

**CAPTIVA  
CONTAINERS**

# **ECO-CLEAR & rPET**

**B O T T L E S**

**ENGINEERING BOTTLES | CAPTIVATING RESULTS**





# Performance & Sustainability Assessment

Today's consumers environmentally conscious & engaged in being part of solutions to improve sustainability, they are interested in making a difference. Market studies confirm 85% of consumers prefer to buy “green” products when given a choice and of these shoppers, over 80% consider the product's packaging before purchasing. Green products occupy a significant retail space, and the trend is growing. Increasing political pressures, more green incentives, diversified alternative energy resources and a growing sense of urgency is driving consumers to make eco- friendly choices.

The eco-friendly market is growing by leaps and bounds, resulting in higher instances of green-washing so companies that can substantiate their green claims have a leg up in an increasingly competitive market, and can set their brand apart from the rest.

Eco-conscious consumers are also more loyal to products they believe have a truly environmental profile. Captiva's commitment to transparency and rigorous verification ensures that our bottles have a landfill bio-degradation claim that is backed up with rigorous testing & documentation. We are also in the works of creating RPET bottles made mostly of recycled plastic.



# PROUDLY MADE IN USA



When you choose products manufactured in the USA, you help avoid the extra fuel expense of shipping foreign-made goods halfway around the globe, which is much more environmentally friendly and has lower carbon footprint.

- ★ Supporting american manufacturing jobs by buying American-made.
- ★ "Made in USA" appeals to consumers.
- ★ Reduces lead time compared to overseas suppliers.
- ★ Guaranteed product safety, "Made in USA" speaks of quality, excellent craftsmanship and a superior product with better traceability.



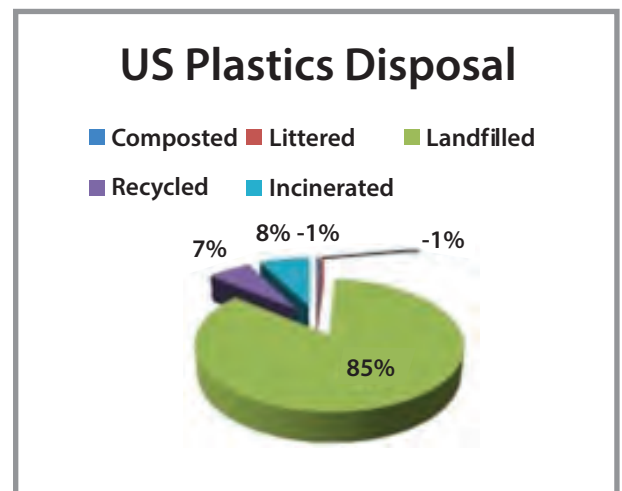
# EcoClear

Captiva Containers offers one of the plastic's industry's most innovative & effective solutions to improve life-cycle sustainability: bottles made with Captiva's **EcoClear** additive.

Bottles with **EcoClear** additive are effectively converted into soil, water & methane gas in a landfill: the most common end of life environment for disposed bottles.

Captiva's **EcoClear** improves significantly the natural microbial process that accelerates the decomposition of plastic & effectively returns it to the natural carbon cycle.

85% of bottles end up in a Landfill, making it the most common disposal method.



Captiva **EcoClear** additive bridges the gap between modern chemistry and microbiology by facilitating the production of naturally occurring enzymes in common waste-environment microorganisms that restructure the polymer into nature's building blocks (soil, air, water). This is done while retaining the shelf integrity, strength, clarity and recyclability of the plastic.

*poly • ethylene*

**PET** 

*terephthalate*



## NO COMPROMISE

Bottles with EcoClear Additive are landfill biodegradable for an ecologically friendly packaging and demonstrates superior extended producer responsibility (EPR). The plastic polymer material in the bottle is effectively converted to new energy in a landfill environment, helping brands reduces their carbon footprint, encouraging LGE projects & reducing landfill mass by degrading at exponentially faster than plastic without EcoClear.

## THE BENEFITS

Simulating common landfill conditions bottles with Captiva EcoClear additive biodegrades in 5-7 years instead of 120-200 years that a PET plastic container without EcoClear would take to degrade

Test and Material	Normalized Years to Biodegrade	Laboratory Years to Biodegrade	Final % Biodegradation in Testing
ASTM D5526 (60)- PET - w/ 1% Captiva EcoClear	7.62	7.62	27.6
ASTM D5526 (45)- PET - w/ 1% Captiva EcoClear	7.21	7.21	28.9
ASTM D5526 (30)- PET - w/ 1% Captiva EcoClear	6.82	6.82	30.3
BMP- PET- w/No Additive	128.11	17.62	2.3
BMP-PET- w/1% Captiva EcoClear	11.64	1.60	22.6

**Captiva's EcoClear additive bottles biodegrade in 5-7 years instead of 120-200 years a PET plastic container without EcoClear would take to degrade.**

CAPTIVA CONTAINERS



# IMPROVE YOUR SUSTAINABILITY

## WITH OUR **ECO-CLEAR** BOTTLES



Captiva's EcoClear additive promotes the natural process of biodegradation of traditionally non-biodegradable plastics, returning the polymer to its natural elements, reducing both waste and overall product carbon footprint – without any infrastructure changes or educational expense, as Captiva EcoClear does not contaminate the recycling stream, bottles continue to be 100% recyclable.

