
Sustainable Labels & Packaging



The next decade is critical to both our business and the world. At Avery Dennison, sustainability is a core value. It is built into our product design, our operations and culture, and the decisions we make every day. We innovate not only to reduce environmental and social impact, but to go further and actually improve the planet and the industries we serve. We're proud to do our part in helping the world move toward a regenerative future where we enable recyclability and circularity.

If COVID-19 has taught us anything, it's that one change can cause a huge impact. We're holding ourselves accountable and doing what we can to enable sustainability everywhere possible, starting with the way we do business. Using our [2030 Sustainability goals](#), we have been improving sustainability in our products while integrating it into our business strategies and work culture.

We understand the role our products play in the greater vision for sustainable packaging, and we're working to meet brands where they are with their sustainability initiatives. As part of our 2030 goals, we're working to ensure that 100% of our standard products contain recycled or renewable materials.

This brochure is our latest step in partnering with you to create a more sustainable future as we guide you through our Sustainable ADvantage portfolio of products and endeavor to address circularity, improve environmental performance and provide transparency across the entire supply chain.



Jeroen Diderich
Vice President and General Manager
Label and Graphic Materials, North America

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Trends in Sustainable Packaging

Sustainable packaging takes into account every stage of packaging’s lifecycle, from how it’s designed, to how it’s made and how it should be disposed of at the end-of-life phase.

Circularity

Circular packaging is composed of materials that can be repurposed, recycled or composted instead of being taken to landfill. Avoiding a linear route – materials ending up as trash in landfills or polluting our oceans or environment – is a primary focus in circular packaging, which means that we need to consider what happens to materials at the last stage of life – whether that packaging is composed of mono-material, which eases recyclability, or multiple materials and is designed to be disassembled. Designing for reusability has become essential.

Ecodesign

Ecological design, or ecodesign, takes into account every stage of packaging’s lifecycle, starting with the design. Designing packaging with sustainability in mind allows us to better prepare for the end-of-life collection while creating products that cause the lowest possible environmental impacts. In fact, “80% of products’ environmental impacts are determined at the design phase” according to the European Union’s Ecodesign Directive, a framework that sets mandatory requirements for manufacturers to reduce energy consumption.



Biodegradable & Compostable

Biodegradable and compostable packaging options are in high demand and for a good reason: both have the ability to completely disintegrate, cutting down on material waste.

While biodegradable materials decompose in the environment, compostable materials go a step further, providing nutrients and fertilizing soil once it has completely deteriorated. Biodegradable materials can break down anywhere in nature, but composting can only happen in specific settings, and the process is typically faster.



Mono-material

Mono-material refers to packaging that is composed of a single material as opposed to packaging made from different materials. Single-material packaging makes the recycling process easier because it reduces the amount of energy required to split or separate various materials. Increased innovation around mono-material packaging is allowing designers more opportunities to create elaborate packaging without sacrificing recyclability.

Recycled & PCW Materials

If your packaging contains recycled materials, then it was created using either post-industrial or post-consumer content. Post-consumer waste (PCW) refers to the everyday recyclable materials, such as plastics, cans and papers, that we toss in our recycling bins. These recyclable materials are compounded into bails, which are then melted or ground into small pellets and later used to form new bottles, cans and papers.



Plastic use & waste reduction

As plastic continues to dominate the packaging market, with the production of more than 80 billion plastic packaging units in 2020, North America has a strong focus on enabling circularity, improving recyclability and reducing plastic waste.

