

Select SolutionsTM Magazine

Avery Dennison[®] application-specific portfolios

Sustainability,
continued

More on food and
pharmaceuticals

Intelligent labels in
Asia Pacific and
multiple industries

New and updated
product portfolios



Dear Valued Customer

I hope you're staying safe and healthy. It's absolutely been an unusual and challenging several months.

In addition to the [recent web version](#) of our latest Select Solutions magazine that was introduced to you earlier this year, we're happy to provide this downloadable version for your deeper engagement. We hope you find this to be more convenient for exploring our latest stories, refreshed infographics, and updated product overviews.



In this issue, you will find further information around our sustainability initiatives as we stay transparent about our progress, and as they remain highly relevant today and continue to play a strong part in every aspect of our lives.

Among the various changes we experienced during the COVID-19 pandemic, one consumer behaviour that stood out was the demand for increased accuracy in the tracking and tracing of food and medicine, solutions to ensure the authenticity of critical pharmaceutical and healthcare products, and touchless and contactless technology in the retail industry. Therefore, we're delighted to share more about our Intelligent Labels business and how our service and technology can meet those demands while helping you expand and diversify into high-value growth projects seamlessly.

We expect to stay connected with you especially during these difficult times. More than ever, we're committed to delivering the best products and services to you.

Holmes Ong
Specialty Leader, ASEAN

We would love to hear from you!

How do you find the Select Solutions magazine? Share your experience with us through this short anonymous survey.

[SURVEY LINK](#)

About us

Avery Dennison Label and Packaging Materials offers self-adhesive technology products that can be designed and manufactured for any application.

We combine creative expertise and engineering with best-in-class automation techniques to produce solutions whose beauty and performance help enhance many of the world's most successful brands.

Contents

Features

Select Solutions™ Collection . . . 4

Sustainability

“Let’s Get it Done” –
An Interview with Extrupet . . . 6

Case Study: Lokales Wasser and
Wash-off Technology. . . . 10

Will Carlsberg’s Green Fiber Bottle
Become Reality? 12

Greenprint Product Life Cycle
Assesment Tool. 14

Recyclability in a View 16

Food

Pressure-sensitive Reclosures
Offer Integrated Convenience
and Versatility in One Package. . 20

Food Labeling Solutions. . . . 22

In-Line Labeling 24

Functional Packaging Matters . . 25

Pharmaceutical

Proper Labelling Gives
Prefilled Syringes a
Greater Shot at Success. . . . 26

Intelligent Labels

RFID: A World of Possibilities . . 28

Touchless Retail Experiences –
the New Normal. 32

Avery Dennison WaveSafe™. . . 34

Avery Dennison Intelligent Labels
in Various Industries 36



Product Overviews

Reclosure & Removable

Removable 40

Wet Reclosure 44

Promotion/Retail

Fluorescents and Foils 46

Cover-up Opaque. 48

Frozen Foods 50

Holographic 52

Piggyback 54

Wash-Off. 56

Digital

Digital Labelling. 58

Apparel

Apparel 60

Pharmaceutical

Low Migration 62

Small-diameter 64

Low Temperature 66

Drum

Drum 68

Durables

Tyre. 72

Overlaminates 74

Outdoor Overlaminates 76

Cable 78

Durables Advantage NextGen . . 80

Durable Goods 82

Tamper-evident. 84

Automotive 86

Polyimide Labels 88

Heavy Industrial 90

Air Egress. 92

Durable Goods Labelling. . . . 94

Overview of Compliant
Durable Label Materials 98

Durable Tapes

Core Tape Products 100

General Industries Tape Solutions 108

Automotive Tape Solutions . . . 114

Electronics Tape Solutions . . . 120

Select Solutions™ Collection

Sometimes the most commonly available materials aren't right for an application. That's why we created the Select Solutions Collection. Here, you'll find label solutions for hundreds of kinds of specific applications, options for mixing and matching materials, and a technical team ready to create custom solutions when nothing else will do.

Product Portfolio

Labels for specific products. Labels that do specific jobs. Labels made of specific materials. Whatever your product, whatever your industry, whatever challenging substrate or environment your labels have to contend with, it's likely that our vast and varied Select Solutions Portfolio includes a solution that delivers —and if not, we can create a custom solution that does.

Mix & Match™

Our Mix & Match Portfolio lets you choose from a set range of unconventional label constructions created to address your unique application and performance needs. Select from a variety of unique facestocks, in combination with some of our best-performing adhesives and liners. Benefit from a customized label solution with low minimum order quantities, rapid pricing, and the quality, service, and expertise you expect from Avery Dennison.

Engineered Solutions

Our Engineered Solutions service helps you to develop custom-made labels that differentiate your business and grow your bottom line. If we don't already have a solution for your specific needs, we'd love to work with you to create one. Our Technical Excellence team includes some of the industry's most experienced professionals. They'll explain the latest market developments and trends in innovation, and then use that knowledge as the foundation for developing your unique solution.



Meet the Avery Dennison Technical Excellence Team

When even we don't have a label that fits the bill, our Technical Excellence team can develop custom labels designed specifically for your application.



Holmes Ong

Responsible for Specialty in the ASEAN region, Holmes has 10 years of experience in the digital printing industry. He works closely with sales, technical support, and R&D teams to develop the right products for the market and customer needs.



Neil McArthur

A chemist with more than 30 years of technical experience with Avery Dennison. Neil works closely with the R&D and product divisions, providing the total solution to customers technical/product queries.



Kanokwan Pankhet

As an Assistant Product Manager for Specialty, Kanokwan is responsible for new product development and closely involves in R&D projects. She also works with sales and marketing teams to provide the right product for the market and customers.



Ken Chan

With more than a decade of experience in printing and films/label industries, Ken provides technical support to converters and end users for material qualification as well as process optimization of equipment.



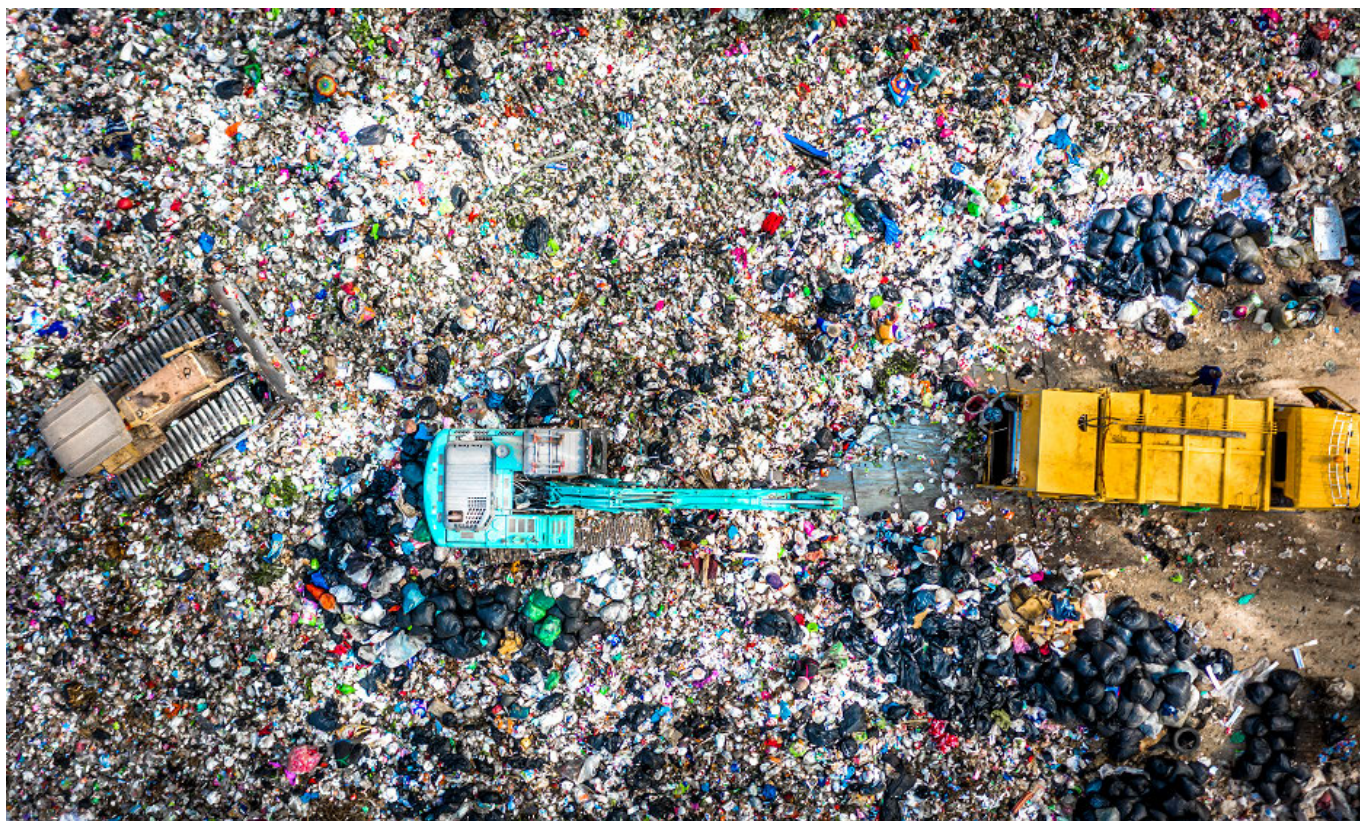
Joleen Lim

With more than 15 years of experience in the pressure sensitive adhesives industry, Joleen is responsible for the Durables products in our South Asia region. Together with the business development, sales, and R&D teams, she develops products that meet industry requirements.



Silvia Tan

As a part of the product management team, Silvia is responsible for the Durables portfolios across ASEAN. She not only manages a wide range of products, but also develops the right solutions for different applications to ensure the overall industry needs are addressed.



An Interview with Extrupet

“Let’s Get it Done”

South Africa’s leading PET bottle recycler says better design is the answer to the plastics crisis—and challenges everyone in the value chain to play their part.

In 2001, when the government of South Africa challenged the local PET industry to launch a national effort to collect and recycle post-consumer PET plastic, a company named Extrupet answered the call. Today, Extrupet is one of the world’s leading PET plastic recyclers, processing 35,000 tons of PET bottles annually at its facilities in Johannesburg and Cape Town.

Chandru Wadhvani has worked with the company since 2001 and has been joint managing director since 2012. In recent years, part of his job has been to convince multinational corporations to make their PET bottles more recyclable. Says Chandru, “I talk with them about how simple this is and how critical their involvement is, and I help them understand the impact of inaction and poor design.”

We recently spoke to Chandru about the state of PET recycling and design, and what brands, packaging designers, and label converters can do to end plastics pollution. This interview has been edited for length and clarity. Chandru’s opinions are his own and do not necessarily represent the views of Avery Dennison.



How does PET bottle recycling work in South Africa?

Bottles are on the whole informally collected by individual collectors. This includes reclaimers taking what households put outside with their bins on bin-collection day, as well as reclamation from landfills. In South Africa, because we're a very water-scarce part of the world, we don't encourage rinsing bottles, because we're going to wash them at our facility anyway.

Once a reclaimer has picked it up, the bottle goes to an intermediary company that collects a variety of recyclables, including paper, cans and glass. They do rudimentary sorting of the PET bottles and bale them. Then our trucks pick up the bales.

At our facilities, the bales are opened up and the bottles go through a washing system. They then go through an automatic sorting machine to remove any non-PET, and undergo a little bit of color sorting if necessary. At the end, we've got a manual system where we remove any problematic bottles that snuck through, even labels that are difficult to get off.

What happens next?

