

## Additive Rapidly Accelerates Biodegrading of Plastic When Discarded into an Active Landfill

There is no question that plastic injection molding has transformed the quality of our lives. It can be easy to take for granted the critical role it has played in medical device innovation, or in making more sophisticated products affordable. It even has its role environmentally by taking weight out of our vehicles to make them operate more efficiently.

Unfortunately, many plastic components are discarded and end up in landfills or oceans around the world - sometimes taking hundreds or even thousands of years to fully decompose. Thankfully, it does not need to be that way anymore.

### Be Part of the Solution

At Elevate Solutions Group, we have invested years researching and testing ways to manufacture plastics more responsibly. We incorporate post consumer resins into many of our applications and when runners and scrap are created, we collect, regrind, and reuse them wherever the process is permitted.

As a result of these efforts, we are proud to offer a proven technology that turns landfill-bound plastics into small groups of harmless bio components in just a few short years and it does this without compromising performance characteristics during their useful life.



Biodegradation is the process that happens when organic materials are broken down by microorganisms into other compounds that are natural.

Plastic products made with our proprietary additives begin this process when they are introduced into an appropriate microbial environment - such as an active landfill. Over time, certain microorganisms are attracted to the product's surface and begin colonizing, digesting and decomposing the polymers exponentially faster than other untreated plastics.

The only by-products created from this process include methane (which can be captured and converted into energy where facilities exist), carbon dioxide, and inert humus which enriches the soil.

Elevate Solutions Group's team of materials and process experts is proud to offer this exciting new sustainability option. You can make truly meaningful, and environmentally impactful differences with the products you deliver to your customers by incorporating our additive into your resin formulations.



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# FAQs & Facts



REDUCE



REUSE



RECYCLE



BIODEGRADE

## WHY do plastic products made with Elevate Solutions Group's new additive biodegrade faster than conventionally molded plastics?

Years of research and testing have shown that incorporating our enhanced additive into a customer's resin formulation before molding will facilitate the accelerated, natural breakdown of polymers and plastics used in products we manufacture - but it only begins when the item is disposed of in an active microbial environment. (i.e. active landfills, nutrient-rich soils)

## HOW does this biotechnology affect the performance characteristics of my product?

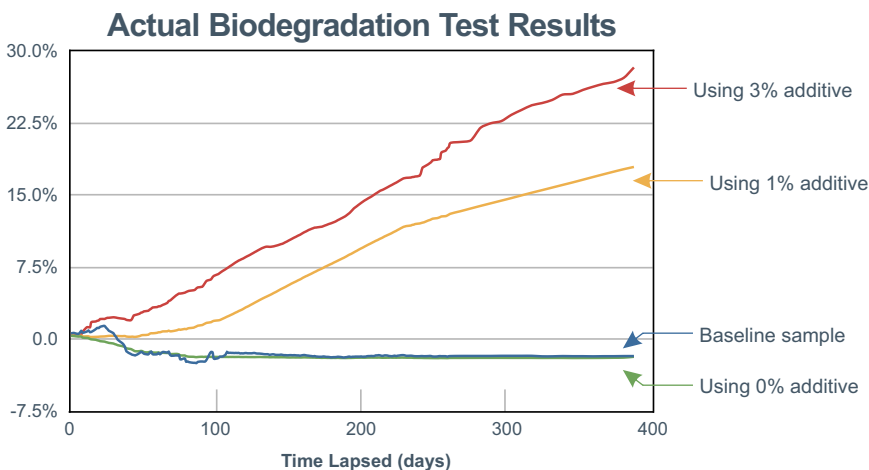
There are virtually NO diminished performance or quality expectations as a result of using our additive in your product formulation. Your customers will enjoy 100% useful satisfaction with the knowledge that the item can be discarded safely into an active landfill where it will be reduced to harmless biomass in a very short period of time. The product can also be processed through conventional recycling streams with no adverse consequence.

## WHAT prevents my product from biodegrading before it is used and discarded?

The ONLY way a product with our additive can begin to biodegrade is if it is fully placed into an anaerobic environment (i.e. without oxygen) and with the presence of certain types of micro-organisms; active landfills are ideally suited for this function. Equally important, the biodegradation process leaves behind NO microplastics.

## WHAT proof do you have that this technology is so effective?

Years of research and studies are validated by independent, certified laboratories who embrace the internationally recognized test methodology called ASTM D5511. This particular test evaluates the rate and extent of anaerobic (oxygen-less) biodegradation of plastic materials under high-solids, anaerobic-digestion conditions.



Independent lab results using ASTM D5511 method indicate an accelerated path of biodegradation for plastic samples manufactured by Elevate Solutions Group. Those made with a 3% additive biodegraded 28.3% within 387 days. And those using just 1% additive biodegraded 17.9% within 387 days. Actual results may vary depending on landfill conditions. Methane gas created from the biodegradation process can be captured and converted into energy where facilities exist.

For more information,  
call 678.648.3795 or  
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**Elevate Solutions Group, LLC**  
7900 Troon Circle SW  
Austell, GA 30168 USA



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