

Landfill-Biodegradable Plastic

Frequently Asked Questions

How long will it take a plastic item to biodegrade? The biodegradation time of a product depends on a variety of factors. These landfill-biodegradable additives will make plastic biodegrade up to 95% faster than conventional plastic. The thicker the plastic section, the longer it will take to biodegrade. Membrane films are expected to degrade in 45 days or so. Thicker sections may take 1- 5 years. If the plastic is put into a dry landfill it will degrade slower than a more actively managed water moistened landfill. The main point to realise is whether it takes a few months or multiple years it does not really matter. What does matter is that after some limited time, the product will no longer be around. We are no longer leaving our plastic waste for future generations to deal with.

Why do ASTM Testing to verify biodegradability? With so many manufacturers and retailers offering 'Green' products it has become confusing to distinguish between what is a genuine biodegradable product, what is a compostable product, what is a degradable product and what are unsubstantiated claims. BMP tests are recognised internationally as being a suitable test to show biodegradation. The ASTM test D5511 is a test performed by an independent laboratory to verify claims of biodegradability in anaerobic conditions, with the aim to replicate conditions found in a typical landfill.

Is it better to recycle used plastic items? Yes we should recycle as much as possible. The EPA promotes reduce, reuse, recycle and composting (a form of biodegradation) as ways to reduce waste. However according to PACIA (Plastics and Chemicals Industries Association), only 19% of plastics are recycled in Australia, the rest ends up in landfill. Therefore while some plastic items can be recycled, only a few of them actually are and most would still end up buried in a landfill.

Is there any toxic residue left after biodegradation? No. There is no toxic residue when the biodegradable plastic decomposes. Plastic such as polyethylene break down to CH₄, CO₂ and organic matter.

Is the additive safe? Yes, the biodegradable plastic is very safe. In fact, food packaging film made with the additive is USFDA compliant for food contact applications. Our products have been tested for groundwater sampling quality to ensure they provide the same high sampling integrity as you would see with a non-biodegradable equivalent.

Is biodegradation the same as degradation? No. They are very different processes. As it's name infers biodegradation is the break down caused by naturally occurring microorganisms such as occurs in a landfill. Degradation is the fragmentation of the plastic into smaller pieces of plastic due to additives put into the plastic to cause the molecules to rupture. We do not want lots of small pieces of plastic loose in the environment.

Plastic Property	Landfill-Biodegradable	Degradable (oxo)	Compostable
100% biodegradable in landfills?	Yes	No	No
100% recyclable with other main-stream plastics?	Yes	No	No
Degradation begins only at time of disposal; not during use	Yes	No	Yes
Will biodegrade without oxygen	Yes	No	No
Typical Plastic Shelf life, years	Yes	No	Yes
Will biodegrade in commercial and municipal composts	Yes	No	Yes
Warehouse storage conditions are adequate?	Yes	No	Yes
Can capture internal energy for reuse	Yes	No	No
Will fragment into small pieces potentially harmful to wildlife	No	Yes	No