The bottles, with compatible caps and labels, are ground up. They then go into a wash where you separate the ground-up closures and labels from the PET. Then we give what's now PET flake a good washing, to remove any glue residue that's left on. Finally, you're left with what's known as a washed flake.

That washed flake goes on to processes that either pelletize it into a food-grade polymer chip, a resin, or we make a multitude of products from it—polyester fiber, PET strapping, and monofilament, which is used in bristles for brooms and brushes.

Does most of the product you make stay on the African continent, or are you exporting it around the world?

Well over 90 percent is sold in South Africa. And I think that's what saved the local recycling industry. When China closed its doors to most plastics in 2018, many parts of the world, including the U.S. and Europe, suddenly found that they were very good at collecting

PET plastic, but didn't have any local use for the material or any local capacity to process it. In South Africa, our drive for many years was to be self-sustaining. So we didn't feel the ill winds of China's closure like many parts of the world did, and are not experiencing the rPET shortages that some countries are. (Food grade rPET as well as other recycled content such as rPP is increasingly important in driving a circular economy and is being driven by many end users, setting % targets of post consumer waste into primary packaging)

What is the recycling rate in South Africa?

The peak was two years ago, when we hit 68 percent of beverage bottles recycled. We went slightly backwards last year because of some challenges due to power. And, sadly, courtesy of COVID-19, we might go backwards this year as well. But still north of 60 percent of beverage bottles are collected and recycled (Information on the tonnage of produced and recycled PET in SA is provided by an industry body). That in many ways is a world-class standard.

What advice would you give countries that would like to emulate South Africa's success?

Busy! To begin with, we're highly committed to doing our part in promoting a circular economy through If there's one thing I preach, it's design, design, design. Having done this now for 20 years, if there's one thing that's dawned on us, it's how simple it is to fix this conundrum of recycling, whether it's PET or anything else. And it all starts with design. We subscribe to the Ellen MacArthur Foundation's drive for circularity. When I look at the 35 to 40 percent of bottles not collected here, the main reason is poor design. They were either the wrong color, or the labeling choices brand owners had made, which might have been aesthetically beautiful and satisfied marketing needs, were too difficult for recyclers to handle. And even where they could handle them, the materials could not be reprocessed for end-use markets. So many bottles are designed from the start to fail in the recycling spectrum.

I recently read that there's a global initiative, I think between the EU and the Americans, to redefine the word recyclable. For most of our lives, if a product was technically recyclable, you could make the claim and put the symbol on there, which is obviously a marketing advantage. I think the drive now is that if you want to claim recyclability, not only do you have to be technically recyclable, but you have to demonstrate that a certain percentage is actually collected and recycled, given that the infrastructure exists, which in South Africa, it does. Failing which, you have to write on your product that it's non-recyclable. And if you want to kill a product in this day and age, all you have to do is put those two words on it. →

Are there brands that you think are designing PET packaging right?

Coca-Cola could be a good example. They're on a global drive to remove the green colorant from Sprite bottles. They understand that when you add colorant to a PET bottle, even though it is technically recyclable, you limit the end-use markets into which it can go. And if you don't have end-use markets, there's no use collecting the bottles in the first instance. I think they realized that they've got a growing appetite for food-grade rPET. But to get more food-grade rPET of good quality, you need good feedstock, and Coca-Cola influences feedstock availability. So I really like them as a benchmark.

Avery Dennison has developed CleanFlake™ Adhesive Technology, which facilitates PET bottle recycling by enabling clean separation of labels from the bottle. Extrupet is considering endorsing CleanFlake. How do you think CleanFlake could make a difference in PET bottle design in South Africa?

I'm glad to see Avery Dennison innovating this way. I think you're recognizing, like other companies, that consumers are being far more demanding about what's recycling-friendly. I think the pressure of government intervention is also playing a part. If you look at draft legislation in South Africa, which is very much a copy-and-paste of what other countries are doing, products perceived as a nuisance because of design will be subject to punitive taxes.

Honestly, I think Avery Dennison could have started earlier to introduce some of their sustainable solutions to the African continent. But I am incredibly encouraged that they are now engaging the market with CleanFlake. My willingness to endorse it is a function of Avery Dennison being true in launching it. We've indicated that if it's done the right way, we will happily attach our name to the launch.

What, in your view, is the right way?

In a sustainable manner, which is mindful of the price



that's charged. One of the excuses we've often heard from companies was that sustainable solutions were too expensive for Africa. But times have changed. And one way to kill a product is to price it wrong. At a certain price point, sustainability leaves the building. It's like the biodegradable story. It would be wonderful if we could add an additive and snap our fingers and the material would just disappear. But it shouldn't come at a cost that's prohibitive. Otherwise, you're not sustainable. It's got to be also not only the big brand owners that are privy to these solutions—there are smaller brand owners out there as well. So maybe, when Avery Dennison launches CleanFlake here, they could look to subsidize it in some locations, as a sign of belief in their own product and a gesture that they're ready to support the greater good. South Africa might be able to afford it, but Zimbabwe probably couldn't. It would be important to not just launch it in South Africa but to be mindful of the whole continent.



Have you had a chance to work with Cleanflake? From a technical standpoint, do you like how it works? Does it work with your system?

I haven't worked with it yet. But a company like Avery Dennison and the client base it enjoys, lends a lot of comfort to us that CleanFlake will work with our system as well. The technology we employ down here is European-based. We look forward to trying it out.

What would you say to someone who believes that the solution to plastics pollution is not recycling, but banning plastic bottles and packaging outright? Why is recycling the better option? Why are PET bottles necessary?

Do the maths on what the alternatives are. When you consider the global population, which equals global consumption, and multiply it by the packaging and resources it takes from the planet, the substitute for PET bottles, in many instances, do more harm than good. And everything has an end of life, so even if you switch over to glass bottles or cans, you



still have to have a solution for the end of life.

Having said that, I'd be the first guy to call out a brand owner who felt they could rest on their laurels and design PET bottles any way they wanted and think it's going to be recycled.

Tell us about Extrupet's support of bottle collectors, and why you believe those efforts are important. Why do you believe in keeping collectors as part of the process instead of moving toward a more formal, government-managed system like those found in the U.S. and Europe?

With my recycling hat on, I would love nothing more than to have separation at source. Because my yield loss, when I buy a ton of bottles, is close to 35 percent by the time I've got a finished product.

But the reality is that separation at source comes at a huge cost. And when you live in a part of the world where resources are scarce and much-needed for housing, education and healthcare, it becomes hard to argue why governments should spend that money on collecting recyclables.

We've also got a huge unemployment problem in South Africa. Even before COVID-19, our numbers were edging up to 30 percent. We're estimating now we'll cross 50 percent. If you can keep collecting as something done by individuals, you're generating income for segments of society which have been disenfranchised and forgotten. When we estimate the employment numbers on the collection side, it runs into the tens of thousands. If you move to a separation-at-source system, what would they do? And it's not unique to South Africa. You find it in South America, across the African continent, and in Asia.

The audience for this article is mainly made up of label printers and packaging designers. As a recycler, what would you like them to know or do as they design and produce PET packaging?

Just say no. Whether you're the designer or the label producers or the converters making the bottles, be more conscious about the choices you make with the color of the bottle or the removability of the label.

In the past, I would ask myself, 'If I don't make the conscious decision, my competitor will.' And it became a kind of self-serving license to kill. My message to them is, just say no. I think the time and age have come when designers, label producers, bottle producers, and brand owners should be brave enough that when they're confronted with demand for something that is designed to fail, they should have the courage to say, I'm not going to take on that business. So that's my message: Be bold enough to make a stand.

Do you have any suggestions for how label converters can educate themselves about what is truly recyclable and what isn't?

There's a trade organization here in South Africa called PETCO. They've launched their own guidelines on design for recycling. They sponsor traveling workshops. And I think Avery Dennison can play a key role as well. Why not talk more about good design in your product catalog? And maybe Avery Dennison itself one day stands up and says, 'We're discontinuing these ten products, because we know they will never stack up to recyclable design guidelines.' And brand owners must do their bit, too, with their resources and access to key people.

I'm not excluding recyclers, either. We can't just sit back and expect everyone to fix our problems for us. Technology is evolving and it's becoming more accessible. Information is prevalent.

For all of us, gone are the days where anyone can say, 'I didn't know.' You just switch on global news. If you still don't know what's happening out there, you're living in a disconnected world.

Any final thoughts for our readers?

Design, design, design. And a reminder that collaboration is needed from everyone across the value chain. You hear a lot of experts saying we can't recycle out of the plastics mess. I firmly believe we can. Words ring hollow. Action is needed. Let's get it done. ■



Case Study:

Lokales Wasser and Wash-off Technology

Agency: Vollherbstdruck

Client: Lokales Wasser

Material: Fasson® PP 50 Top Clear, Wash-Off adhesive

Market: Europe, Switzerland

Lokales Wasser is a staple on every table in Zurich. The modern Fasson PP 50 Top Clear label with wash-off adhesive is minimalist and clean—so simple it fades into the ambiance of upscale Swiss hotels and restaurants, elevating the entire dining experience.





Stefan Vollherbst, CPO at Vollherbstdruck comments on the groundbreaking nature of the product:

“This is a material with very high clarity, and that clarity is retained after lengthy immersion in water or in humid, chiller cabinet conditions. Adhesive and facestock performance and printability are great, and we were able to achieve a bottle design that looks as if it uses direct print with an almost invisible label material.”

Pure, premium contents deserve a clean, sustainable label application.

The label material for Lokales Wasser emits quality and purity at a glance and enables sustainability. The “no label” design offers a minimalist aesthetic while the clear Wash-Off material provides good adhesive performance without hazing. Removable by a single wash cycle at an eco-friendly 65°C, the label fulfills the brand’s sustainability goals by delivering a bottle that can be rinsed and reused up to 30 times, all while amplifying the Lokales Wasser brand.

Visit my-muse.com or Instagram @m_uselive for more label inspiration. ■



Will Carlsberg's Green Fiber Bottle Become Reality?



Consumers' concern about their environmental impact has grown consistently in the past five years. In response, brands are investigating alternative packaging solutions to reduce their environmental impact. For Carlsberg Group, part of that mission is its Green Fiber Bottle project. The Future Laboratory speaks to Myriam Shingleton, Carlsberg's vice-president of group development, about the progress the brand is making to create a viable paper bottle.



With nine in 10 food and drink retailers declaring in a recent survey by Tetra Pak that climate change is affecting their packaging choices, brands across the industry are seeking alternative materials and sustainable packaging solutions. For the past five years, the Carlsberg Group has been searching for a better bottle. This wouldn't replace its traditional glass bottles, but would offer the similar low-CO2 sustainability credentials of glass and maybe even some additional benefits for consumers, such as being lighter. The experimentation with new packaging for its alcohol products began in 2015, when it announced its Green Fiber Bottle concept – a collaboration with packaging companies EcoXpac, BillerudKorsnäs and post-doctoral researchers from the Technical University of Denmark to develop a beer bottle made from sustainably sourced wood fiber. The first physical prototype of the bottle, produced in 2016, showed what such a bottle might look like, but at the time, the company had still not figured out issues like creating a feasible barrier for containing carbonated drinks.

In October 2019, at the C40 World Mayors Summit in Copenhagen, Carlsberg unveiled its next iteration – a paper bottle that could actually contain beer – which delegates at the conference got to drink out of. This version of the bottle tested two different types of polymers to determine which might offer a better barrier. But the ultimate aim for Carlsberg is to create a bio-based bottle that doesn't use a polymer at all, thereby reducing the company's reliance on fossil-based fuels in its packaging.

