

Now is the time for a materials revolution

By **Brad Lich**

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Eastman's Advanced Circular Recycling technologies turns waste plastics into something valuable that can be used again and again. Source: Eastman.

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The global waste crisis and climate change are two of the greatest challenges of our time, and the world desperately needs a materials revolution that will help address both.

At Eastman, we are committed to be an active leader of that materials revolution. We are taking action through recycling innovations that can give almost any plastic material infinite life. These recycling innovations can help stem the tide of waste that is clogging landfills and polluting our oceans. They also reduce our greenhouse gas emissions and consumption of fossil fuels.

It's important to note that this is not a future aspiration at Eastman but something we're doing today.



Eastman's headquarters is in Kingsport, Tennessee. Source: Eastman.

Accelerating the circular economy is front and center at Eastman, and I've never seen an initiative move so quickly at our company. It was only about 18 months ago that Eastman began investing in the development of new, advanced recycling technologies, and we began operating at commercial scale near the end of 2019.

We have launched advanced recycling technologies that are turning a broad set of waste plastics that are typically discarded — such as single-use packaging and polyester carpet — into something valuable that can be used again and again, preserving our valuable resources. We are reimagining recycling so that it evolves into a more robust system where almost any kind of plastic gets reused infinitely.

Until recently, limitations in basic recycling methods have prevented recycling of most plastics, resulting in a very small percentage of plastic in the U.S. getting recycled. It doesn't have to be that way. Our advanced recycling technologies can be used along with existing mechanical processes to dramatically expand the plastic materials that can be recycled.

We are launching a variety of products with recycled content including Eastman Tritan Renew, a next-generation version of our durable copolyester. Tritan Renew will achieve up to 50 percent certified recycled content through a mass balance allocation process certified by International Sustainability & Carbon Certification (ISCC). It provides the same high-performance attributes of Tritan, only featuring recycled content — providing sustainability without compromise.

We're aware that Eastman can't build a circular economy alone. However, we can be a catalyst for a multifaceted solution. Just as important as the technologies are brands with foresight and commitment to see and participate in the materials revolution, too. It's no surprise to our team that Nalgene, a world leader in creating reusable water bottles, is one of those brands.

Nalgene: A company 'born from science' and an early adopter

At Eastman, we've long considered Nalgene to be an early adopter. Its tagline — born from science — says a lot about its history (Thermo Fischer Scientific is its parent company) and approach to innovation. Back in the 1960s, many of the company's scientists were hikers, and they took Nalgene lab bottles on the trail because they performed. That gave rise to the Nalgene bottles many of us know and carry today.

Nalgene bottles are prized and trusted possessions for hikers, campers and office workers. They build bottles to last and with good reason: 2.5 million nonreusable bottles are trashed hourly in the United States alone. Nalgene also points out that using one of its bottles saves 167 nonreusable bottles from going to the landfill each year. As a company born from science, Nalgene has a natural curiosity and always has pushed for bigger ways to make an even bigger impact.

Nalgene was an early adopter of Eastman Tritan, introducing its water bottle made from Tritan in 2008 before Tritan was adopted by brands around the world for its many attributes, including durability and safety, and because it doesn't contain BPA or any bisphenols.



Nalgene bottle made with Eastman Tritan Renew and up to 50 percent certified recycled content. Source: Nalgene.

Nalgene and Tritan Renew: Right choice. Right now.

In the near future, you'll be able to purchase a Nalgene bottle made from Tritan Renew with 50 percent certified recycled content. That bottle is built on a commitment to sustainability, as the plastic equivalent to seven single-use water bottles were recycled in the making of that Nalgene bottle.

Our team has been deeply engaged with Nalgene leadership, talking through how a materials revolution could elevate that impact. The Nalgene team was clear that they could not compromise on the performance benefits of Tritan, which include durability and safety attributes that might be surprising to some.

For example, because Tritan can withstand high heat, Nalgene bottles are dishwasher-safe. This makes the cleaning process more energy efficient than hand washing and provides an added plus of easy sanitation.

As Nalgene wondered about what was possible, it had a specific focus: Could it increase its positive impact on the planet by creating reusable bottles made of recycled plastic?

The answer became yes with the introduction of Tritan Renew, a material that includes certified recycled content with absolutely no sacrifice in performance.

Defining the problem. Reimagining the solution.

