

RECYCLED CONTENT: THE TRUTH ABOUT

THIRD-PARTY CERTIFICATION



THIRD-PARTY CERTIFICATION

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WHAT IS THIRD-PARTY CERTIFICATION?

Third-party certification is a transparent process by an independent body who provides an unbiased verification of a company's sustainability claims. Third-party certification requires a complete audit of a company's processes and products to determine compliance with international standards.



WHY IS THIRD-PARTY CERTIFICATION IMPORTANT?

Third-party certification is essential to both companies and consumers. Certifying your claims can protect your business from greenwashing allegations and from Federal Trade Commission (FTC) compliance issues. Third-party certification is the new way to do business.

RECYCLED CONTENT HAS THE HIGHEST RISK FOR FRAUDULENT CLAIMS

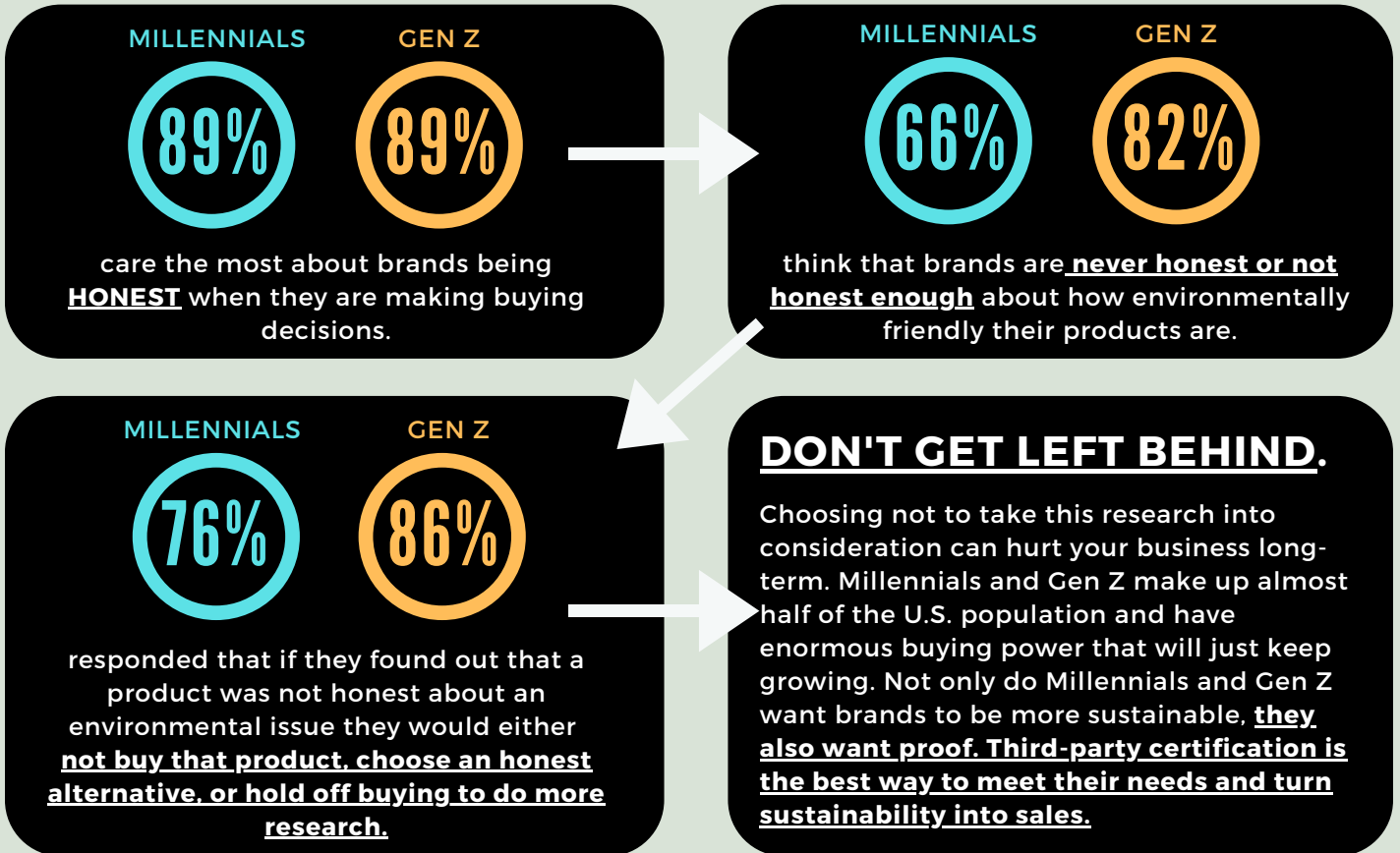
The marketplace is full of products with recycled content claims, but Post-Consumer Resin (PCR) bears the highest risk for fraudulent claims. These greenwashing claims have allowed companies to sell manufacturers "recycled content" that is not recycled. It has become increasingly difficult for companies seeking PCR to be certain that they are buying genuine post-consumer material. False claims amplify risk to all participants in the recycling market, especially buyers' confidence in recycled content claims.