In our conversation with Myriam Shingleton, vice-president of group development at Carlsberg Group, we discuss the appeal of a paper bottle and the challenges of bringing it to the mainstream market. For Shingleton, the Green Fiber Bottle initiative is not about replacing all other forms of packaging that the company uses, but rather offers the beginning of a conversation on alternative materials for Carlsberg to invest in in the future.

What were the challenges of creating a bottle out of paper?

We had to take a step-by-step approach in the R&D process toward the vision. In the prototypes, we used two different polymer materials, as there are no technical solutions available now that can ensure that the bottle can contain beer at the strict quality levels we require. The barriers are thinner than that of a normal PET bottle, given that the fiber shell provides structural strength to the bottle, enabling a much smaller barrier. It's a step-by-step approach, but the vision remains to make a fully bio-based and recyclable beer bottle without any polymers. At present, we are evaluating and testing the two prototypes

What is the appeal of creating a paper bottle when we already have glass, an endlessly recyclable alternative?

We have no plans to replace refillable glass bottles. The bio-based paper bottle we are developing is an alternative, which will have a very low total environmental impact when produced at scale, due to the new energy and efficiency focus of the technology used in the production. Since it is a bio-based material, it will have a lower CO₂-impact than the conventional materials used for carbonated drinks.

Many people think that paper coffee cups are eco-friendly, but a lot of them cannot be recycled because of their barrier. How does the 2019 concept bottle address the problem of the barrier?

A significant amount of money has been invested over the past three years to solve this, but it is not only a matter of capital, it is primarily a matter of technology. To date, we have not been able to identify a biodegradable barrier that lives up to the requirements for beer. The two prototypes revealed in 2019 have either a thin rPET film barrier or a thin PEF bio-based film barrier, enabling the bottle to meet the high standards required to contain beer.

We took an important step in 2019 toward creating the world's first paper bottles made from sustainably sourced wood fibers, but innovation takes time, resources and brain power, and we are delighted that three other like-minded companies have now joined us as part of Paboco's Paper Bottle Community. We are taking the next steps with the Coca-Cola Company, Pernod Ricard's Absolut Vodka and L'Oréal. We are now,



together, evaluating and testing the two prototypes. This step is already in progress.

Why would consumers reach for a paper bottle over a glass bottle or an aluminum can?

Consumers should see it as a bio-based packaging alternative alongside our other bottles and cans, combining state-of-the-art impulse drying technology and materials science to enable the production of a strong yet, light fiber-based paper bottle with a very low total environmental impact, including CO₂, when produced at scale.

We have found a real demand for more sustainable and environmentally friendly packaging. If it has the same price as traditional packaging, consumers choose the sustainable alternative. We are basically trying to help our customers to live more sustainable lives by introducing a range of packaging innovations, which will minimize the environmental impact of our beers, while moving quality to an even higher level.

What will it take to bring a paper bottle to the mainstream?

What we have said is that we are on a journey toward doing things better, offering great beer products while reducing their environmental impact. In 2015, the Green Fiber Bottle was just part of that vision, but now we are able to pour beer from a reusable paper bottle and keep the beer fresh. The idea remains to create a fully biodegradable and bio-based bottle, but it will probably take a few years before we are able to pilot test this bottle in our markets. ■

Avery Dennison Product Life Cycle Assessment Tool

Sustainable label choices at your fingertips

Find the right solutions for your labeling needs using Avery Dennison Greenprint™ life cycle assessment

Sustainability results you can measure

Avery Dennison offers our ClearIntent™ sustainability portfolio, each product included in this portfolio has measured improvement in environmental impact. That measurement is quantified through the Avery Dennison Greenprint™ analysis tool, using a product life cycle assessment (LCA) methodology providing greater transparency of your materials' impact—and greater confidence in your decision-making.

Now Avery Dennison Greenprint™ analysis is available for customers to customize their analysis,

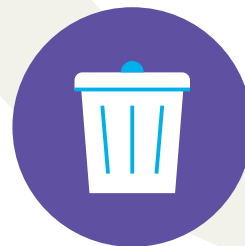
thanks to an interface that lets your Avery Dennison sales representative quantify and compare your materials' environmental impact to produce a summary report for you to use and share.



Fossil material
consumption



Water consumption



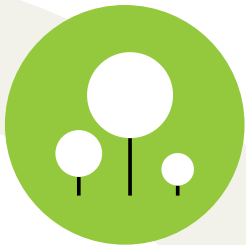
Solid waste generation

Avery Dennison Greenprint™ analysis compares these impacts to those of our standard products, so you can easily visualize potential environmental savings and make decisions about which materials to use.

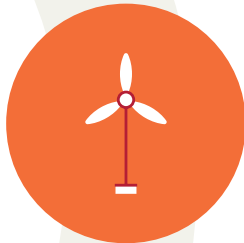
“Sustainable decision making is part of our ethos at Avery Dennison, starting with our R&D teams who build each new product with the environment in mind. Through our ClearIntent™ portfolio and Avery Dennison Greenprint™, we are offering our customers transparency of the environmental impact to inform their choice of labeling materials.”

Renaë Kezar

Senior Director, Global Sustainability, Avery Dennison Label and Graphic Materials



Biobased material consumption



Energy consumption



Greenhouse gas emissions

Six environmental components measured

Using an easy-to-understand graphic display, Avery Dennison Greenprint™ quantifies six important environmental impacts of the materials in our Avery Dennison ClearIntent™ portfolio:

The advantages are easy to see

Avery Dennison Greenprint™ delivers data in a graphic, easy-to-read document that you can share with both internal and external stakeholders. It gives you the information you need to make decisions with confidence, and makes it easier to tell a compelling sustainability story in a way people can quickly understand.

Learn more

Our latest version of the Avery Dennison Greenprint™ tool is just one way we're ready to help converters and brands reach their sustainability goals. Learn more by talking with your Avery Dennison representative, or visit label.averydennison.com. ■

Recyclability in a View

Make the most informed labelling and packaging decision for greater sustainability. Here is an overview of different labelling technologies, the recyclability of various packaging materials, and the global trend in plastic packaging to help you make the right choice.

Avery Dennison ClearIntent™ portfolio contains hundreds of products that help reduce material consumption and landfill waste.

Benefits of PS labels versus other labelling technologies



Pressure Sensitive Labels

- + CleanFlake™ solution enhances the recyclability of PET containers by enabling a clean separation during the recycling process
- + Materials from renewable resources available for facestocks and liners
- + Bio-sourced, compostable, biodegradable materials readily available
- + Liner and matrix recycling programs make it easy for converters and end users to recycle label waste
- Backing liner waste
- No current CleanFlake solution for HDPE or PP
- Standard adhesives may impact label and container separation



Wrap-around

- + No backing liner waste
- + Easiest separation due to small adhesion zone
- Limited material options, lower quality look & feel
- Hotmelt contaminant



Shrink Sleeve

- + No backing liner waste
- + Perforations can be added to provide manual sorting
- + Container lightweighting / recycled content color variation
- 360 coverage impacts optical sorting process
- Traditional PETG and PVC sleeves do not separate through PET recycling process (sink / float)



Wet Glue

- + No backing liner waste
- Limited to paper face - can disintegrate and contaminate recycling wash water
- Not proven through plastic recycling process (only glass)



In-mould

- + No backing liner waste
- + Single polymer plastic makes recycling easier (container and label are PP)
- Limited availability of PP recyclers
- Label cannot be separated from container
- Risk of ink contaminating recycling wash water



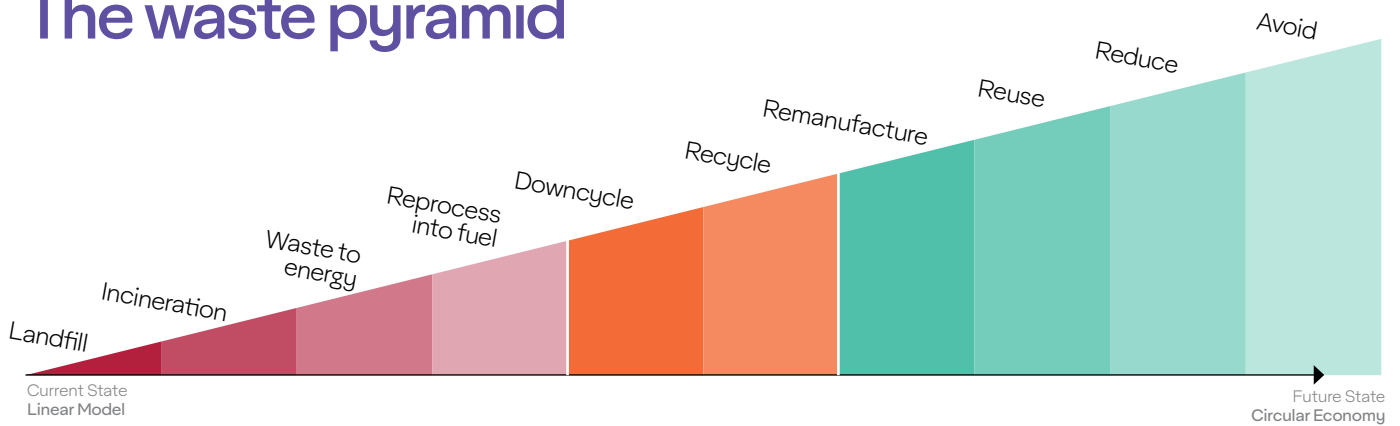
Direct Print

- + Zero label waste
- Inks have a high risk of contaminating recycling wash water
- Typically rejected by recyclers

Ease of recyclability

<p>Easier</p> <p>Harder</p>	<p>Paper & Cardboard Most paper mills are actively sourcing paper to recycle</p>	<ul style="list-style-type: none"> + Easily separated and 100% recyclable 	
	<p>Glass Glass industry recycles bulk of glass into new glass products</p>	<ul style="list-style-type: none"> + Easily separated and 100% recyclable or reusable 	<ul style="list-style-type: none"> - Heavy weight and energy intensive production process
	<p>Metal Cans Many aluminum recyclers accepting and recycling waste</p>	<ul style="list-style-type: none"> + Aluminum is easily separated and 100% recyclable 	<ul style="list-style-type: none"> - Energy intensive production process
	<p>PET Many rPET closed loop food grade recyclers available</p>	<ul style="list-style-type: none"> + Easily separated and recycled into food grade containers 	<ul style="list-style-type: none"> - Some decorations can limit recyclability (shrink sleeves, direct print, PSL)
	<p>HDPE Closed loop food grade HDPE recyclers are emerging</p>	<ul style="list-style-type: none"> + Can be recycled into food grade containers 	<ul style="list-style-type: none"> - Some decorations can limit recyclability (shrink sleeves, direct print, PSL)
	<p>PP Limited to industrial recycling process</p>	<ul style="list-style-type: none"> + Can be recycled into non food products 	<ul style="list-style-type: none"> - Few recyclers available due to commercial viability and lack of demand for rPP
	<p>Flexible Plastics Few recycling options available today</p>	<ul style="list-style-type: none"> + Lightweight/thin 	<ul style="list-style-type: none"> - Hard to separate - Multi-layer substrates impact recyclability

Advancing a circular economy: The waste pyramid



Downcycling

Recycled into lower grade industrial applications.

Example:

Food-grade to industrial grade fibers

Recycling

Recycled into alternate applications.