- 1 As part of the Canada-wide Strategy on Zero Plastic Waste, Prime Minister Justin Trudeau made it clear in June 2019 that Canada would take a firm stance on packaging and packaging waste, especially plastics. Canada is following the EU's bans on harmful single-use plastics, as well as setting standards and targets for companies that manufacture plastic products or sell items with plastic packaging so they become responsible for their plastic waste.
- 2 To help increase recycling and circularity, several U.S. states have variations of extended producer responsibility (EPR) and producer responsibility organization (PRO) schemes, minimum recycled content requirements, and various other bans and mandates. In June 2021, Maine became the first state to sign an EPR law for consumer packaging. Oregon implemented the Plastic Pollution and Recycling Modernization Act in August 2021, making it the second state to sign an EPR law. Since then, six other states introduced EPR legislation: California, Hawaii, Illinois, Massachusetts, Maryland and New York.
- 3 In September 2020, California became the first state to require recycled content use in plastic beverage containers, aiming to reach a 15% requirement by 2022 and a 50% requirement by 2030.
- 4 Additionally, a stand-alone plastic packaging reduction bill has been introduced in Washington state that would mandate that each year a producer of plastic packaging must meet the following minimum post-consumer recycled content on average for the total amount of plastic packaging sold in the state: no less than 15% post-consumer recycled plastic in 2023, 25% in 2027 and 50% in 2031.
- 5 Sustainability efforts made on the state level help governments pay for collection and recycling by obliging producers of packaging materials (manufacturers, sellers, distributors, etc.) to pay for the costs of recycling their materials. Avery Dennison continues to monitor the evolving regulatory and legislation space across the U.S. to understand the impacts to the pressure-sensitive label industry.

Time for change in the U.S.

Presently, legislation targeting circularity is handled at the state level. Several bills have been proposed, both federally and state-wide, that would dramatically alter the way packaging materials are designed and manufactured.

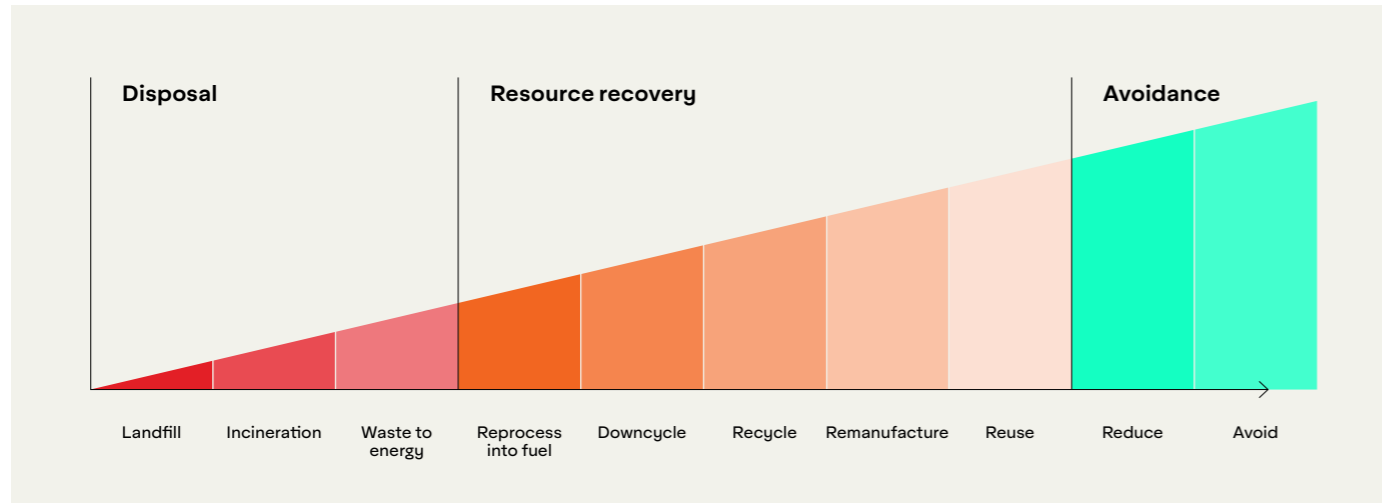


Packaging Recyclability

To create sustainable packaging, we must adopt label technologies that reflect a whole systems approach—from materials design to end-use—and work in harmony with the existing recycling stream.

The waste hierarchy

The waste hierarchy is a set of priorities for the efficient use of resources that advances the circular economy. In place of the traditional waste management approach consisting of three Rs (reduce, reuse, recycle), it shows a more elaborate waste management hierarchy – listing actions in order of priority, from least to most favourable from an environmental perspective.



Downcycling
Packaging is recycled for lower grade applications

Example:
Food-grade packaging fibers are recycled into industrial-grade fibers

Recycling
Packaging is recycled for alternate applications

Example:
Food-grade packaging fibers are recycled into non-food-grade fibers

Remanufacturing
Packaging is recycled back into the same applications

Example:
Food-grade packaging is remade into food-grade packaging

North American State of Waste Management

Only 9% of all plastic waste ever created has been recycled.



The U.S. produces more than **12% of the planet's waste**, though it is home to only 4% of the world's population.