FACT: Only 9 percent of discarded plastics are actually being recycled globally, which means the commitments to incorporate recycled content in products exceed the actual supply of PCR.

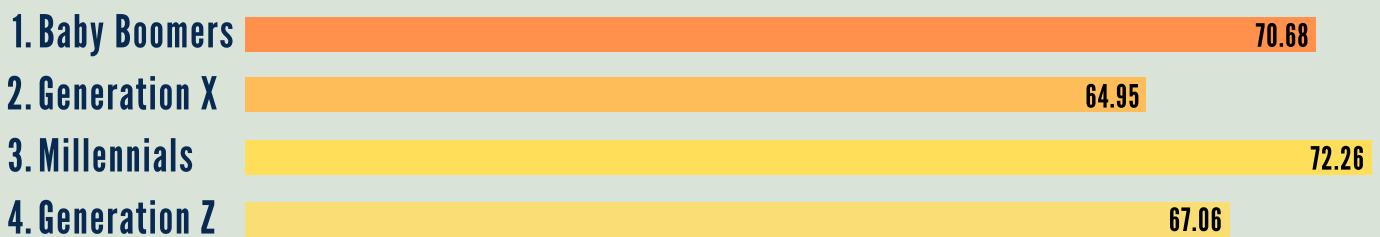


CONSUMER RESEARCH: THIRD-PARTY CERTIFICATIONS MATTER MORE THAN EVER

Millennials and Gen Z's Purchasing Decisions are Influenced by a Brand's Honesty about the Environmental Attributes of their Products:



Generations by Population - United States (Millions):



FACT: Millennials and Gen Z combined make up 139.32 million people in the United States. This is 42% of the total U.S. population.

Generations by Buying Power (Trillions):



FACT: Millennials and Gen Z have a combined buying power of \$1.5 trillion and that number will continue to grow every year.

WHAT ARE THE BENEFITS OF THIRD PARTY CERTIFICATION?

FEDERAL TRADE COMMISSION (FTC) COMPLIANCE

The FTC specifically works for consumers to prevent fraudulent, deceptive, and unfair business practices. The FTC's Green Guides provide guidance for marketers on how to qualify their environmental claims and how they can substantiate their claims. GreenCircle's certification is consistent with the Green Guides and is verified to FTC standards.

The FTC takes environmental claims very seriously and has filed charges against many businesses for misleading customers about the environmental attributes of their products. For example, [the FTC filed multiple charges against American Plastic Lumber, Inc.](#) for stating that their plastic lumber contained 100% post-consumer recycled content when their products actually contained less than 79% post-consumer recycled content on average, and some products contained no recycled content at all.



DEMONSTRATES BRAND INTEGRITY

GreenCircle has always certified on a per plant, per product basis because this is the most accurate way to reflect the sustainability of a product and assure accountability. Obtaining GreenCircle certification demonstrates a brand's commitment to sustainability.

BUILDS CONSUMER TRUST

Recycled content has the highest risk for fraudulent claims. Companies who take the extra step to obtain GreenCircle certification are not only ensuring that their claim is valid, they are also setting the standard for transparency in their industry.



WHAT ARE THE BENEFITS OF THIRD PARTY CERTIFICATION?

ESTABLISHES COMPETITIVE ADVANTAGE

According to a [Futerra Report](#), the majority of Millennial and Gen Z respondents stated that if they discovered a product was not honest, they would choose an honest alternative. Also, Millennials and Gen Z are becoming the next generations of specifiers, procurement professionals, and decision makers. Not only do they want honest sustainable products for their personal lives, they also understand the value of choosing sustainable products in their professional careers. GreenCircle certification provides tangible proof to consumers and gives companies an edge over competitors who have unsubstantiated claims.



MEETS SUSTAINABLE PURCHASING REQUIREMENTS

Sustainable purchasing and supply chain requirements are being developed by many companies, government agents, and purchasing agents. Many of these entities require third-party certifications to verify that claims are accurate. GreenCircle certification can ensure that you meet these sustainable purchasing requirements.

DRIVES CONTINUOUS IMPROVEMENT

As a by-product of certification, companies will be creating powerful benchmark data. This data is the foundation for measuring progress and supports achieving sustainability goals. Many companies have goals to increase recycled content in their products or to sell higher percentage recycled materials. Your initial GreenCircle Recycled Content certification serves as a baseline for driving continuous improvement towards your goals.



HOW DOES GREENCIRCLE VERIFY RECYCLED CONTENT?

GreenCircle's Recycled Content certification demonstrates an organization's commitment to reuse materials in an effort to support circular economy as well as reduce their reliance on virgin materials. GreenCircle follows ISO 14021 and FTC standards on recycled content claims.

GreenCircle conducts a thorough review of the actual bills of material/recipes for a product, raw material purchases, the organization's supply chain (chain of custody), production, and a visual confirmation of raw materials used via a site audit.

GreenCircle validates the source of the recycled materials and distinguishes the recycled content of the raw materials to be either pre- and/or post-consumer content in accordance with internationally accepted definitions (as defined in ISO 14021).