Example:

Food-grade into non-food-grade packaging

Remanufacturing

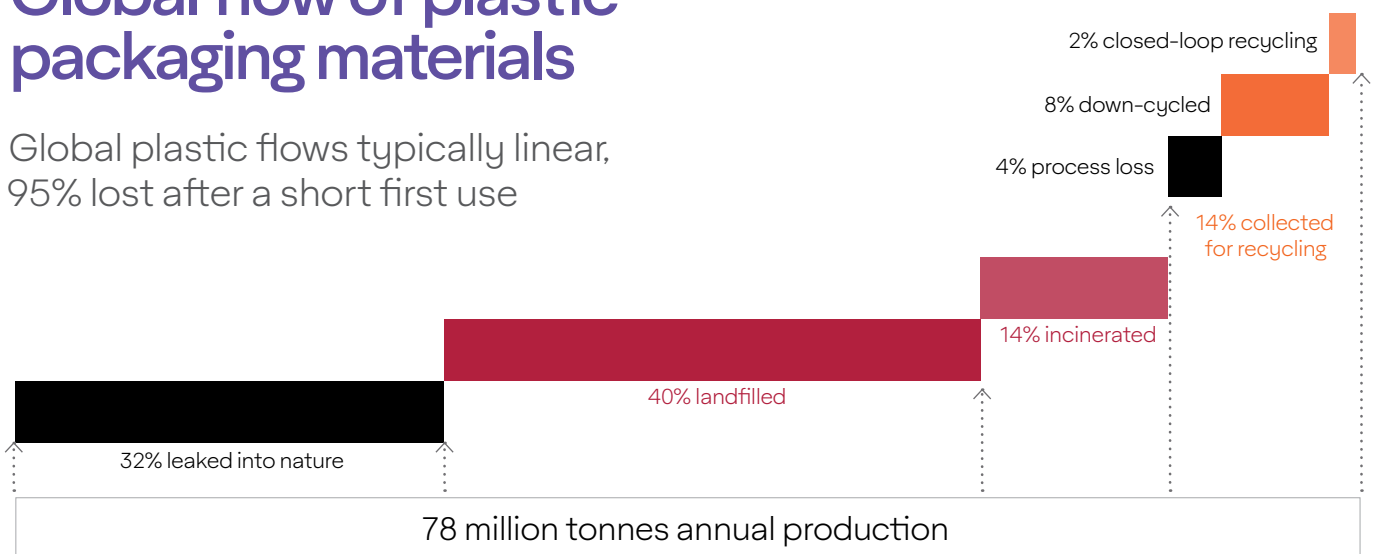
Closed-loop recycling back into same applications.

Example:

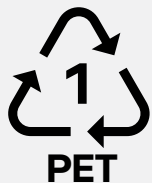
Food-grade into food-grade packaging

Global flow of plastic packaging materials

Global plastic flows typically linear, 95% lost after a short first use



Main plastic types and recycling potential



PET

Bottle to bottle

water & soft drink bottles
salad domes
biscuit trays
salad dressing
peanut butter dressings



HDPE

Bottle to bottle

milk bottles/jugs
freezer bags
dip tubs
shopping bags
ice cream containers
juice bottles
shampoo bottles
chemical & detergent



PVC

Limited options

cosmetic containers
commercial cling wrap



LDPE

Downcycled

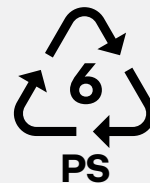
squeeze bottles
cling wrap
shrink wrap
rubbish / trash bags



PP

Downcycled

microwave dishes
ice cream tubs
potato chips bags
dip tubs



PS

Limited options

compact disc cases
water station cups
plastics cutlery
imitation of crystal glassware
video cases



EPS

Limited options

foamed polystyrene hot drink cups
hamburger take-away clamshells
foamed meat trays
protective packaging for fragile items



OTHER

Limited options

water cooler bottles
flexible films
multi-material packaging

Pressure-sensitive Reclosures Offer Integrated Convenience and Versatility in One Package

The pressure-sensitive (PS) reclosure market has changed: Consumers now expect certain products, especially those in the home and personal care and food industries, to include this technology. PS reclosures are especially suited for today's on-the-go consumer, enabling convenient opening, closing and transporting without the worry of spills or messes. In the split second it takes consumers to make a purchasing decision, PS reclosures can put products ahead of their competition.



Branding

PS reclosures not only enhance a package's aesthetics with their smooth, sleek design but also provide enhanced branding opportunities. Typically, once consumers open a package, the product loses much of its branding because the package tears or the consumer removes the product and places it in another container. PS reclosure solutions encourage consumers to keep products in the original packaging, resulting in more frequent interaction with brand graphics. Brand logos and marketing can be printed in high quality on PS reclosures, creating product differentiation at the consumer level both on the shelf and at home. Even if the product package is collapsible, as with most flexible packaging, the branding on the reclosure will remain visible to the consumer.

Versatility

Wet products? Dry products? No problem. PS reclosures can be used for a variety of needs. Typical wet uses include medical, personal hygiene, beauty, industrial and household cleaning wipes. They are also well suited for moist products such as meats, cheese and produce, due to the fact products containing water, scents, oils, fats, solvents and chemicals can touch the adhesives without affecting the strength and functionality of the seal or contaminating the product. Dry uses include food products such as pasta, rice, cookies, crackers and coffee, and even pet food. PS reclosures include various types of seal strength and levels of tack that are durable, efficient and flexible, and for added durability, Avery Dennison can overlaminate materials with transparent polypropylene or polyethylene terephthalate films.

Avery Dennison ADvantage

Avery Dennison can help you select the best products and solutions for your business and your customers. Our Select Solutions™ Reclosure Portfolio offers cost-effective, user-friendly and time-sensitive solutions that fit many brand and marketing goals. In addition, our dedicated reclosure team with technical, adhesive and business development experts are available to provide troubleshooting and employee training, along with our expert knowledge of PS reclosures and the industry's most reliable labels and packaging materials. We also offer opportunities to create unique and custom solutions through our engineered solutions program.



Cost benefits

PS reclosures not only provide freshness and convenience but can also improve a company's bottom line. They:

Use fewer materials.

Compared to a traditional zipper or hard case, PS reclosures eliminate additional rigid materials, replacing them with one low-cost label, decreasing materials costs, reducing package weight and aiding in sustainability efforts.

Speed up the production line.

Zippers and hard cases slow down the manufacturing process because of the additional materials. PS reclosures come precoated with adhesive, so there is no mixing, mess or cleanup. And their minimal changeover time allows companies to run promotional, regional, seasonal and themed campaigns cost-effectively.

Utilize reasonably priced equipment.

The machines that create PS reclosures are easily affordable, and many can apply as many as 1,000 containers per minute. In addition, zipper reclosure applicators can cost between \$10,000 - \$15,000 while PS applicators are approximately \$5,000.

Demand a higher price from consumers.

Consumers are willing to pay more for the benefits PS reclosures provide. In a recent focus group study conducted by MarketVision research we learned that consumers were willing to pay anywhere from 10 percent to 50 percent more for features that ensure a longer storage life, make the package easier to open and use, or make the package more convenient. ■

PS reclosure myths

Myth: *PS reclosures don't keep products as fresh as zippers or hard cases.*

Reality: PS reclosures are designed to be opened and closed many times while maintaining freshness and protecting the product from contamination.

Myth: *PS reclosures are not as durable as zippers or hard cases.*

Reality: By examining the package design and format, Avery Dennison can suggest the appropriate type of PS reclosure for your specific product and packaging needs — multiple adhesive and facstock options are available.

Not everything you've heard about PS reclosures is true.

Myth: *The product will fall out if the package is dropped.*

Reality: PS reclosures protect products from falling out. Consumers often do not reseal zippers or hard cases properly, causing products contained in them to fall out if dropped. PS reclosures are simple and easy to use, making resealing more convenient. Avery Dennison also offers drop testing and analytical testing to ensure a package has the strength and flexibility to withstand dropping.

Food Labeling Solutions



Few labeling applications are as demanding as food packaging. Food labels must perform under all kinds of challenging conditions while also protecting quality, complying with government regulations, and delivering maximum shelf appeal. The hundreds of products in our Food portfolio have been specifically engineered for the challenges of the food industry, delivering outstanding performance from supply chain to shelf and beyond.

The right material for any application.

Get the right materials, whatever the application. Our years of experience in creating labeling solutions for food inform every one of our products, ensuring materials that get the job done – fresh or frozen, direct or indirect food contact, reclosure, sustainable, and irregular packaging shapes.

Delicious shelf appeal.

Our materials give packaging designers a beautiful and functional canvas for expressing a brand's essence and capturing consumers' confidence.

100% compliant.

Our foods team tracks the evolving packaging regulations in countries worldwide, and our products are engineered accordingly. We can recommend the right materials for your application to ensure your labels make the grade.

Less spoilage. Greater sustainability.

What if you could reduce food waste by as much as 20 percent? Our intelligent label solutions give you unprecedented visibility into inventory and enable you to manage expiry automatically.

Key features

- Designed to withstand pasteurization, chilling, freezing, and more
- Engineered for hard and flexible packaging, or for direct contact
- Fully compliant with all regulations governing food packaging
- Improves productivity
- Reduces inventory stock
- Low minimum order quantities

Application areas

- Pasteurized foods
- Frozen foods, including poultry and meat
- Chilled foods
- Flexible packaging and irregularly shaped containers
- Indirect or direct food contact (includes fatty and non-fatty foods)

Food Adhesives

AT20

An emulsion acrylic, permanent adhesive

Good cold temperature performance

Suitable for applications below freezing point, e.g., chilled and frozen foods

C2075

A rubber-based, freezer-grade, permanent adhesive

Excellent cold temperature performance (adheres well on slightly frosted surfaces)

Moderate room temperature performance

Resistant to moisture during thawing

Suitable for a wide variety of packaging materials, in particular, flexible containers

C2076

A rubber-based, high-tack adhesive

Excellent performance at low and chilling temperatures

Excellent adhesion on a wide variety of substrates, including apolar, slightly rough and curved substrates

Not recommended for PVC substrate

C2076C

A rubber-based, high-tack adhesive

Excellent performance at low and chilling temperatures

Not recommended for PVC substrate

C7501

An emulsion acrylic, permanent adhesive

Excellent cold temperature performance

Suitable for applications below freezing point, e.g., chilled and frozen foods

CR701

A water-borne, general-purpose, acrylic-based, removable adhesive

Excellent for removable applications under freezing condition

R1490M

Clear, solvent acrylic-based, removable adhesive

The only FDA-compliant direct food contact adhesive with excellent reclosurability

S2800

An acrylic-based, special-purpose, permanent adhesive for direct food contact

Good room temperature performance and excellent cold temperature performance with consistent die-cutting and stripping properties

S333F

A clear emulsion acrylic, general-purpose, permanent adhesive for food industrial application

High initial tack, ultimate adhesion, and low adhesive ooze

Product information - food labeling adhesives

	AT20	C2075	C2076	C2076C	C7501	CR701	R1490M	S2800	S333F
Facestock type	Film	Film	PE White Film	White PET, PO Film	Film	Film/Paper	Film	Film/Paper	PET
Adhesive type	Acrylic Emulsion	Rubber-based Hotmelt	Rubber-based Hotmelt	Rubber-based Hotmelt	Acrylic Emulsion	Acrylic Emulsion	Acrylic Solvent	Acrylic Emulsion	Acrylic Emulsion
Adhesive position	Perm	Perm	Perm	Perm	Perm	Removable	Reclosure	Perm/Removable	Perm
Initial tack	Medium	High	High	High	Medium	Low	Medium	Medium	Medium
Ultimate adhesion	High	High	High	Medium	High	Low	Medium	Medium	Medium
Min app temp (°C)	-20	-20	-5	-5	-40	0	10	-15	-4
Min service temp (°C)	-50	-50	-30	-40	-50	-20	-40	-50	-40
Max service temp (°C)	90	70	70	70	90	50	121	80	145
Food compliance	Indirect	Indirect	Indirect	Direct	Indirect	Indirect	Direct	Direct	Direct
Substrate Type									
Dry	✓	✓	✓	✓	✓	✓	✓	✓	✓
Moist/wet		✓	✓	✓		✓	✓	✓	✓
Fatty food							✓	✓	
Slightly rough and curved		✓	✓	✓					
Application									
Direct dry food		✓	✓	✓				✓	
Dairy			✓					✓	
Meat & animal products				✓				✓	
Chilled	✓	✓	✓	✓	✓	✓	✓	✓	✓
Frozen	✓	✓			✓			✓	
Removability						✓	✓		
Excellent water resistance		✓	✓	✓			✓		
Microwavable**	✓				✓				✓

For details on food compliance, please reach out to your Avery Dennison sales representative.
 **Lab test on 1200W for 2 minutes. Actual application test is highly recommended for end use.