In 2018, **69 million tons** of material was recycled.



Americans throw away **35 billion** plastic bottles per year.



In 2021, the US recycled **5%** of plastic, compared to **8.7%** plastic recycled in 2018. Europe recycled **23.1%** of plastic in 2021.



33% of everything received by recyclers went to landfill because it was either contaminated, too small to be sorted or not actually recyclable.



Americans use **100 billion** plastic shopping bags per year and discard **2.5 million** plastic bottles per hour.

What does it mean to be recyclable?

To be considered “recyclable”, a product has to be collected, sorted, processed, and applied, according to How2Recycle. None of these processes can be missing.

	PET	HDPE	PVC	LDPE	PP	PS	OTHER
% of global plastic waste	11%	14%	5%	20%	19%	6%	24%
Ease of Recycling	Easy	Easy	Very Difficult	Manageable	Manageable	Difficult	Very Difficult
Applications	Beverage bottles, food jars, liners	Snack boxes, detergent bottles	Credit cards, pipes, car wraps	Packaging film, shopping bags	Bottle tops, straws, films	Plastic-foam cups, egg boxes	Baby bottles, compact disks
Challenges	It is more expensive to recycle than landfill. Also, standards vary by recyclers.	HDPE is usually downcycled into flower pots, patio furniture, etc.	Recycling PVC emits toxic compounds which is dangerous to people and the environment.	China was handling 400-600 million lbs that's no longer being processed. Recycling is in trouble without the demand.	There are fewer recyclers in the U.S. Recycled PP is available, but it is being consumed by the PET bottle mfg.	Not applicable	This code has a blend of material making it difficult to recycle.

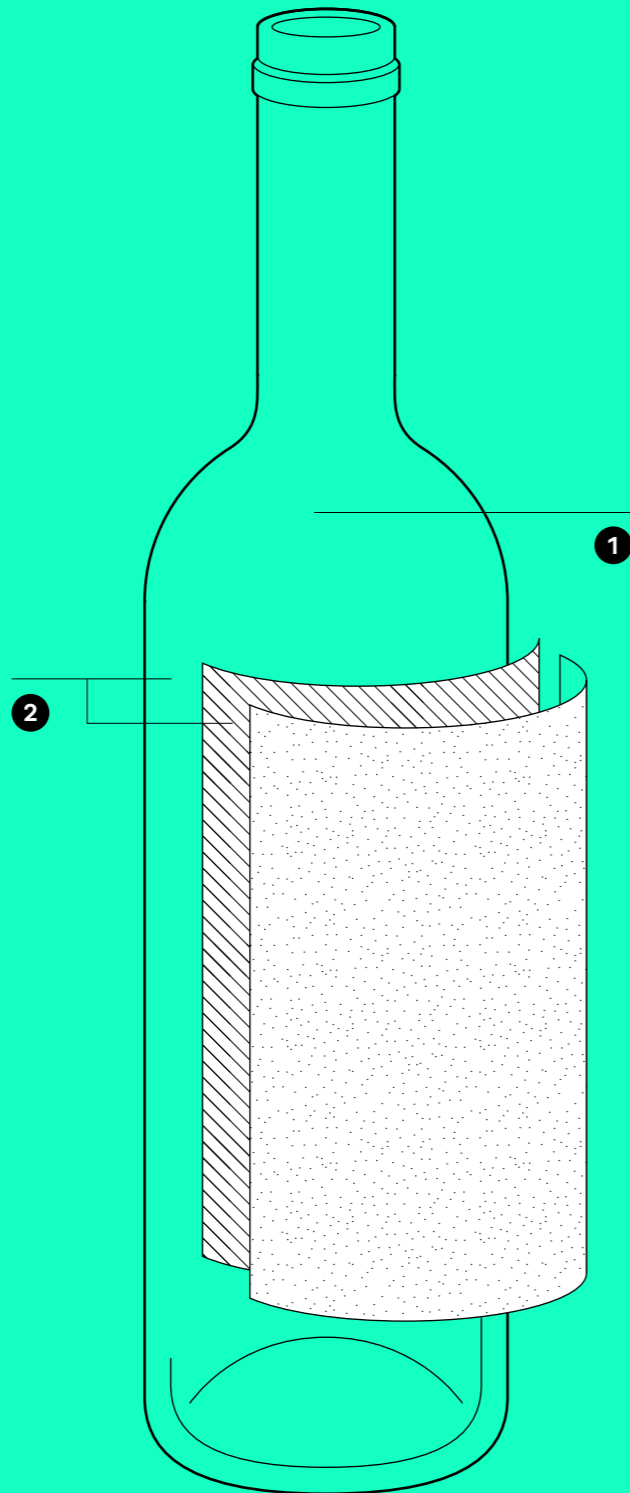
Source: National Geographic; AD-NA Market Research

What is Ecodesign?

