

# Oxo-Biodegradable Additives: Frequently Asked Questions

## What is an oxo-biodegradable plastic additive (OBPA)?

OBPAs enhance oxo-biodegradation of plastic products into more environmentally safe byproducts. They are engineered to promote oxidation, leading to the molecular breakdown of plastic. Microorganisms then complete the biodegradation process, metabolizing the remaining polymer structure as food, generating water, carbon dioxide and biomass (humus) as by-products.

## How does OBPA work?

Simplified, OBPA-treated plastics display two active lifecycles. The first lifecycle encompasses manufacturing, transportation, storage, shelf life and engineered product life. We custom engineer the OBPA to ensure the physical properties of your product are not compromised during this first lifecycle. The second lifecycle occurs after disposal, when microorganisms attach to the surface of the OBPA-treated plastic, and in the presence of oxygen, consume the plastic as a food source to multiply. The process continues in the presence of oxygen until the plastic is truly biodegraded.

## How long for OBPA-treated plastics to degrade?

Many factors influence oxo-biodegradation, including plastic type, OBPA content, access to air, ambient temperature, humidity and exposure to UV light. We customize and test the appropriate blend to achieve optimal degradation.

## Can OBPA work for my product applications?

OBPAs assist in shortening the lifecycle of polypropylene (PP) and polyethylene (PE) plastics products. Suitable applications include bag, film, garden, agricultural, food packaging and container/utensils, cap and closures, strapping, toothbrushes, golf tees – the list is long and growing. Our technical experts can assist you to determine the suitability of your specific product application for OBPA treatment.

## How much do OBPAs cost?

Our OBPAs are cost-effective – they typically only add 1-4% to material costs depending on the product and lifecycle expectancy. These additives are handled just like color additives, requiring no special handling techniques or new equipment. Contact us for a custom sample and quote to get the full story for your application.

## Are your OBPAs safe for food contact?

Our OBPAs have been third-party tested and certified as safe for use in food and beverage packaging. They are non-toxic and contain no regulated heavy metals.

## Will your OBPA product compromise our product before it is even used?

Our experts work closely with you to understand the lifecycle requirements of your product – your manufacturing process, product transportation, warehousing, storage times, shelf-life expectations and so on. With that information, we engineer the right additive and its loading within your product to safeguard against premature degradation.

## How can we be sure your OBPA products work?

At a U.S. state-of-the-art laboratory, third party technical professionals will perform accelerated additive concentration and biodegradation testing of your product application to ensure proof of the proper and timely degradation. We certify the oxo-biodegradability of your product against the latest ASTM and global standards. Our quality consistency is backed by independent audits through ISO 9001.

## You Can Make a Difference!

Request a complimentary sample customized for your application.

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