In-Line Labeling

Not just any label can withstand the rigors of application on a bottling line, particularly with HDPE or LDPE bottles with low surface-energy that have been freshly in-molded and maintain high substrate temperature. Our In-Line Labeling portfolio contains adhesives and facestocks purpose-engineered for hot-filling and other challenges of labeling.

Label with confidence

We designed our high-tack S477A acrylic emulsion adhesive to hold tight at temperatures of 80°C to 90°C, even on low surface-energy materials like HDPE. S477A is made to expand along with containers during hot filling, eliminating pleats, wrinkles, tunnels, bubbles and edge lift.

Facestocks as tough as our adhesives

Choose a facestock that prints beautifully, holds up to in-line dispensing and delivers maximum shelf appeal. We offer many options to choose from, including our GCX, PE75, and polypropylene synthetic paper products.

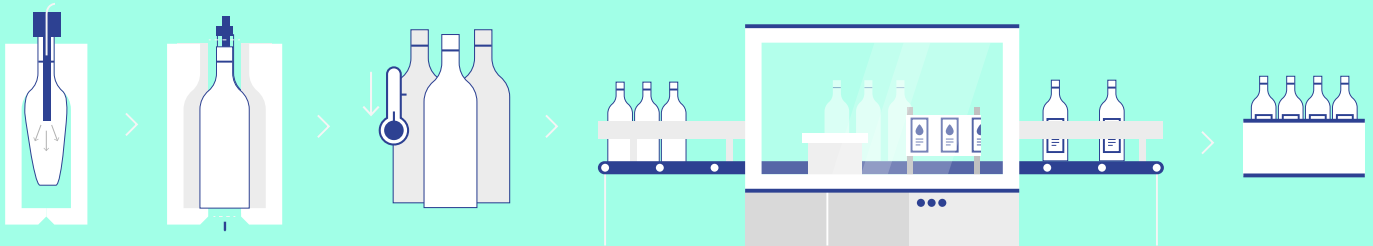
Key features

- Specially engineered for in-line labeling
- High-tack, expandable adhesive for hot-filling on containers with low surface energy
- Won't tunnel, wrinkle, bubble or pleat
- No "edge lift" resulting from poor adhesion
- Backed by legendary Avery Dennison service and technical expertise

Application areas

- Oil and lubricants
- Personal hygiene products, such as baby powder
- Food and beverage products including milk bottles

Rotary labeling - Includes cool-down process



In-line labeling - Eliminates cool-down process



Code	Description	Location	Width	MOQ (m ²)
NEW SY7114	GCX Clear NTC / S477A / BG40Wh Imp	ASEAN	1000	2000
NEW SY7123	PE75 Wh NTC / S477A / BG40 Wh Imp	ASEAN	1525	4575
NEW SY7124	Synthetic Paper / S477A / BG40Wh Imp	ASEAN	1000	2000

*Similar label material to container type (HDPE, PP, etc.) is recommended

Functional Packaging Matters

Shoppers share their perceptions on this fast-growing trend*

Functional packaging is a fast-growing category that is helping brand owners add value to consumers' hurried lifestyles through innovative product packaging solutions, including ease-of-use flexible pouches, stick packs, and pressure-sensitive reclosures.



Protection

43%
of shoppers seek packaging features that offer protection of the products inside ▲

Convenience

45%
of shoppers look for packaging that delivers lifestyle convenience ■

25%
of consumers age 18-34 value packaging that is portioned for snacks or smaller meals ■

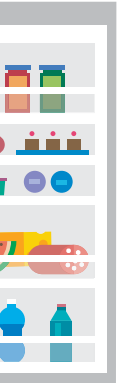
Sustainability

58%
of consumers wanted instructions on the products they purchased, on how to dispose of or recycle the packaging ▲



Storability

44%
of consumers stated ease of storage as a desired packaging feature ▲



Ease of use

58%
of consumers sought packaging features with the ability to reseal and close ▲



Freshness

68%
of consumers identified freshness as a key packaging feature ▲

82%
of consumers felt freshness was an important factor when food shopping ■

Flexibility

22%
of consumers appreciate packaging features that offer portability ▲

18%
of shoppers age 18-34 express a desire for packaging to provide food that can be eaten on-the-go ■

70%
of consumers remove food products, like produce, meat and cheese from store packaging after purchase ▲

▲ Avery Dennison omnibus study
■ Lightspeed/Mintel study

* Avery Dennison 2018 Omnibus and Consumer Focus Group Research Studies, in conjunction with MarketVision
© 2017 Mintel Group Ltd. All rights reserved. Used with permission.

Proper Labelling Gives Prefilled Syringes a Greater Shot at Success

Choosing the right materials is key for compliance, safety, efficient production, and more.

Medications delivered in pre-filled syringes represent a substantial leap in the safety and accessibility of pharmaceuticals. They're also one of the fastest-growing facets of the healthcare market. In 2018, global market revenue reached €4.4 billion, and is expected to hit €9.2 billion by 2025. According to Pharma Network Magazine, 26 percent of drugs approved in Europe between January and September of last year were delivered in an injectable device.

The spike in sales makes sense. Providing medications in prefilled, self-injectable packages improves speed of use, decreases the risk of dosing errors and drug contamination, reduces waste, and makes life easier for the growing number of people with diseases like diabetes, who administer their own medication. The emergence of biological medicines, which are especially sensitive to contamination and significantly more expensive to waste, is also driving the rise in prefilled syringes.

Choosing the right label materials for a pre-filled syringe is an important design decision. The label does more than just convey critical information. With the right materials, it can also help protect patient safety, improve speed and efficiency on the production line, and ensure regulatory compliance. At Avery Dennison, our years of experience working closely with the pharmaceutical industry has given us a front-row seat for viewing the emergence of prefilled syringes and for helping our customers (and their customers) navigate the challenges that inevitably arise. Based on what we've learned, here are five



By Jos van Noort, Principal Scientist, Global Pharmaceutical Applications, Avery Dennison

questions any pharmaceutical company, label converter, or packaging designer should ask when choosing label materials for a prefilled syringe:

Just as the right materials can improve the safety, compliance, and production of a prefilled syringe, the right partner can help you navigate the growing global pharmaceutical market and shifting regulatory landscape.

What is the syringe made of?

When you're labeling a prefilled syringe, not just any label will do. Your label must be optimized for the syringe material itself, and for the wear and tear prefilled syringes undergo during shipment and use. Most syringes are still made of coated glass, which has high surface energy, so the label's mandrel hold tends to be better. On the other hand, the increasing numbers of syringes made of COP or COC plastic might require labels with higher initial tack and with higher adhesion properties.

Will they be safe for patients and compliant with regulations?

Anyone in the pharmaceutical industry knows that going to market means meeting a crazy-quilt of safety regulations that vary by country. Be sure your label materials are properly tested and certified so that they can meet the standards for safety in every country where you sell your products. Extractables and leachables testing is especially important, to ensure that label materials don't migrate through the container and into the medication inside. Meeting standards for



cytotoxicity (ISO 10993-5 norm) is also important for prefilled syringes that are considered medical devices.

What is the temperature across the supply chain?

Supply chains have gotten more complex as medicines have become more advanced. Consider the varied temperature and humidity that the syringe will experience as it moves through the supply chain and into use. Prefilled syringes can be exposed to extremely high temperatures and humidity during autoclave sterilisation, for example, or to low temperatures when the finished product is stored or transported.

Will they support the labeling system on a high speed packaging line?

Label materials intended for use on high-speed packaging lines—those faster than 150 pieces per minute—must be robust and have high initial tack.

On these lines, labels are released from the liner and onto the substrate at very high speeds, with an application time of less than a quarter of a second. It is critical that the label material's adhesive has a high enough initial tack to facilitate good pick-up of the label from the liner to the syringe. What's more, the label carrier must be strong enough not to break during dispensing.

Additionally, when using UV detection systems to confirm the label presence, the label has to be luminescent. Label materials with luminescent topcoat are a good solution, thanks to the stability and durability of the luminescence they provide.

Are the label materials made nearby?

Producing prefilled syringes on multiple continents, as most drug manufacturers now do, makes it easier to meet growing global demand. But ensuring standardisation and consistent quality across all those locations can be difficult. At Avery Dennison, we're a global company with standardized products available worldwide, enabling us to serve global customers on a local level.

Just as the right materials can improve the safety, compliance, and production of a prefilled syringe, the right partner can help you navigate the growing global pharmaceutical market and shifting regulatory landscape. Labels that met essential criteria in the recent past might already be obsolete. You'll also want to be sure your materials have been thoroughly tested in real-world conditions and also vetted against regulations in multiple countries.

At Avery Dennison, our technical consultants around the globe can help you determine your label's performance criteria and guide you to materials that will not only meet them, but also help you better capture the substantial opportunities that the rise of prefilled syringes is creating—not just today, but also as the market (and your operations) continue to evolve. ■

[See our solutions for pharmaceutical labels here](#)



RFID: A World of Possibilities

Our commercial lead for Asia Pacific explains RFID labels—and how converters can leverage them to diversify their business into higher value-growth projects.

As director of sales and market development for Intelligent Labels in Avery Dennison's APAC region, Marcel Coté oversees teams in multiple countries across several continents. One thing those countries have in common is increasing the number of companies actively adopting and integrating RFID to transform their businesses. We asked him to share his insights about the rise of RFID and the unprecedented opportunities it offers for converters and end-users alike.

Some of our readers might not be familiar with labels enabled with radio frequency identification (RFID). Can you describe what they are?

Simply put, it's a pressure-sensitive label or non-adhesive tag with an RFID inlay attached behind it, which we call an Intelligent Label—comprising a tiny microchip which holds data, a very thin aluminum antenna which transmits and receives radio signals, and a carrier material, typically paper or PET, which holds it all together.

RFID facilitates the wireless transfer of data enabling a label to extend any physical product to the digital world. Tagging an item with an RFID label creates the item's digital twin, with its very own unique ID, visible across the supply chain and inventory management systems. RFID

improves on barcodes and QR codes in important ways, not least of which is that the amount of data that can be stored and protected in an RFID label far exceeds the limits of a printed code, which opens up a world of possibilities.

Can you say more about those possibilities?

By giving each item a unique digital identity, Intelligent Labels provide a multitude of benefits, particularly in managing inventory and tracking and tracing items across logistics and supply chains.