Eco designing a product or service means to make it desirable for people, maximize business impact, and minimize its environmental impact along its life cycle by designing a circular system around it.

We are committed to making every product we develop more sustainable than its predecessor, taking into account the whole product life cycle from the use of raw materials to the end of life.

To promote proactive thinking, create awareness, and empower our teams to make bold decisions in product development, we have included Ecodesign in our approach to designing products. We have followed the basic steps of a standard life cycle analysis (LCA) tool and the guidelines we already have for our sustainable materials portfolio.



Designing for Recyclability

Choosing the right label design for your product starts with understanding how the packaging protects your product, enhances consumer use, and enables a sustainable end-life.

1

The container

Product

Choosing a container starts with the requirements of your product, including safe delivery of your product to the consumer, and meeting safety requirements and compliance regulations.

2

The label material & adhesive

Use

Considering how consumers use your product is crucial for choosing the right container. Single-use products might do better in a plain, functional container, while products used daily may need a durable container that's more aesthetically pleasing to the consumer.



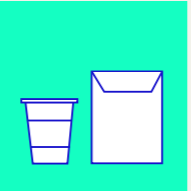

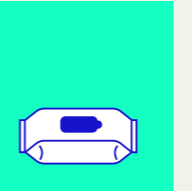
Ensuring the durability of a label and its adhesive is incredibly important for packaging. A label must be readable and stay adhered throughout the lifecycle of the product. A member of our team can help you choose materials and adhesives that work best for your application and helps meet your sustainability goals.

End of life

The lifecycle analysis of your product should include the packaging, as governments and consumers are looking to brands to create products that enable sustainability. If the container can't be recycled or reused, consumers may choose a product with packaging that can.

When a product comes to the end of its life, a label shouldn't hinder the recyclability or reusability of the container. Consider how your label will affect the recyclability of your product. For example, choosing a recyclable or compostable material can make a meaningful waste reduction, or choosing an adhesive technology like CleanFlake™ that enables recyclability.

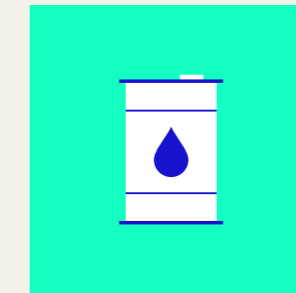
Our sustainable solutions for each packaging substrate

	PET	HDPE	PE	Cardboard	Flexible Packaging
Packaging Substrate					
Key end use segments	<ul style="list-style-type: none"> • Beverage • Food • HPC 	<ul style="list-style-type: none"> • Beverage • Food • HPC 	<ul style="list-style-type: none"> • Dairy • HPC • E-Commerce 	<ul style="list-style-type: none"> • Food • Transport • Logistics 	<ul style="list-style-type: none"> • Food • Pet Food/Treat • HPC
Label types & technologies	<ul style="list-style-type: none"> • PP (wrap around) • PP Paper • Sleeves • Resealable PET lidding film 	<ul style="list-style-type: none"> • Paper (wet glue) • PE, MDO, BOPP, Paper (PSL) • Sleeves 	<ul style="list-style-type: none"> • Direct print • Paper (wet glue) • PP (PSL) 	<ul style="list-style-type: none"> • Paper DT (PSL) • Compostable papers and films <p>Or</p> <ul style="list-style-type: none"> • A combination of PP, PET and PE layers 	<ul style="list-style-type: none"> • Bio-based films • PP, PET, PE <p>Or</p> <ul style="list-style-type: none"> • A combination of PP, PET and PE layers
Avery Dennison solutions	<ul style="list-style-type: none"> AD CleanFlake™ Technology Heat Seal Reclosure 	<ul style="list-style-type: none"> APR-Recognized Materials: CL/WH BOPP, MDO & PE films, AD CleanFlake™ Technology 	<ul style="list-style-type: none"> DT BOPP for PE Flexibles (Poly Mailers) 	<ul style="list-style-type: none"> TTC & DT Eco TrueCut AT2550 DT Linerless Industrial compostable labels 	<ul style="list-style-type: none"> Recyclable Stand Up Pouch Sustainable Cosmetic Web Easy Open Cello Stickpak Surlyn Reclosure Labels