Whether you work in sustainability or fix cars, whether you're drinking tea or coffee or whether you're hiking tomorrow with a reusable bottle, you have the right to demand better from the materials industry. We have a responsibility to take a leadership role in solving the waste crisis.

The world population is growing, and billions of people will rely on the production of plastic and other materials for quality of life and basic living. The problem is that too many products are discarded as valueless when we're finished using them, and alternatives to common end-of-life solutions such as landfill or incineration are not top of mind.

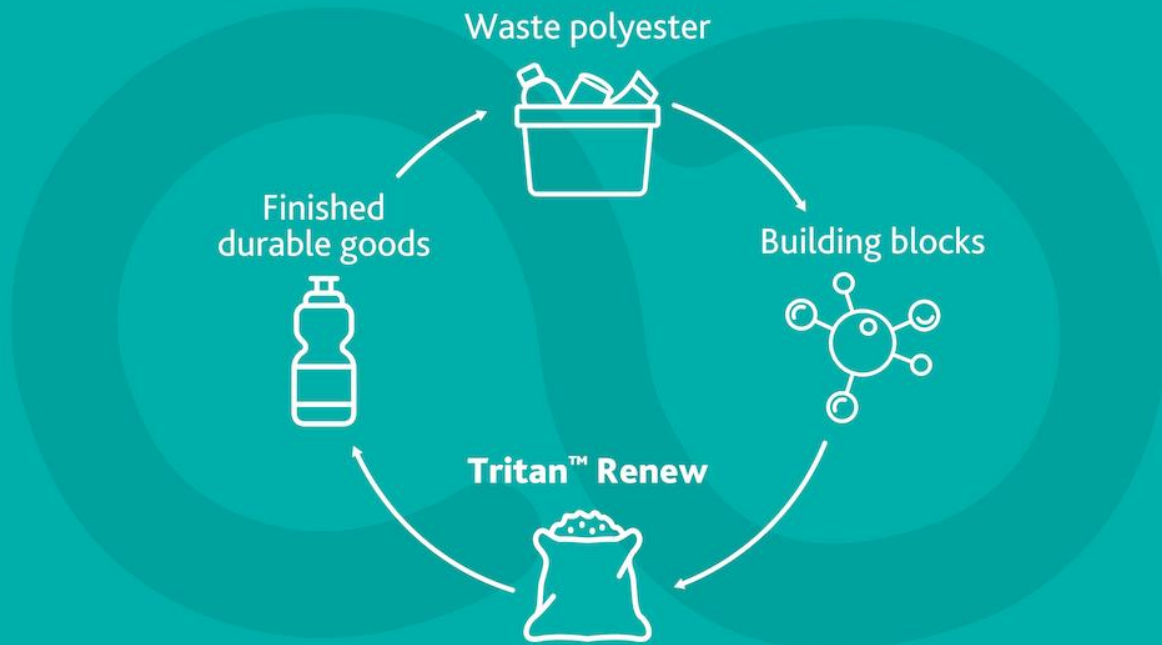
It doesn't have to be that way.

At Eastman, we will continue to push the boundaries of technology to reduce the amount of polymers needed for the products that the world needs. We will continue co-innovate with partners such as Nalgene to drive reuse.

And Eastman will contribute to a future of reimagined recycling. We see a future where the world has the capability to recycle almost any plastic product we use — and we can see that future because we have the capability. Right. Now.

EASTMAN

POLYESTER RENEWAL TECHNOLOGY



Eastman has two breakthrough Advanced Circular Recycling technologies — polyester renewal and carbon renewal — that turn almost any kind of waste plastic into new, durable plastics, continuously, with no loss of quality. Source: Eastman.

There was a time when society had deep appreciation of the value of an item, perhaps for its long usefulness, perhaps for the effort and resources required to make it, or perhaps for both. We now have an opportunity to restore that lost value through our Advanced Circular Recycling technologies, which can keep materials in use forever.

We value early adopters of Tritan Renew such as Nalgene, and we are in deep conversations with other customers who want to achieve their sustainability commitments. If you want to learn more about our efforts in creating a more sustainable, circular economy, visit eastman.com/tritanrenew or eastman.eco.

No one in this revolution carries more weight than the consumer. If each of us demand recycled content in our products, we can accelerate solutions that will help solve the waste crisis. Together, we can deliver a materials revolution.