Using this methodology, GreenCircle then provides a certified percentage of pre- and post-consumer recycled content (percent by weight) within the product or raw material. This is verified by conducting a mass balance analysis to ensure that the recycled content percentage is consistently used in the product.

This process ensures accuracy, consistency and authenticity of recycled content claims. GreenCircle's Recycled Content certification is ISO 17065 compliant and the most rigorous certification in the market, making it the gold standard in transparency.

GREENCIRCLE'S RECYCLED CONTENT VERIFICATION PROCESS

Our ISO 17065 compliant process ensures that recycled content claims are accurate, truthful, and consistent.





WHY IS IT IMPORTANT TO VERIFY THE RECYCLED CONTENT MATERIALS FROM SUPPLIERS?

Verifying the recycled content of materials from suppliers is essential to ensure that the recycled content claim is consistent for all products produced. GreenCircle has a rigorous chain of custody process to document and certify recycled content materials. This includes a close inspection of the product recipe to understand whether the material is pre- or post-consumer, as well as to understand the source of those materials. This process assures that you are buying genuine post-consumer material.

WHAT IS A MASS BALANCE AND WHY DOES IT MATTER IN THE VERIFICATION PROCESS?

Mass balance is another important step in this process. GreenCircle analyzes the total amount of products produced and the total amount of recycled content materials purchased and utilized each month. This data helps GreenCircle verify that sufficient quantities of recycled content materials were purchased to meet the recycled content claim on a consistent basis. Consistency of the claim is critical to maintaining FTC compliance. GreenCircle certifies to a minimum recycled content based on the results of the mass balance.

RECYCLED CONTENT VS RECYCLABLE MATERIAL - WHAT IS THE DIFFERENCE?

RECYCLED CONTENT - DEFINITION

Proportion, by mass, of recycled material in a product, material, or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content.

WHAT IS A RECYCLABLE MATERIAL?

Closing the loop on materials is very important. Companies that integrate recycled content, especially post-consumer materials, help drive a continuous circular process. However, it is essential to note that not all materials can be considered recyclable based on the current waste management infrastructure within the U.S.

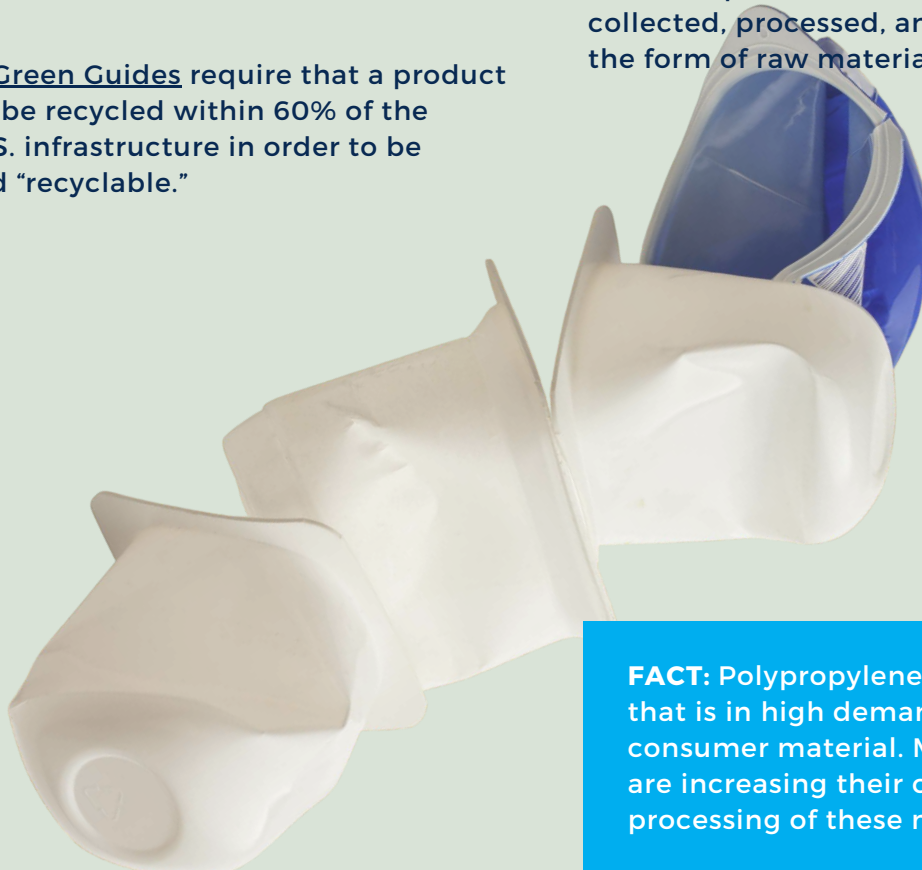
In order for a material to be recyclable, especially packaging, it requires careful consideration during the design process to minimize contaminants and ensure that the material will be accepted and properly sorted for recycling in a Material Recovery Facility (MRF).

The FTC's Green Guides require that a product be able to be recycled within 60% of the current U.S. infrastructure in order to be considered "recyclable."