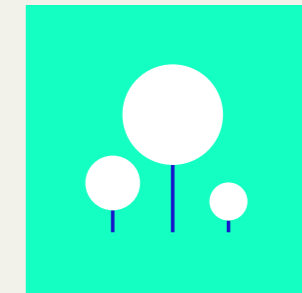
Avery Dennison Life Cycle Assessment Tool

Environmentally responsible labeling and packaging can make for a greener world—and a greener bottom line, too. That’s why Avery Dennison has created a product life cycle assessment (LCA) tool that helps our customers understand the environmental consequences of their labeling and packaging decisions.

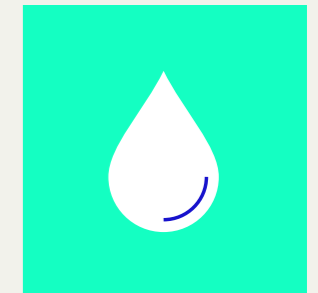
The tool compares two of our products, from material extraction to processing by Avery Dennison and to end of life. It provides directional information on environmental impacts across six impact categories.



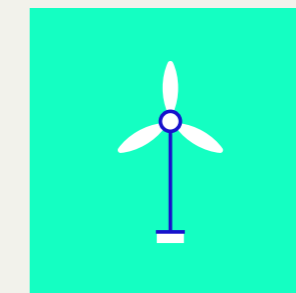
Fossil material
A measure of the depletion of fossil resources for material inputs in barrels of oil equivalent. A barrel of oil is equivalent to 42 gallons or 158,98 liters.



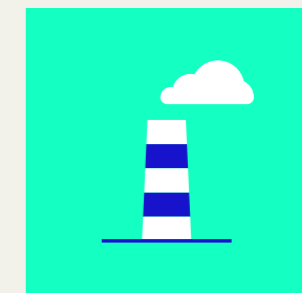
Materials from biobased sources
The amount of biobased sources required to produce a material.



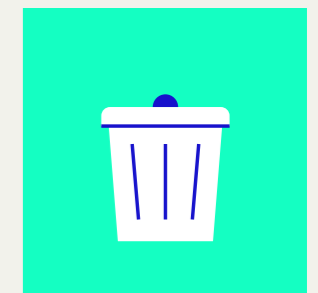
Water
The amount of process water that is treated and discharged to receiving waters. This measure does not include water used for the generation of electricity via hydro power or water used for process cooling.



Energy
A measure of the total amount of primary energy extracted from the earth, including petroleum, hydropower, and renewable sources such as solar power, wind power, and biomass. This does not include the amount of fossil material used as feedstock. The efficiency of electric power and heating processes is taken into consideration.