- FDA/EU Compliant For Food Packaging
- REACH Compliant Materials
- D4D Compliant Eligible
- No Heavy Metals
- Non-Hazardous
- BPA Free
- Lab Validated Biodegradability Solution







## LANDFILL ENVIRONMENT

Despite current efforts of recycling, the great majority (86%) of plastics in the USA are discarded in landfills. Captiva EcoClear Additive technology is not meant for compost environments, nor is it ox-degradable in an open environment rather the technology is specifically designed to naturally biodegradable being digested by microorganism when disposed in a landfill environment. It is intentionally formulated for controlled biodegradability that is conducive for Clean Energy capturing projects (US EPA LMOP), while integrating seamlessly with today's waste disposal infrastructure.

As organic materials biodegradable in a landfill, they are converted into biogas (methane), carbon dioxide and soil. Plastics that include Captiva EcoClear biodegradable in the same way, producing energy rich biogas for our communities. Captiva uses only tests which measure the conversion of the plastics into methane and carbon dioxide.





# ALL PLASTIC ISN'T THE SAME



## CREDIBILITY

Captiva EcoClear performance is supported by internationally recognized ASTM standards and Bio- Methane Potential (BMP) studies as well as End-Of-Life Responsibility studies.

Captiva EcoClear additive accelerates the natural biodegradation of plastics in biologically active landfills and anaerobic digesters as validated by independent certified laboratories using ASTM International test methods. Independent third-party testing has shown up to 32.7% biodegradation in 10 months in optimized conditions \*\* Actual rate of biodegradation will vary dependent upon environmental conditions and the biological activity of microorganisms surrounding the plastic.

Products using Captiva's EcoClear are eligible to be recognized by the Environmental Research & Education Foundation (EREF) and be Design for Discard (D4D) certified being implemented innovative participating communities.

For more information please visit: <https://erefdn.org/d4d/> for more info.





## PRODUCTION METHOD

Captiva's EcoClear additive is added during the melt injection stage of plastic bottle production, just like a colorant or most any plastic additive at a less than 2% let-down rate. Captiva has over 10 injection stretch blow molding (ISBM) production lines that integrate injection and blow molding of bottles which allows us to offer a wide variety of bottle shapes & sizes with EcoClear additive added in the injection melt stage of production.



**“Captiva’s  
EcoClear  
additive  
significantly  
improves  
generation of  
clean energy &  
the return of  
plastic materials  
to the natural  
carbon cycle in  
a landfill  
environment.”**



# rPET

(recycled PET plastic)

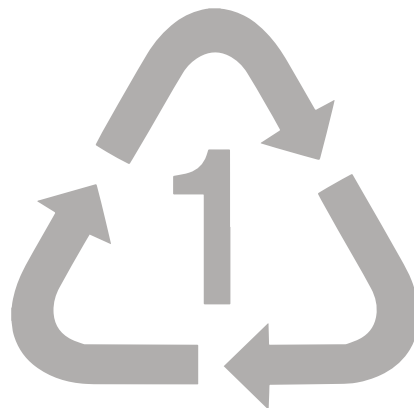
Captiva is advancing the latest in sustainability innovation with a program to produce bottles with rPET content, that's recycled PET plastic. rPET is not fully transparent and is harder to process than virgin plastic, so it is a challenging material to work with but at Captiva we are up for the challenge! Incorporating bottles made partially from reclaimed recycled plastic have an improved carbon footprint and support efforts to develop a circular economy. The goal of a circular economy with plastic being collected, reprocessed and reused is the ultimate vision for long-term sustainability and Captiva is doing its part by incorporating rPET in our bottles.

## Did you know?

Producing 1 Pound of rPET takes **70%LESS** energy than producing 1 Pound of Virgin PET.

Using rPET **REDUCES GREEN HOUSE GAS** emissions by 71% when compared to using Virgin PET.

Recycling 1 ton of PET saves **1.5 TONS OF CO2** Emissions. That is the same amount of CO2 released by the average car driving for 2.5 days non-stop.





REDUCE  
REUSE  
RECYCLE

**Legal Notice**

*The information contained in this document represents the current view of Captiva Containers on the issues discussed as of the date of publication. Because Captiva must respond to changing market conditions, it should not be interpreted to be a commitment on the part of Captiva, and Captiva cannot guarantee the accuracy of any information presented after the date of publication.*

*This document is for informational purposes only. CAPTIVA MAKES NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AS TO THE INFORMATION IN THIS DOCUMENT.*

*Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Captiva Containers LLC.*

*Captiva may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Captiva, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.*

*All rights reserved.*

C O N T A C T U S



75-95 NE 179th Street Miami, FL 33162



[www.captivaco.com](http://www.captivaco.com)



1.800.861.3868



[info@captivaco.com](mailto:info@captivaco.com)



@CaptivaCo