Typical materials that are readily recyclable include water bottles and beverage containers manufactured out of PET (#1), and milk jugs and detergent bottles manufactured out of HDPE (#2). According to the State of Curbside Recycling 2020 Report, polypropylene containers (#5) such as yogurt cups and butter tubs should increasingly become a core collected material in curbside programs. However, some restrictions to recycling this product may apply due to the location in which you live, and it is important to understand what your local municipality will accept. For more information about plastics recyclability and the recycling industry-accepted criteria for plastic package design, check out the Association of Plastic Recyclers Design Guide.

RECYCLABLE MATERIAL - DEFINITION

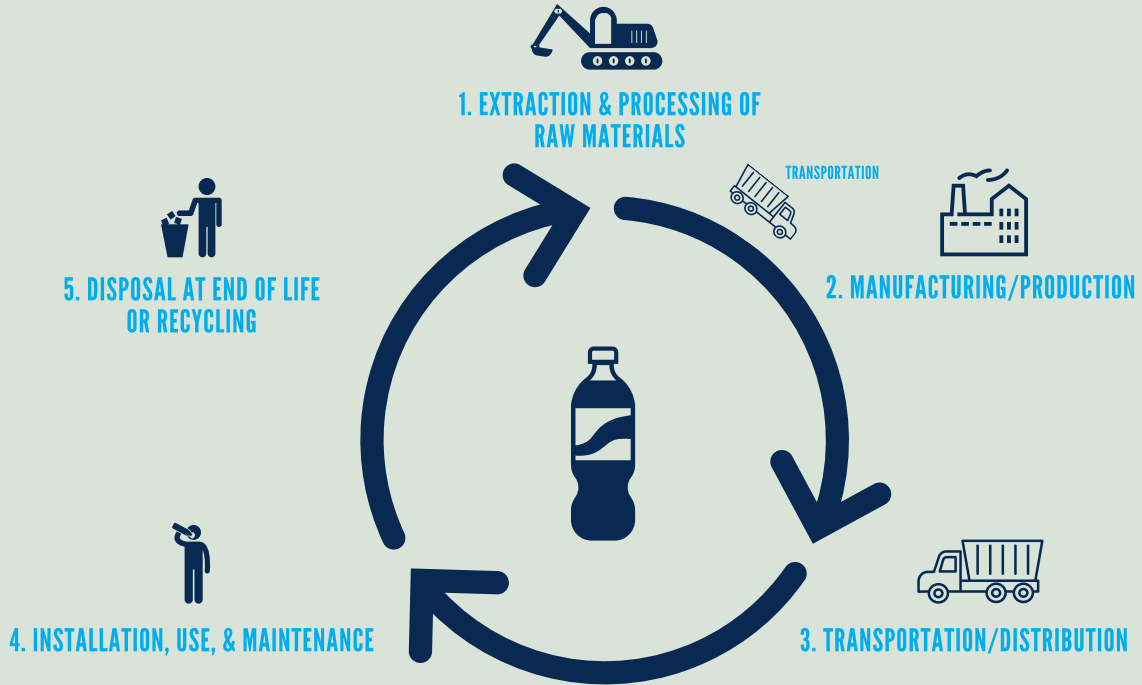
"Recyclable" is a characteristic of a product, packaging, or associated component that can be diverted from the waste stream through available processes and programs and can be collected, processed, and returned to use in the form of raw materials or products.



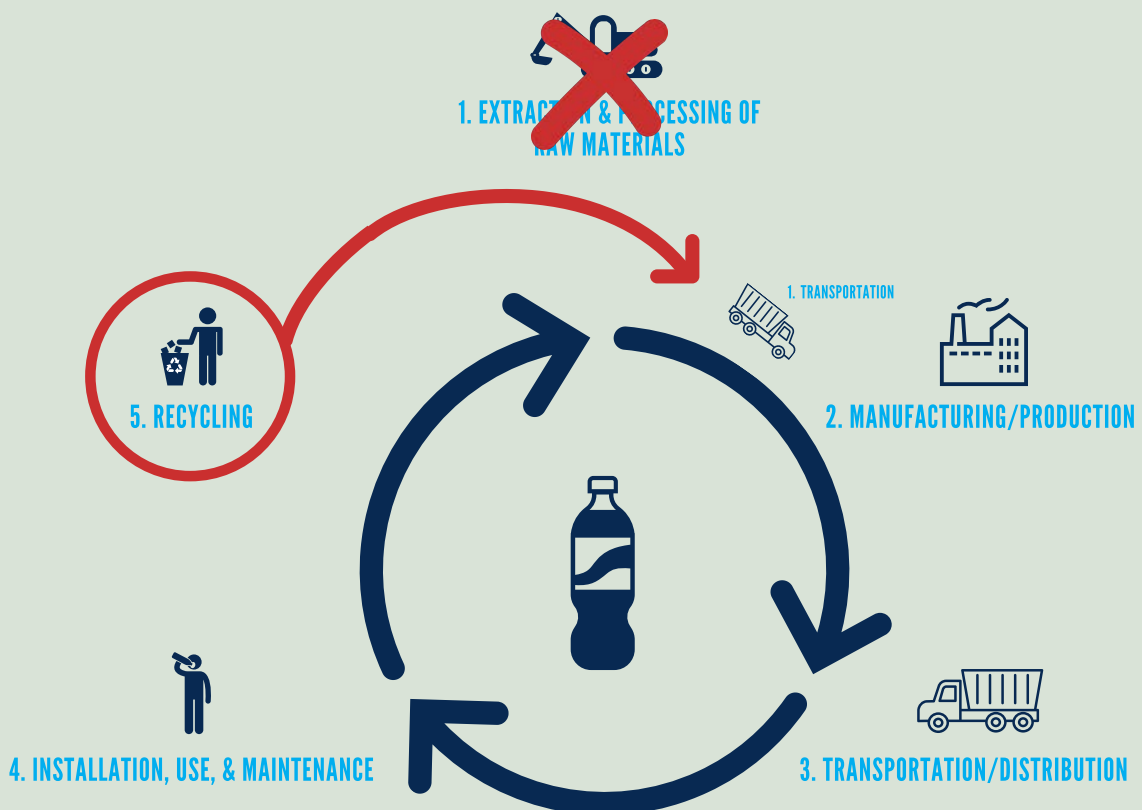
FACT: Polypropylene is a plastic resin that is in high demand for post-consumer material. MRF's and recyclers are increasing their collection and processing of these materials.