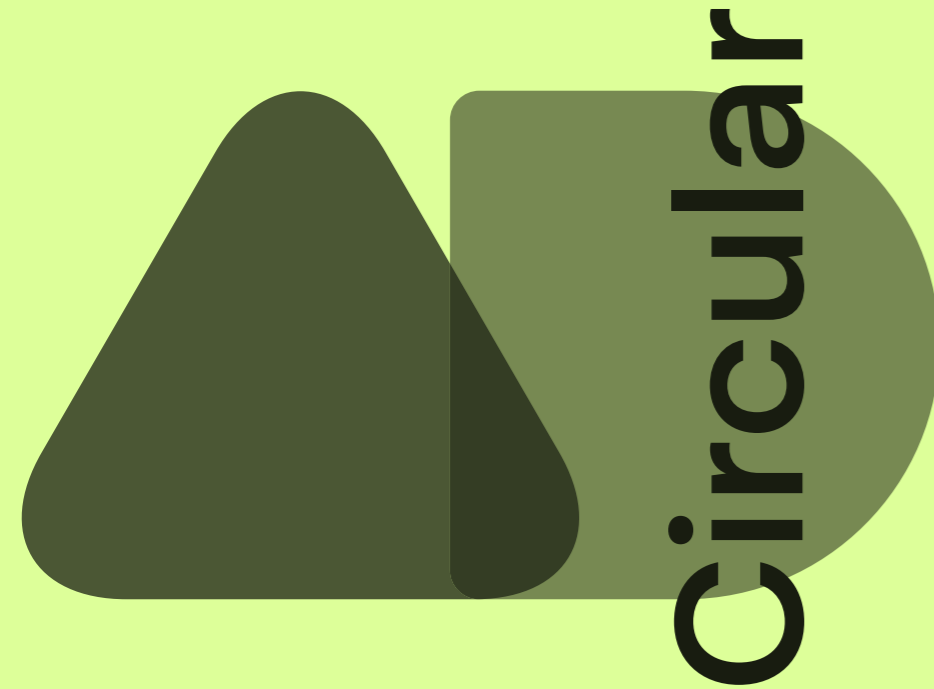


Greenhouse Gases (GHG)
A measure of greenhouse gas emissions, such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).



Solid waste
A measure of the total amount of solid waste generated that is disposed of offsite. This does include waste prior to incineration.

Introducing the AD Circular program
 — our latest contribution toward the establishment of a circular economy, and one of the many ways we’re enabling the recycling of label waste and advancing the use of recycled materials.