First, they offer a much higher level of visibility and accuracy throughout the supply chain—from the original raw material source locations through to the real time in-store location—letting you see any tagged item, wherever it is across the globe, whenever you want to. Intelligent Labels also eliminate the need for direct line-of-sight barcode scanning. A box of 100 items with Intelligent Labels can instantly be identified with an RFID reader without the need to even open the box. You can imagine the speed, efficiency, and accuracy made possible compared to traditional barcode labels, which require every box to be opened and every item to be individually scanned.

For retailers, Intelligent Labels offer much faster stock checks—12 times faster, or more, compared to barcodes.



They improve inventory management accuracy to 99.9 percent, versus 70 or 80 percent available with barcodes and their margin for human error. Intelligent Labels also allow for real-time stock-checking and replenishment. They can prevent counterfeit products from entering legitimate distribution channels, and they help reduce the risk of products being diverted into grey markets. Intelligent Labels also make product recalls faster, more precise, and less wasteful by allowing only affected products to be removed from shelves.

These are all compelling benefits for companies. What about for consumers? Do Intelligent Labels provide any benefits directly to them?

Very much so, and more companies are starting to realize this and explore the benefits. With Intelligent Labels that enable near-field communication, or NFC, consumers can tap their smart phone on a label and instantly connect to all kinds of digital information, from details on a product's provenance to promotional offers and loyalty programs.

NFC can also provide added authentication features and can be used together with other Avery Dennison label solutions, such as Void labels and Blockchain, to enable consumers to check if the products they purchase are authentic and have not been opened or tampered with throughout the supply chain. Compared to QR and 2D codes, NFC is a much more robust solution in many ways: It cannot be easily copied or printed, each NFC chip has a unique identity that is burnt into it during manufacturing as it is typically hidden behind the label and does not use valuable branding real estate, data can actually be encrypted on the NFC label with password protection, and it allows consumers to verify authenticity of products while limiting the amount of unauthorized access.



You oversee a large territory that includes ASEAN, Australia and New Zealand, India, Japan, and Korea. What does RFID adoption look like in the region, and what are some of the trends you see?

We're seeing the fastest adoption across segments that face supply chain and inventory-management challenges and are especially active in retail, healthcare, logistics and automotive. As just one example in healthcare, we collaborated with one of our system integrator partners in Thailand to label surgical supplies for use in RFID-enabled smart cabinets. The cabinet reads the RFID-labeled items and instantly informs the hospital and the supplier of the stock levels through the cloud, while automatically triggering replenishment.

Although RFID technology has been around for decades and Avery Dennison has been leading the industry for over 15 years, brand owner adoption is just starting to ramp up in APAC. With the recent acquisition of Smartrac, Avery Dennison is best positioned to support our customers on their RFID journey with the broadest and highest quality product portfolio in the industry, largest manufacturing footprint and capacity, combined with the most knowledgeable team of experts. It's truly an exciting time for the RFID industry as we see adoption expand and accelerate from the global retail apparel brands to many other industries across the region.

How are COVID-19 and the sudden need for touchless systems affecting demand for Intelligent Labels?

The pandemic will only accelerate the demand for RFID in retail as stores move to self-service ordering, self-checkout, and grab-and-go technology. RFID labelled items enable many contactless opportunities for retailers including self checkout where you don't even need to remove items from your shopping bag. Try visiting a local Decathlon store to see how RFID enabled items effectively prevent long checkout queues and physical interactions with staff.

Aside from retail, we're also involved in applications in which RFID tags are helping to ensure authenticity of COVID-19 test kits. There's also an interesting →

application in the hospitality industry in Australia. It's called SafeWash. An RFID-enabled badge works in combination with a reader at hand-washing stations to measure the duration of staff hand-washing, to help businesses maintain hygiene standards. All in all, we see RFID as an important enabler as the world adapts to life with COVID-19.



Consumers and regulators are increasingly demanding sustainable packaging. How do RFID-enabled labels fit the bill?

In terms of product design, we've taken many steps to reduce the environmental impact of our RFID inlays. We've dramatically reduced their carbon footprint relative to competing products. Also, inlays with our SmartFace™ top laminate use paper instead of PET. And all of our inlays with paper constructions use paper certified by the Forest Stewardship Council—in fact, we developed the industry's first FSC-certified tag. We've also developed a proprietary "strap attach" process that enables us to use 70 percent less plastic, and our antenna production process enables 100 percent recycling of waste aluminum.

In terms of how our products advance sustainability in the products and systems they're part of, there are many compelling benefits. At the top of the list is the fact that they help reduce waste, energy use, and transportation by optimizing inventories. One great example is food waste—It is proven that RFID tags can cut it by up to 20 percent which is a significant sustainability benefit given

the linkage to global issues surrounding food shortages and climate change.

RFID also provides more detailed data to inform less resource-intensive processes and product design. By providing greater visibility into supply chains, RFID labels can improve companies' environmental audits of suppliers and help drive more environmentally friendly practices. They can also promote recycling and reuse by letting consumers connect to more detailed and up-to-date guidance.

What about the recyclability of the inlays themselves?

Our inlays contain fully recyclable paper, aluminium, and PET, as well as a small non-recyclable chip about the size of a pen tip. Some recycling processes are able to extract these recyclable components. According to sources, we estimate that by 2025, global RFID chip usage will contribute roughly to only a cubic meter of waste annually to the worldwide waste stream, which can be considered insignificant. In addition, RFID tags represent a very small percentage of the overall packaging, and in most cases are automatically extracted during the packaging recycling process. We're not going to stop looking for ways to make our inlays 100 percent recyclable – that's the ultimate goal – but we see compelling sustainability benefits being realized by businesses adopting RFID.

RFID adoption in APAC is still in its early days. How is Avery Dennison helping converters explore and implement the technology?

We're passionate about our customers' success. We're working with converters throughout the region to help them first understand RFID and how it works, and then support them as they identify new growth focus areas. We connect them with hardware providers who can provide the necessary equipment for inserting and testing RFID-enabled labels on a converting line, and we continue collaborating with them once they've added RFID capabilities, to help them optimize their converting process and make sure they maximise the performance of our products.

Last year, we built two I.Labs in the APAC region, one in Pune, India and another in Kunshan, China, in addition to Europe, the US, and Brazil. These sites are set up to fully simulate real-world RFID applications from supply chain and inventory management to retail, self checkout and consumer engagement demonstrations. We located them at our existing converter training facilities to help customers gain a deeper understanding of the RFID technology, how to integrate it into their converting processes and to experience hands-on demonstrations

of how the technology works. Our I.Labs are available for our customers to test and conduct trials to prove the benefits to their customers to drive adoption.

Overall, we're helping customers identify and develop RFID opportunities so they can diversify their business and tap this new, high-growth, high-value market.



Adding RFID capabilities to a converting line requires a bit of investment. Is there any way converters can see if Intelligent Labels are right for them, without risking an immediate cash outlay?

Absolutely. We understand there is an initial investment involved for converters to integrate RFID inlays into their label converting process. That's why we also offer our customers blank, ready-to-sell RFID labels to help them quickly learn and easily enter the market and establish new high-value growth projects while developing their RFID business to help offset future RFID converting investments.

What's the one thing a converter or end-user should know before diving into RFID?

Consistent, dependable inlay quality is essential. It makes all the difference in whether your RFID application fully delivers a ROI and achieves the anticipated long-term integration benefits. For example, we know that a misaligned chip attachment can cause tags to malfunction, weak chip adhesion can cause the chip to separate during the label converting process, and poor inlay durability can lead to damage during the conversion process. We've seen many problems occur because the quality was overlooked by brand owners. We've even observed cases of RFID programs being discontinued after 12 months because of inconsistent performance results due to low quality RFID inlays used across the supply chain.

It's critical to ask: Does your RFID inlay supplier test 100 percent of its products? Are their inlays independently tested and certified to meet industry standards?

There are a lot of RFID inlay suppliers who don't meet these standards, and the result is poor performance, often which undermines investment, with tagging that doesn't deliver the promised ROI.

At Avery Dennison, we test every single inlay—100 percent of them. We are the only company globally to hold the highly respected Auburn University Quality Certification for manufacturing. A successful RFID deployment starts with the quality of your tag. If you compromise there, you've set yourself up for failure. And we want our customers to succeed. ■

Read more about Avery Dennison's RFID solutions available in the Asia Pacific region and globally



Touchless Retail Experiences – The New Normal

By Francisco Melo, vice president and general manager, Global Intelligent Labels, Avery Dennison Corporation

Like any crisis, the COVID-19 pandemic is a catalyst for change. While we have seen traditional stores suffering from lock-down situations, e-commerce is thriving for primarily store-based retailers as it is for their online competitors. Yet COVID-19 doesn't only add to shuffling the deck between retail channels – it will contribute to a fundamental shift in consumer behavior. For Francisco Melo, vice president and general manager, Global Intelligent Labels, Avery Dennison, it's clear that retail as we know it will need to further innovate and 'touchless' retail concepts will help brick and mortar stores not only defend their territory but to shape the future of retail.

Food and other daily-use products are and will continue to be a stronghold for brick and mortar stores, and so are items that consumers like to treat themselves to such as beauty and apparel products. However, faced with a global pandemic reality, consumers might acquire a more 'distanced' attitude towards traditional, personal store-floor interactions. They are likely to be more hygiene conscious than ever before, with concerns about what products and materials have been exposed to the COVID-19 virus or other germs.

Hygiene awareness increasing? Touchless is the answer!

Increased demand, product shortages, minimal time to stocktake and the added need for social distancing have really put the pressure on grocery stores and retailers alike worldwide. Coupled with the issue of contamination and reducing the amount of 'hands' touching products is raising alarm bells for what the 'new normal' retail concept will look like. There is also a shift in consumer expectation for stores to provide solutions for unmanned stores, no-touch deliveries and 'scan and go' cashless self-checkout – introducing a new concept of truly 'touchless retail'. Within that concept, technology is changing the retail game, not just for technology's sake, but for everyone's sake.

Esselunga leads the way to tomorrow's touchless retail experiences...

Being one of the largest and certainly most innovative grocery retailers in Italy, Esselunga has made extensive use of RFID technology within its newly opened Milan store. Originally established to provide a new type of retail experience, La Esse store was conceived as a technology showcase, where all products are tagged with RFID and customers can check out directly from their mobiles. Eliminating social contact between employees and customers, the store opened in December 2019 and continues to serve the public during the outbreak with very positive feedback.

...while Mishipay provides contactless payment to match

In Esselunga's store as well as in similar locations around the globe, retailers are facing the need to innovate cashless and contactless payment solutions as part of their future-oriented frictionless shopping concepts. Another remarkable solution comes from Mishipay, a London-based tech company, and a partner of ours, that has built a mobile 'scan and go' self-checkout technology that facilitates immediate and contactless purchasing and potentially puts an end to queuing to pay. It's no secret that food, fashion and beauty stores



What's exciting is that 'touchless technology' does not have to impair the overall retail experience – it could in fact enhance it whilst ensuring that social distancing rules are adhered to.

are often prone to queuing, which ultimately leads to a higher chance of transmission. Scan and Go offers an alternative by providing customers their own means to scan specific barcode or QR code labels and pay for their items from anywhere in the store, leveraging the power of their mobile phone. Coupled with the unique ID and 'digital twin' of an RFID tag, the retailer also reaps the benefits of complete item-level visibility and Electronic Anti-Theft Systems (EAS) to minimize losses.