THE VALUE OF RECYCLED CONTENT AND REDUCING EMBODIED CARBON

PRODUCT LIFE CYCLE OF A PLASTIC BOTTLE

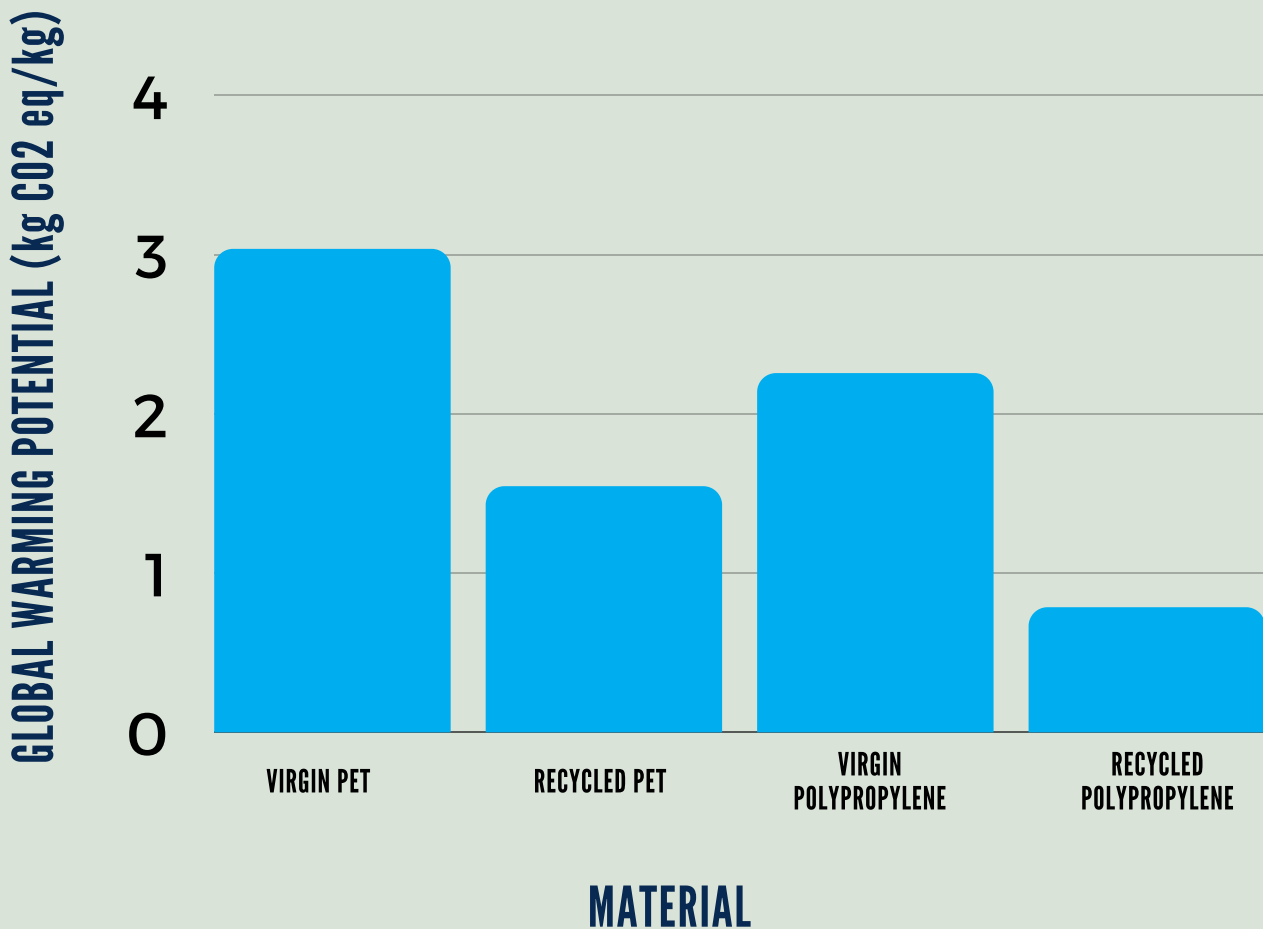


PRODUCT LIFE CYCLE OF A PLASTIC BOTTLE WITH RECYCLED CONTENT



THE VALUE OF RECYCLED CONTENT IN REDUCING EMBODIED CARBON

VIRGIN PLASTICS VS RECYCLED PLASTIC (LOWER IS BETTER)