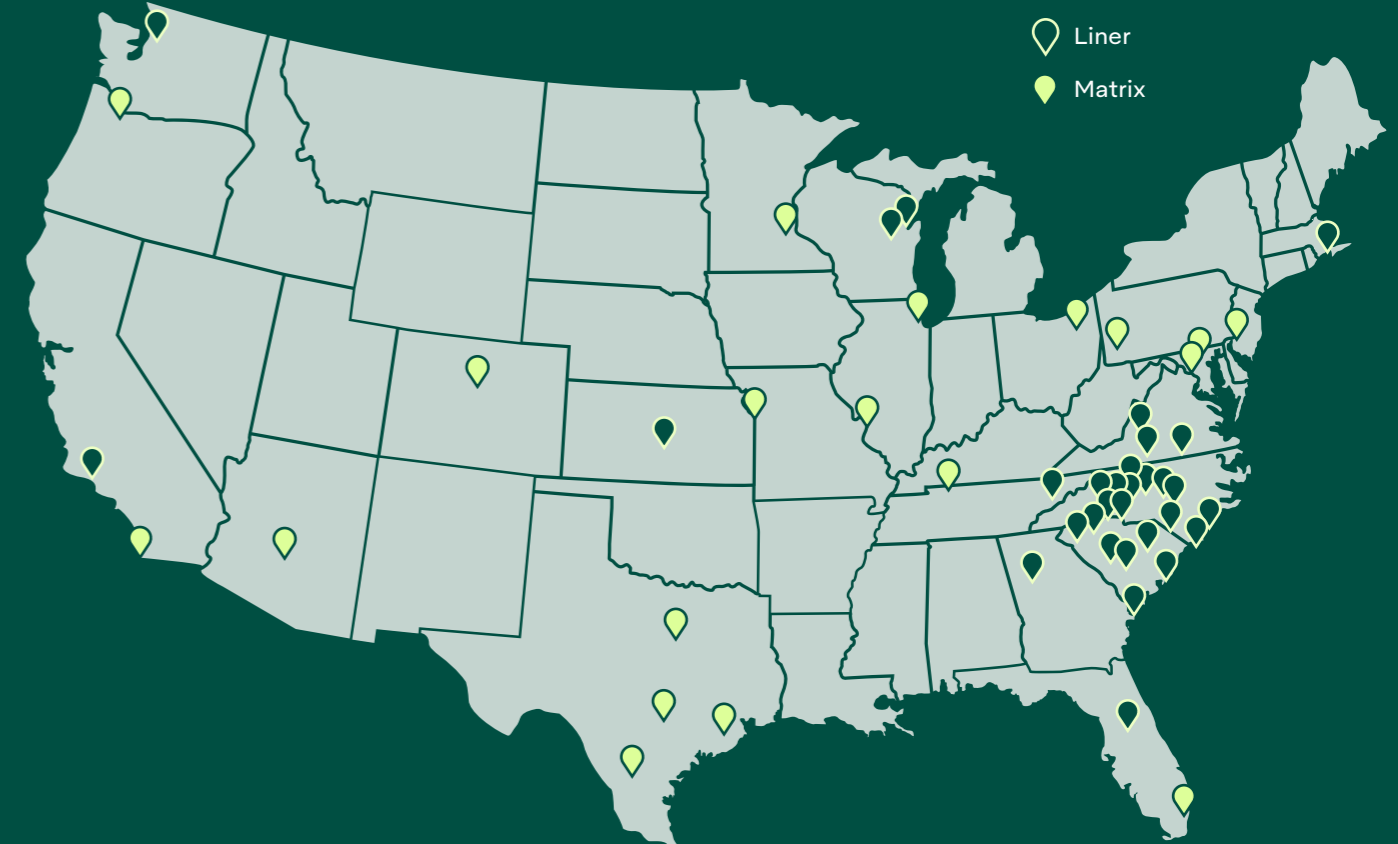


Through AD Circular, we connect you with recycling providers nearby who can evaluate your entire waste stream, focusing on solutions for liner recycling or matrix landfill diversion. They’ll develop a custom and cost-effective approach to all your recycling needs, addressing concerns like limited floor space, material storage, labor capacity, and more. We’ll work with them to track metrics showing how much matrix is being diverted or liner is being recycled, the amount of CO2 emissions avoided as a result, and more.

How it works

- 1 Sign up for AD Circular through the form at label.averydennison.com/adcircular
- 2 Once you’ve completed the form, our team will connect you with the best recycling provider for your needs
- 3 A custom plan will be created for you
- 4 Get started diverting and recycling waste
- 5 Share the AD Circular certificate and the good news on your platforms!

Our providers continue to evaluate locations throughout the US - the below locations have recycling and landfill diversion options nearby



Register for AD Circular now.
 Learn more and sign up online at: label.averydennison.com/adcircular



With sustainability as one of our eight company values, we are dedicated to enabling circularity and improving the environment and industries we serve. To help customers find the right solution that aligns with their sustainability goals, we've designed a new portfolio: Sustainable ADvantage.

Sustainable ADvantage comprises products and solutions that enable companies across global industries to use fewer natural resources, cut carbon emissions, reduce waste, and build toward a low-carbon, circular economy.



Sustainable ADvantage enables our customers to reduce their environmental footprint, satisfy consumer demand, increase recyclability, and respond effectively to government regulations. As a showcase of our mission to build towards regeneration, Sustainable ADvantage enables circularity, improves environmental performance and facilitates transparency across the entire supply chain. Sustainable ADvantage products enable you to do one or more of the following:



Reduction in the use of materials.
Use what is necessary.



Responsibly Sourced.
Forest Stewardship Council certified paper



Enables Recycling, Reuse or Compostability.
What we use can be used again.



Further methods to improve Environmental Impact.



Contains Recycled/Renewable Content.
Give a second life to what we have already used.

Reduction of Materials



Uses only what is necessary
Products in our portfolio made with a reduction in materials are produced with less oil, water, and energy, resulting in a reduced carbon footprint compared to conventional label materials.



Eco portfolio
Our TTC Eco and DT Eco labels are made with FSC-certified facestocks and offer 33% more labels per roll with a thinner construction, decreasing liner waste by 40%.

Also meets criteria for:
↓
R



DT Linerless
Adding efficiency, sustainability and convenience, DT Linerless eliminates liner waste, uses 32% less material and creates 50% more labels per roll.

Labeling with sustainability in mind has different meanings for different companies. From responsible sourcing to enabling end-user and commercial recycling, we have solutions that meet your goals.

Contains Recycled/Renewable Content



Give a second life to what we have already used
Our sustainable labeling solutions leverage the circular economy concept with products made with up to 30% recycled content, which saves resources including water, energy, and greenhouse gases.



rPET Liner
Partially made from post-consumer waste from PET bottle flakes, rPET liner is available in 23 and 30 microns, with PET liner recycling options available.

Also meets criteria for:
↓
R



Recycled wine labels
A range of paper facestocks, with 30% to 100% recycled content, and unique finishes ready to inspire creativity.

Also meets criteria for:
↓
R



rCrush
The rCrush range is produced with 15 percent agri-industrial byproducts and 40% post-consumer recycled paper. Choose from facestock made with organic by-products including grape, citrus, and barley.