Touchless yet enticing

What's exciting is that 'touchless technology' does not have to impair the overall retail experience – it could in fact enhance it whilst ensuring that social distancing rules are adhered to. Imagine a retail experience where you can always find what you are looking for, where and when you want it and have the opportunity to interact digitally to receive personalised content, checkout through your mobile and even virtually try on clothes. With hygiene conscious consumers, retailers will be pushed to 'think outside the box' and offer new ways to interact with products. Take beauty products for example – imagine if instead of applying the tester lipstick in-store before you make the purchase you could simply look into an augmented reality mirror and

see the color digitally applied on your lips in real time? RFID based solutions create the foundation that can enable this and more.

The future belongs to connected products...

If all of our products became enabled with a digital trigger such as QR code or NFC then it opens up the opportunity for the product to become a 1:1 connection between the brand and the consumer – where our smartphones become the portal to a digital world of unique experiences. We could get access to information on the products provenance, additional product suggestions and rewards – we could even reorder a new one when it has reached its end of life, without having to leave our homes!

...and touchless retail concepts

Even if the increasing demand for – in the full sense of the word – touchless retail experiences is currently driven by the COVID-19 pandemic, there is every indication that highly automated stores with self-service ordering, self-checkout, and grab-and-go technology will establish themselves in the retail landscape of the future. ■

**The End of Queues?
How Technology Offers a Road
Map for Retailers to Overcome
the New COVID-19 Era**

READ

**Enabling Safer Supply
Chains with Touchless
Technologies**

READ

**Why Touchless
Technologies Add a
Touch of Strength to
Healthcare**

READ

Avery Dennison WaveSafe™

Capturing the benefits of RFID while keeping consumers safe

Sodexo is capturing the benefits of RFID while keeping consumers safe by using Avery Dennison WaveSafe™ tags to reduce the spark hazards from RFID-labeled microwavable meals.

SmartChef Powered by SmartFridge

Based in Paris, Sodexo is one of the largest multinational corporations providing food services and facilities management services. In October 2018, Sodexo piloted SmartChef™, a grab-to-go food concept powered by SmartFridge™, to provide convenient, all-day food access. Invented by CryoWerx, a Singapore-based engineering and technology company, SmartFridge is a fully-automated self-service vending machine that provides ready-to-eat options including hot entrees, healthy snacks, and beverages. It is also RFID-enabled, providing a cashless experience.

Each item in a SmartFridge is tagged with an RFID inlay. Through the SmartChef app, consumers simply scan the machine's unique QR code to unlock the fridge and take what they want. As soon as the door closes, SmartFridge reads the remaining items to identify the consumer's selections, which are then automatically billed to their preferred payment mode. This system is not only convenient to the users; It also helps clients lower labor costs, reduce food waste, and better manage their inventory. Precise tracking and tracing enable operators to efficiently replenish and manage the machines, while promotions can be digitally displayed on the face of the fridge to offer discounts on items near expiration.





“A few months after conceptualizing SmartChef, we were introduced to WaveSafe™ which was a great fit for our needs.”

- Darwin Gosal, CEO at CryoWerx

The Challenge

As microwaving standard aluminum components could potentially cause sparking or even create a noticeable flame, consumers are instructed to remove the RFID tags from the food items before microwaving them—a requirement that is critical to consumer safety, but at the same time something that can easily be overlooked. The team had run into a challenge: How could it benefit from a combined technology of RFID and SmartFridge while ensuring consumer safety?

The Solution

WaveSafe™ is the first microwave-safe UHF RFID solution developed by Avery Dennison in 2017 and introduced to the market in 2019, for item-level tagging of frozen packaged foods while ensuring food safety compliance. WaveSafe™ is designed to prevent arcing or heat build-up during microwaving while still delivering highly accurate read rates for item tracking.

“Safety is such a big issue and we take consumer health to heart,” says Darwin Gosal, CEO at CryoWerx. “A few

months after conceptualizing SmartChef, we were introduced to WaveSafe™ which was a great fit for our needs. Our sole focus now is expanding and accelerating the use of SmartFridge globally, which is extremely exciting.”

Consumer Safety Guaranteed

Initially launched at Sodexo Asia Pacific House, SmartFridge has proven to be a success. With Avery Dennison's WaveSafe™, Sodexo's operations are now streamlined and consumer safety is guaranteed. Using WaveSafe™ tags has helped Sodexo to keep SmartFridge users safer by reducing the spark hazards associated with RFID tags on microwavable packages. The company has also been able to simplify their operations, since there is no longer a need to provide warnings about the possible fire risk on food packaging or the pantry's microwave.

To learn more about how WaveSafe™ and other Avery Dennison RFID solutions can help your business, visit rfid.averydennison.com or email rfid.info@averydennison.com ■



Avery Dennison Intelligent Labels in Various Industries



Food and Beverage

- 20% reduction in date expired food waste*
- 50% reduction in labor costs*
- Greater availability = higher sales
- Improved utilization of returnable trays
- High-speed retail checkout (up to 15 times faster)*

QUICK GUIDE



Pharmaceuticals

Inventory accuracy

- Faster stock checks
- Eliminates manual paperwork.
- Easy to identify near expiration medication
- Reduces processing time

Reduced medical errors

- Eliminates human error
- Ensures all medication is correct and safe to use

QUICK GUIDE



Supply Chain

- Reduced packing errors
- Highlights & reduces errors upon delivery
- More accurate and advanced shipping notifications
- No line of sight required to read item information
- Long read range (up to 10 meters)

QUICK GUIDE



Inventory Management

- 99% inventory accuracy*
- 10 times faster* stock counts = lower labor costs
- Increased inventory visibility
- Long read range (up to 10 meters)
- No line of sight required to read item information
- Reduced 'out of stock' = increased sales

QUICK GUIDE



Aviation

- Mishandling rates reduced by 13%*
- Ramp loading time cut by 4 minutes per aircraft turn*
- Baggage Handling System throughput increases up to 18%*
- Read rates are 99.5% or better, which is 8 - 10% more than current barcode levels
- Enhanced services for passengers such as real-time baggage tracking

QUICK GUIDE



Retail Apparel

Inventory accuracy

- Up to 92% faster* stock counts vs barcode
- Up to 80% reduction* in 'out of stock'

Loss Prevention

- Improved stock visibility
- Increased internal control

Logistics

- Increased delivery accuracy
- Faster processing speed

Customer experience

- 4-10%* sales increase
- Improved returns process
- Interactive communications
- Fast automated self checkout

QUICK GUIDE

Why Avery Dennison RFID?

Broadest product range for any RFID challenge

- Global manufacturing footprint with one of the largest product ranges
- Customized inlay and label products
- Sustainable paper-based SmartFace®

Most reliable and durable products ensuring consistent quality and performance

- Proprietary chip strap attach for most durable RFID tags (chip protection through life cycle)
- 100% Quality control ensures 99%+ functioning tags on roll to achieve maximum ROI
- Minimal number of malfunctioning tags even after conversion
- Less machine down time and wastage (label converting and application)

Valued services that help grow your business

- Low MOQs (from 1 roll)
- Free sampling service
- Shipping of stock items within 24 hours
- Fast response from local RFID tech/sales team
- Quick product qualification & POC support

Global network to expand your knowledge and capability

- New business opportunities from dedicated Business Development Managers and SMEs
- RFID training academies and workshops at our I.Lab centers
- Connect with local/global commercial partners

Avery Dennison Select Solutions™ Product Overviews



We would love to hear from you!

How do you find the Select Solutions magazine? Share your experience with us through this short anonymous survey.

[SURVEY LINK](#)

Reclosure & Removable

Removable	40
Wet Reclosure	44

Promotion/Retail

Fluorescents and Foils	46
Cover-up Opaque	48
Frozen Foods	50
Holographic	52
Piggyback	54
Wash-Off.	56

Digital

Digital Labelling.	58
----------------------------	----

Apparel

Apparel	60
-------------------	----

Pharmaceutical

Low Migration	62
Small-diameter	64
Low Temperature	66

Drum

Drum	68
----------------	----

Durables

Tyre.	72
Overlaminates	74
Outdoor Overlaminates	76
Cable	78
Durables Advantage NextGen	80
Durable Goods	82
Tamper-evident.	84
Automotive	86
Polyimide Labels	88
Heavy Industrial.	90
Air Egress.	92
Durable Goods Labelling.	94
Overview of Compliant Durable Label Materials	98

Durable Tapes

Core Tape Products	100
General Industries Tape Solutions.	108
Automotive Tape Solutions	114
Electronics Tape Solutions	120

Removable



Avery Dennison offers the most comprehensive portfolio of peelable solutions in the market. It includes general, special, ultra-repositionable and water-removable adhesives for a broad range of substrates. Full technical support is available when choosing the right peelable labelling material – and especially the best adhesive. Avery Dennison will help you consider many key factors around label performance and ultimate removability.

Key features

- A broad range of specialist removable adhesives and constructions
- Suits a wide variety of substrates from rough to smooth
- Easy-peel for quick removability without residues
- Full technical support

Application areas

- Promotional and retail applications (newspapers, price tags, magazines, books)
- Removable food labels applied at low temperatures
- Window stickers and identification labels
- Textiles labelling
- Shipping and tracking

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
Prime Paper				
AW0363F.1200	Vellum Elite FSC/R450/BG40 Wh Imp	ASEAN	1200	2400
A03846	Vellum Extra/R100/BG40Br Imp	ASEAN	1000	2000
AW0362F.1200	Fascoat Elite FSC/R450/BG40 Wh Imp	ASEAN	1200	2400
AA0965	MC Primecoat/R100/BG40Br Imp	ASEAN	1000	2000
AW0361N.1200	High Gloss Paper/R450/BG40 Wh Imp	ASEAN	1200	2400
AA1450	HGW Premium/R100/BG40Br Imp	ASEAN	1000	2000
New SY7126	Fastcoat 2 FSC /CR701/CCK55	ASEAN	1000	2000
Prime Film				
SY7049	PPNg Top Trans/R480/BG40Wh	ASEAN	1000	2000
SY7051N	PPNg Top White/R480/BG40Wh Imp	ASEAN	1000	2000
Variable Information				
SW7050F	Direct Thermal Premium2 FSC /R423/BG40BI	ASEAN	1000	2000
MW0057F	Transtherm 2C FSC/R423/BG40Wh	ASEAN	1000	2000
SY7050N	Synthetic Paper/R480/BG40Wh Imp	ASEAN	1000	2000
MW0068F	Transtherm 2C FSC/R450/BG40Wh Imp	ASEAN	1000	2000
SY7050N	Synthetic Paper/R480/BG40Wh Imp	ASEAN	1000	2000
MW0068F.1200	Transtherm 2C FSC/R450/BG40Wh Imp	ASEAN	1200	2000

Removable adhesives

R450

General purpose removable adhesive for paper facestock featuring moderate initial tack and minimal adhesion build over time. Its consistent level of adhesion and long term removability make it suitable for applications on substrates such as glass and plastics. Proven successful for shelf and tote marking used in logistical tracking.

R480

General purpose removable adhesive for filmic facestock featuring moderate initial tack and minimal adhesion build over time. Its consistent level of adhesion and long term removability make it suitable for applications on substrates such as glass and plastics. Proven successful for shelf and tote marking used in logistical tracking.

R423

Removable, low peel adhesive featuring long-term removability, and excellent die cutting and stripping characteristics. Particularly suited for wallpaper promotional labels, high gloss book covers and shelf marking. R423 is an excellent solution for Monroney labels.

R100

A premium, rubber based adhesive designed for applications requiring special purpose removability. Excellent low temperature and deep freeze performance.

Factors in choosing a removable adhesive

Removable adhesives are designed for various application segments and the below factors have to be considered before choosing the right solution.

Facestock

Internal strength or weakness of a facestock is a significant factor for ultimate removability. Higher strength ensures a greater degree of removability.