THE VALUE OF RECYCLED CONTENT IN REDUCING EMBODIED CARBON AND DRIVING THE CIRCULAR ECONOMY

The life cycle diagrams above demonstrate the value of utilizing recycled content in order to reduce embodied carbon. By avoiding the use of virgin materials, all of the life cycle impacts of the extraction and processing phase of the raw materials are eliminated. Also, the life cycle impacts of extracting oil and natural gas for the chemical manufacturing process for virgin plastics are erased. These steps in the virgin plastic process contribute heavily to the carbon footprint of plastic.

In the product life cycle of a plastic bottle with recycled content, there will still be energy utilized to collect and transport the recycled materials, and to process the post-consumer plastics into usable flake or pellets. However, this requires significantly less energy to process these materials compared to manufacturing virgin plastic.

The graph above proves this by showing the associated reduction in global warming potential of virgin PET (#1) and polypropylene (#5) compared to recycled PET and polypropylene. Global warming potential is the measure of the carbon footprint or embodied carbon of the materials.

GreenCircle Certification System

GreenCircle Certified, LLC certifies
that an independent, third-party evaluation has been conducted for:

Company Name

Product

City, State

This product meets all the necessary qualifications
to be certified for the following claims:

XX% Recycled Content

Minimum XX% Pre-Consumer Content

Minimum XX% Post-Consumer Content

Certification Period: Month day, year - Month day, year

Certification Number: xxx-xxxxx

Referenced Standards: ISO14021 and FTC Green Guides



Tad Radzinski

*Tad Radzinski, PE, LEED AP, SFP
Certification Officer*

**GreenCircle
CERTIFIED** LLC
155 Railroad Plaza, Royersford P.A. 19468

GREENCIRCLE'S RECYCLED CONTENT CERTIFICATE

At the end of each project, GreenCircle issues recycled content certificates that qualify the minimum pre- and post-consumer recycled content in each product. These unique certificates are featured on our [Certified Product Database](#) where they can be publicly accessed. GreenCircle's Recycled Content certificates serve as tangible proof of the recycled content material in our client's products and demonstrate our client's commitment to transparency.

Our certifications are valid for one calendar year, which is noted with specific dates under "Certification Period." GreenCircle conducts an annual recertification to verify that the recycled content claim remains consistent, and to ensure that our clients are always in compliance with the FTC. Certifying annually also helps our clients drive continuous improvement in their products and processes.

GREENCIRCLE'S CERTIFIED ENVIRONMENTAL FACTS MULTI-ATTRIBUTE LABEL

As our clients begin to achieve multiple certifications for different claims, they can display all of the sustainability information for their product or facility in our Certified Environmental Facts Multi-Attribute label (pictured below). Our Certified Environmental Facts label is as easy to read as a nutrition label, and it is the most transparent multi-attribute label in the industry.