100% post-consumer waste paper
We offer FSC®-certified recycled paper facestocks made from 100% post consumer waste.



Hot Melt Adhesives
Our C4500 and C4510 adhesives are friendlier to the environment, using 40% less fossil material during production, while maintaining minimal adhesive bleed. The C4500 has received USDA BioPreferred Certification.

Also meets criteria for:
↓
R



rMDO
A first for the industry, rMDO contains 30% recycled content resin, helping brands reduce reliance on fossil-fuel based films.

Sustainable Labeling Products

Enables Recycling, Reuse or Compostability



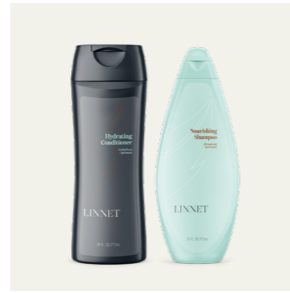
What we use can be used again

Our labeling solutions support compostability and more effective recycling of containers with adhesives that facilitate easy removal in bottle washers without contamination of the washing water.



AD CleanFlake™

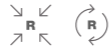
Next generation AD CleanFlake™ adhesive technology is upgraded to enable rigid plastic recycling across our film portfolio — making sustainability the easy choice.



HDPE products

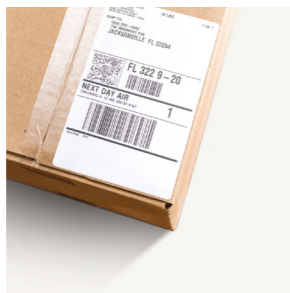
We offer clear and white films that have been recognized to comply with the Association of Plastic Recyclers (APR) Critical Guidance Protocol for HDPE recycling.

Also meets criteria for:



DT BOPP/ Flexible PE

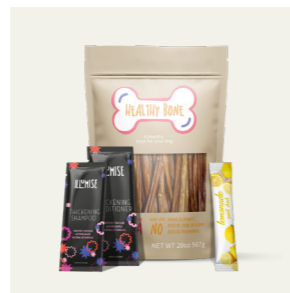
Polypropylene facestocks combined with our all-temp adhesive offers durability and resistance to tearing and environmental factors and have been recognized by the Association of Plastic Recyclers for PE Film recycling.



TrueCut AT2550

Fully repulpable, TrueCut™ AT2550 adhesive technology is a more responsible solution for paper labeling while delivering the same great performance.

Also meets criteria for:



Flexible Packaging

Flexible Packaging Our expanded portfolio of sustainable flexible packaging products allows consumers and value chain partners to be better stewards of the environment.

Also meets criteria for:



Responsibly sourced



Products sourced from a supply chain that shows care for people and the environment

Using existing production methods, our responsibly sourced labeling solutions help brands communicate positive values, reduce dependency on fossil fuels by protecting scarce resources, and reduce the carbon footprint of the label.



FSC®-certified

We offer the industry's widest selection of Forestry Stewardship Council®-certified facestocks. More than 80% of the paper products we purchase are made with wood fiber certified by FSC.

Avery Dennison: Your Partner for Sustainable Labeling Solutions

With an abundance of sustainable labeling solutions and a focus on driving sustainability in the label and packaging industry, we help brands and manufacturers meet their sustainability goals.

Whether you're looking for a sustainable solution for an existing application, or you're looking to reinvent your packaging to be more sustainable, we want to work with you.



Who we are

As the pioneer in the pressure-sensitive industry, we bring one-of-a-kind capabilities to sustainable labeling. We combine decades of innovation with deep knowledge of both regulatory and legal requirements. We know about the real-world conditions in which our labels must perform, and the technical challenges they have to meet. Whatever your product, wherever it is going, we can help you develop a sustainable label that sticks with it.

What we stand for

Sustainability. Innovation. Quality. Service.

In 1935, we invented the first self-adhesive label, and we've never looked back. With each passing decade, our innovations have further shaped our industry by lifting the limits on what labels can do. The world's most successful brands know that innovation and evolution are the lifeblood of longevity and success. We're proud to help our clients continually expand the boundaries of what's possible.

Work with us

You're the expert in your business; we're the expert in labeling. Contact your sales representative today to find out how Avery Dennison can meet and exceed your needs.

label.averydennison.com

01/2023

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