post-Consumer Recycled Material

- Recycled material can be added to the mix with the biodegradable additive to divert waste
- PLA is a pre-mixed formulation that cannot accept recycled materials.

3. Strong and reliable

- Encore-biodegradable bags will maintain the benefits like strength, leak resistance, grease resistance, and less storage requirements until they are placed in an environment that cause the material to breakdown, i.e. soil and bacteria.
- PLA bags are designed to compost, not for strength or many of the properties that made plastic bags functional and popular.

4. Less expensive

- Biodegradable additives are added in very small amounts adding only incrementally to the cost.
- Biodegradable additives are readily available and can be compounded with relatively little start-up capital.
- PLA bags are thicker and made from agricultural based materials which cost more than 6x the price of plastic bags.
- PLA materials were designed primarily for rigid plastics (containers) and worldwide supply for this material is extremely limited and will be for years to come.

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Choose biodegradable additives to allow plastic bags to be **reusable** and **recyclable** while **reducing** the environmental impact.

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