GREENCIRCLE'S CERTIFIED ENVIRONMENTAL FACTS (CEF) LABEL ADDRESSES RECYCLED CONTENT

Certified Environmental Facts®	
Company: Company	
Product: Product Name	
Facility Location: Facility Location	
Certification Period: Month X, 20XX - Month XX, 20XX	
Certification Number: XX-XXXX	
Product Specific:	
Total Recycled Content ^{1,2}	%
Pre-Consumer:	%
Post-Consumer:	%
Regional Raw Material Sourcing ³	%
Product Optimization⁴	
Embodied Carbon Reduction ⁵	%
2013 (kgCO ₂ eq per yd ²)	
2017 (kgCO ₂ eq per yd ²)	
Acidification Reduction	%
Eutrophication Reduction	%
Smog Potential Reduction	%
Carbon Neutral ⁶	Yes
Take Back Recycling Program ⁷	Yes
Closed Loop Product ⁷	%
Biobased	0%
Recyclable ⁸	0%
Published Environmental Product Declaration (EPD)	
Low-Emitting Materials	Green Label Plus
Material Ingredient Reporting:	
Verified Manufacturer Inventory (MIR) ¹⁰	
Verified Health Product Declaration (HPD) ¹⁰	
Verified Declare Label ¹⁰	
Manufacturing Specific¹¹:	
Carbon Emissions Reduction ¹²	0%
2013 (total metric tonnes CO ₂ eq):	
2018 (total metric tonnes CO ₂ eq):	
Carbon Emissions Neutral	Yes
Energy Usage Reduction	0%
2013 (total MJ):	
2018 (total MJ):	
Renewable Energy Usage ¹³	0%
2013 (total MJ):	
2018 (total MJ):	
Water Usage Reduction	0%
2013 (total gallons):	
2018 (total gallons):	
Outgoing Waste to Landfill Reduction	0%
2013 (total lbs):	
2018 (total lbs):	
Waste Diversion from Landfill ¹⁴	%
ISO 14001 Certified	Yes
ISO 9001 Certified	Yes
Baseline Period: Month 20XX - Month 20XX	
Evaluation Period: Month 20XX - Month 20XX	
For more information on the Certified Environmental Facts of this product, please contact: info@GreenCircleCertified.com. www.GreenCircleCertified.com	
* Attributes in green contribute to LEED v4 and v4.1 credits.	
1. The minimum pre-consumer, post-consumer, and total recycled content across all product recipes is listed.	
2. This meets the requirements of LEED v4 and v4.1 MR Credit: Sourcing of Raw Materials.	
3. Raw materials sourced from tier one suppliers within a 500-mile radius of the manufacturing facility.	
4. This meets the requirements of the LEED Materials and Resources Building Product Disclosure and Optimization – Environmental Product Declaration and Multi-Attribute Optimization. This contributes two products or 200% of material cost under LEED v4.1.	
5. Product carbon footprint is based on a product recipe calculated using the sales-weighted average for yarn weight. Scope is cradle-to-gate.	
6. Made carbon neutral using retired carbon offsets. BV North America conducted an independent audit of the GHG Protocol Product Standard Report. The scope is raw material extraction to disposal.	
7. This meets the requirements of the LEED Circular Products Pilot Credit.	
8. Percentage indicates internal recyclability. Product may be 100% recycled at end-of-life in certain infrastructures.	
9. This meets the requirements of LEED v4 and v4.1 MR Credit: Building Product Disclosure and Optimization – Environmental Product Declarations. This attribute contributes 1 product under LEED v4 and v4.1.	
10. This meets the requirements of LEED v4 and v4.1 MR Credit: Building Product Disclosure and Optimization – Material Ingredients. This attribute contributes 1 product under LEED v4 and v4.1.	
11. All reductions benchmarked to production. Third-party review of manufacturing reductions contributes to optimization.	
12. Scope 1 and 2 emissions only. Carbon emissions reductions and total metric tons of CO ₂ eq calculated using a market-based approach and financial instruments.	
13. Includes purchase of wind RECs and purchase of directed biogas.	
14. Includes both hazardous and non-hazardous material streams.	
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Every attribute on our label is third-party verified in accordance with applicable standards and is specific to your product and operations.

RECYCLED CONTENT

EMBODIED CARBON REDUCTION

CARBON NEUTRAL

TAKE BACK RECYCLING PROGRAM

CLOSED LOOP PRODUCT

BIOBASED

RECYCLABLE

Every attribute for building products in **green font** contributes to a LEED credit. Specific LEED credits are called out in the footnotes on the label.

GREENCIRCLE CERTIFIED IS RECOGNIZED BY THE FOLLOWING ORGANIZATIONS:

 <p>The Association of Plastic Recyclers</p>	<p>GreenCircle is an APR Endorsed Certifier for Recycled Content.</p>
	
	<p>GreenCircle is recognized by the the U.S. Federal Government as a Tier 1 recommended Ecolabel for all federal purchasing.</p>
	
	<p>GreenCircle is a recognized certification body by the United States Green Building Council (USGBC) and our certification is included in multiple LEED Credits.</p>
	<p>GreenCircle is a recognized certification body by the Home Innovation Research Labs for the National Green Building Standard (NGBS).</p>
	<p>GreenCircle is a partner with Pennsylvania RMC and coordinates regularly with the center to stay on the cutting edge of material recovery and plastics recycling.</p>
	<p>GreenCircle is a founding member of the Sustainable Purchasing Leadership Council.</p>
	<p>GreenCircle is an approved verifier for the Health Product Declaration Collaborative.</p>
	<p>GreenCircle is a certified WBENC Woman Owned Business.</p>

GREENCIRCLE SALES TRAINING

We understand that you want to get the most out of your investment in GreenCircle certifications. This is why we provide a 1-hour training webinar to educate your sales team on your GreenCircle certification, market drivers in your industry, and how to use your GreenCircle certification to make sales. We record the webinar and deliver the recording to you for your future training needs. We believe that it is essential to teach your sales team how to use your GreenCircle certification to turn sustainability into sales.



GREENCIRCLE MARKETING SUPPORT

We know that you might feel lost when it comes time to communicate your certification achievements. This is why we offer marketing support to help you effectively communicate your GreenCircle certification. Our dedicated marketing team is available for the duration of your certification to assist with copy writing for press releases, script writing, infographic development, website updates, case studies, social posts, and your own company profile that highlights your sustainability story on our Brands You Can Trust website page.

GREENCIRCLE BRANDS YOU CAN TRUST

According to a [Shelton Group report](#), 90% of millennials buy from a brand when they trust that brand's environmental and social business practices. GreenCircle is proud to cultivate multi-layered trust. Our clients can trust that our certifications are rigorous and accurate and, in turn, their customers can trust their business and claims. GreenCircle recognizes and champions our clients for going the extra mile to validate their claims. Every company that is certified by GreenCircle is a brand you can trust.



LOOKING FORWARD

Recycled content will continue to be a major aspect in the evolution of sustainable products. Incorporating recycled content into your products is essential to reducing embodied carbon and reducing your company's environmental impact. Going forward, companies who make unsubstantiated recycled content claims will be left behind. Millennials and Gen Z consumers want proof of the environmental attributes of your products and third-party certification is essential for gaining consumer trust. Put your brand ahead of the competition and get certified.

NEED HELP CERTIFYING RECYCLED CONTENT?

Contact Ryan Heins

Account Manager

Phone: 610-569-1047 x119

Email: Ryan@GreenCircleCertified.com

www.GreenCircleCertified.com



NOT READY FOR CERTIFICATION? SUSTAINABLE SOLUTIONS CORPORATION CAN HELP!

Interested in incorporating recycled content into your products but don't know how? Our sister company, Sustainable Solutions Corporation (SSC), can help! SSC's Life Cycle Assessment (LCA) and Sustainable Product Innovation (SPI) programs are embedded into a company's stage-gate or new product development process and enables product teams to consider alternative materials, processes, sourcing, and other aspects of a product. SSC has had great success helping clients find reliable sources of PCR for use in the manufacturing of products, and has provided the training and tools to help new product development teams integrate that PCR into products.

NEED HELP WITH LCA OR SPI?

Contact Nicole Meyer

Account Manager

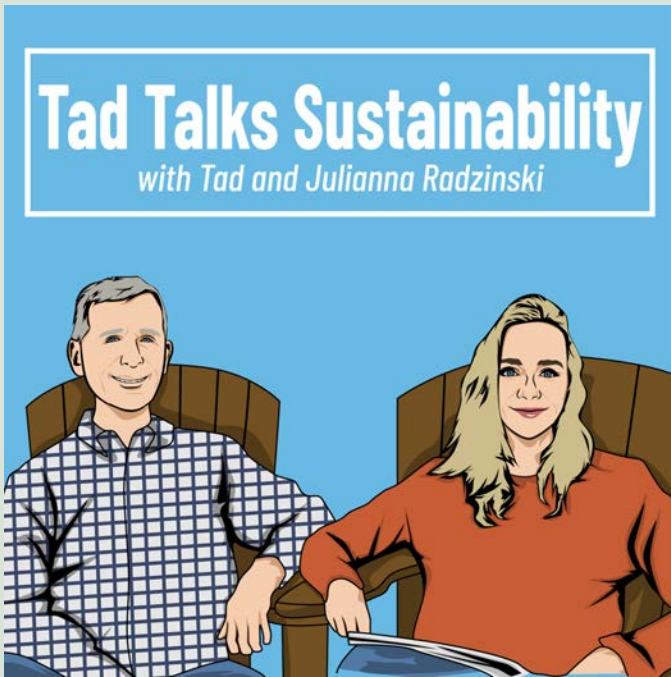
Phone: 610-569-1047 x116

Email: Nicole@SustainableSolutionsCorporation.com

www.SustainableSolutionsCorporation.com



RESOURCES



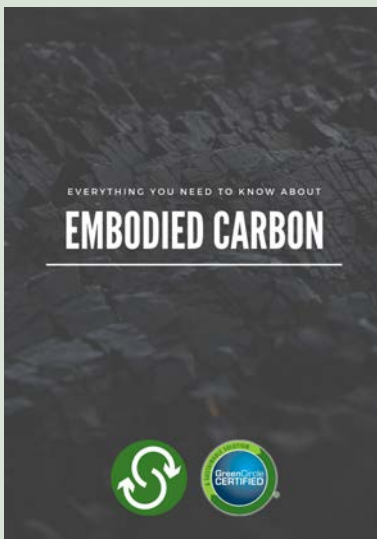
CHECK OUT OUR PODCAST EPISODES!

Tad Talks Sustainability Podcast is hosted by sustainability expert, Tad Radzinski, and his daughter, Julianna Radzinski. During our episodes, Tad clearly explains everything you need to know about sustainability to help your company optimize your sustainability strategy and reach your goals. Tad offers tips for reducing embodied carbon and operational carbon, designing sustainable products and packaging, setting sustainability goals, and so much more.

Click here to listen:

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OTHER DOWNLOADABLE DOCUMENTS



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GREENCIRCLE CERTIFIED



SUSTAINABLE SOLUTIONS CORPORATION



SOURCES

1. [Resident Population in The United States in 2020 By Generation](#)
2. [Baby Boomer Spending Power](#)
3. [Spending Across the Generations: How Gen Xers Shop](#)
4. [Millennial Buying Power](#)
5. [Gen Z and The Future of Spend](#)
6. [Futerra Report](#)
7. [Shelton Group Report](#)
8. [FTC Brings Second Case This Year Against Plastic Lumber Products](#)
9. [Production, Use, and Fate of All Plastics Ever Made](#)
10. [2020 State of Curbside Recycling Report](#)
11. [FTC Green Guides](#)
12. [Association of Plastic Recyclers Design Guides](#)