Exposure Conditions

Are there any unusual environmental conditions during or after application? What is the minimum application temperature of the adhesive?

Period of Use

One day, 1 week, 1 month, 1 year, etc.

Substrate

Shape, roughness and cleanliness of the surface must be known when selecting the correct adhesive. Is it flat or curved, textured or corrugated, damp or dry? Is the substrate glass, paper, textile or polymeric?

Label Size

The greater the area of adhesive contact, the greater the force required to remove the label. With large labels, a reduced adhesive weight or an ultra-removable adhesive should be considered.

Removability



Adhesive selection

		R100	R423	R480	R450
		Removable	Removable	Removable	Removable
Facestock combination		Paper	Paper	Film	Paper/VI
Application / segment					
Polymeric	PET	✓	✓	✓	✓
	PP	✓	✓	✓	✓
	LDPE	✓	✓	✓	✓
	HDPE	✓	✓	✓	✓
	PMMA	✓		✓	✓
	PC *1	✓		✓	✓
	PS *1	✓		✓	✓
	Nylon (PA6)	✓		✓	✓
	ABS (Co-polymer)	✓		✓	✓
Paper	A4 printing paper	✓			
	Newspaper	✓			
	Greeting cards	✓			
	Cardboard		✓	✓	✓
Textiles	100% cotton (various types)				
	100% polyester				
	100% acrylic				
	Cotton/acrylic blends				
Other	Fiberboard			✓	✓
	Unvarnished wood				
	Carbamic painted panels (LSE)	✓			
	Terracotta				
	Aluminium	✓		✓	✓
	Glass	✓	✓	✓	✓
	Stainless steel	✓	✓	✓	✓
Initial tack	Medium	Medium	Low	Low	
Ultimate adhesion	Medium	Medium	Medium	Medium	
Min. appl temp	-20°C	-12°C	-15°C	-15°C	
Service temp. min	-40°C	-40°C	-30°C	-30°C	
Service temp. max	+80°C	+80°C	+80°C	+80°C	
Chemical resistance	Nil	Nil	Nil	Nil	
Removability	Superior	Superior	Long term	Long term	
UV exposure	●●●	●●	●●	●●	
Adhesive technology	Solvent Rubber	Emulsion Acrylic	Emulsion Acrylic	Emulsion Acrylic	
Special Gum Pattern (SGP) possible	N	N	N	Y	
Major benefits and applications	More demanding applications for ultra clean removability. Excellent low temperature and deepfreeze performance.	Particularly suited for wallpaper promotional labels, high gloss book covers and shelf marking. Excellent solution for Monroney labels.	General applications, food labelling, barcoding, price labelling.	General applications, ship & track (cardboard surface), food labelling, barcoding, price labelling.	

● Good ●● Better ●●● Best

Wet Reclosure



Consumers who buy wet wipes are focused on easy-open/easy-close convenience. For manufacturers and brand owners, the priority is finding cost-effective alternatives to rigid plastic lids and other reclosure solutions.

Growth in wet wipes continues and they are now used in many different home and personal care applications. Household wipes are growing most rapidly, and Avery Dennison offers a proven range of adhesives designed to ensure performance in baby, cosmetic, toilet and domestic product applications. Those adhesives can even handle contact with challenging solvents, oils and chemicals.

Key features

- White and clear polypropylene facestocks
- Adhesives with good solvent and moisture resistance
- Up to 60 openings and closures
- Clean removability and variable peel depending on substrate

Application areas

- Household wipes
- Baby wipes
- Cosmetic wipes
- Toilet wipes

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Comments
White					
AQ959	PP Light Top White/ R1490M/ BG40Wh	EUR	1000	2000	Excellent water and chemical resistance with a smooth peel for home and personal care reclosure applications
AQ961	PP Gloss Top White/ R1490M/ BG40Wh	EUR	1070	2000	90µm facestock featuring premium adhesive
BW7517	Synthetic Paper7 NTC/ SR106/ BG50#White ni	CHINA	1530	3000	Suitable for wet tissue reclosure
New BWS765	Primax 300/ SR106/ 80gsm glassine liner Imp	CHINA	1000	1000	
Clear					
AO633	PP Light Top Clear/ R1490M/ BG40Wh	EUR	1000	2000	Excellent water and chemical resistance with a smooth peel for home and personal care reclosure applications
AQ687	PP Gloss Top Clear/ R1490M/ BG40Wh	EUR	1070	2140	90µm facestock featuring premium adhesive
BW7516A	50uClear BOPP/ SR106/ Polycoated liner imp	CHINA	1070	2140	Suitable for wet tissue reclosure.
New BWS722	Fasclear 350/ SR106/ 80gsm glassine liner Imp	CHINA	1000	1000	
Alcohol Wet Wipes					
New BW7567	Synthetic Paper/ SR133/ 80gsm glassine liner	CHINA	1070	1070	
New BW7569	50um BOPP Clear TC/ SR133/ 80gsm glassine liner	CHINA	1530	1530	
New BW7579	PP100 Top White/ SR134/ 80gsm glassine liner	CHINA	1070	1070	
New BW7534	100u Clear PET TC/ SR123/ 80g glassine liner Imp	CHINA	1070	1070	

Item	Categories	SR106	SR110	SR115	R1490M
		(Solvent)	(Solvent)	(Solvent)	(Solvent)
Wet reclosure	Baby wipes	★★★★★	★★★★★	★	★★★★★
	Facial/hand wipes	★★★	★★★★★	★★★	★★★★★
	Home wipes	★★★	★	★★★★★	★★★
	Disinfectant wipes	★★★	★★★★★	★★★★★	★★★
	Industrial solvent wipes	★★★	★★★	★★★★★	★★★
Package size	<20 pcs	★	★★★★★	★★★	★★★
	<80 pcs	★★★	★★★	★★★★★	★★★★★
	<200 pcs	★★★★★	★★★★★	★★★★★	★★★
Package substrate	PET	★★★	★★★★★	★	★★★★★
	PP	★★★★★	★★★	★★★★★	★★★★★
	PE	★★★★★	★	★	★★★★★
Content moisture level	Low	★	★★★	★★★	★★★
	High	★★★★★	★★★★★	★★★	★★★★★
Requirements	Chemical resistance	★★★	★★★	★★★★★	★★★★★
	Clean removability	★★★	★★★★★	★	★★★★★
	Peel feel/sound	★	★★★★★	★★★	★★★★★
	Peel adhesion	★★★★★	★★★	★★★	★★★★★
	Smell/odor	★★	★★★	★	★★★

Fluorescents and Foils



Available in a wealth of bold, bright colours, Avery Dennison Fluorescent and Foil label materials for food industry applications are as versatile as they are functional, improving supply chain visibility, waste reduction and freshness labelling.

Available in a range to gold, silver, bright and matte finishes, Avery Dennison Foil solutions are suitable for the labelling of quality products including cosmetics and luxury toiletries.

Used as inventory and warning labels, as well as eye-catching advertising and promotional labels, Fluorescents demand attention. They not only communicate important data such as use-by dates that provide consumer confidence and safety, but they also boost immediate shelf impact. However you use them, our Fluorescent facestocks provide excellent stability and durability in application.

Key features

- Available in many bold colours

Application areas

- Promotional labels
- Warning labels

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
AW0401F.1000	Radiant Red FSC/M3000/B100	ASEAN	1000	2000
AW0402F.1000	Radiant Orange FSC/M3000/B100	ASEAN	1000	2000
AW0403F.1000	Radiant Green FSC/M3000/B100	ASEAN	1000	2000
AW0404F.1000	Radiant Yellow FSC/M3000/B100	ASEAN	1000	2000
AW0405F.1000	Radiant Pink FSC/M3000/B100	ASEAN	1000	2000
AW0370F.1000	Radiant Red FSC/M3300/BG40Wh Imp	ASEAN	1000	2000
AW0371F.1000	Radiant Orange FSC/M3300/BG40Wh Imp	ASEAN	1000	2000
AW0372F.1000	Radiant Green FSC/M3300/BG40Wh Imp	ASEAN	1000	2000
AW0373F.1000	Radiant Yellow FSC/M3300/BG40Wh Imp	ASEAN	1000	2000
AW0374F.1000	Radiant Pink FSC/M3300/BG40Wh Imp	ASEAN	1000	2000
AW0356.1060	Matte Silver Foil/M3300/BG40Wh Imp	ASEAN	1060	2120
SW7039F	Metallica FSC/S2090/BG40Wh Imp	ASEAN	1000	2000
SW7339.1000	Bright Silver Foil Prime /M3300/BG40Wh Imp	ASEAN	1000	2000

Cover-up Opaque

High-opacity barrier coating on paper or film hides errors, and covers outdated information on packaging, labels and containers.

No matter what the relabelling need, Avery Dennison's Cover-up portfolio can make it right without the high cost of repackaging, with reduced harm to the environment.

Almost every packaged product will need to have its labeling changed or adapted at some point in its life. It is crucial to ensure that any over-labelling is truly opaque. This makes the new labels fully legible and, especially for correction labels, ensures that overprinted data is hidden. Avery Dennison opaque label stocks offer label converters and their customers an unrivalled range of options in both paper and film, with permanent and removable adhesives. The range is a genuine one-stop shop for all correction applications, and the sheer quantity of choices available allows for highly creative solutions. Most paper or film products can be customised on demand to use a specific opaque colour - for example, an attractive coloured background on a clear bottle.

Key features

- Opaque prime films
- Opaque prime papers
- Opaque VI front materials
- A selection of standard colours and multiple opaque layers
- Customising colours

Application areas

- Correction labels
- Translation labels
- Promotional labels
- Shipping and tracking labels



Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
6263	Matte Littho FasCover 2/AT20/40#SCK	ASEAN	1372	1372
AA755	Vellum OPQ/S2045N/BG40BR	ASEAN	1000	2000
BW0259	PP40 Top Matte White/S692N/BG40Wh Imp	ASEAN	1000	2000
AA186	LCJ Premium OPQ FSC S2012HTC-HF55	EUR	1000	1000
AA570	Mattcover Black FSC S2000N-BG40BR	EUR	1000	1000
NEW SW7071	Opaque Vellum Extra/S692N/BG40Wh Imp	ASEAN	1000	2000
NEW AW5250	Semigloss Paper with Black Back/C2005/BG40Wh Imp	CHINA		

Frozen Foods



Ready and Frozen meals are becoming more prevalent on supermarket refrigerated shelves and ready meal delivery services. Traditionally these meals are packaged in a microwavable CPET or PP tray and wrapped in a cardboard sleeve, allowing for large graphics on the front and product information on the back.

However, sleeves are often not fixed to the tray and can be slipped off on shelf, posing a risk of product tampering. Sleeves are also generally manually applied, making them a costly decoration technology.

Pressure Sensitive synthetic labels provide the coverage of a traditional sleeve to deliver large graphics, with the added benefit of sticking directly to the food tray, protecting the product from sleeves being removed on shelf. Card labels can also be automatically applied which improves the overall packaging cost and productivity.

Key features

- Excellent print quality to provide attractive on-shelf appearance
- Available on hotmelt, emulsion and removable

Application areas

- Frozen Ready meals in supermarkets or home delivery services
- Refrigerated meat/fish/poultry trays

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Comments
SY7022	Synthetic Paper II/C7501/BG40Wh Imp	ASEAN	1000	1000	
SY7074M	Synthetic Paper/AT20/BG40Wh Imp	ASEAN	1000	1000	
BW0278	Synthetic Paper TR75/C2075/BG40Wh Imp	ASEAN	1525	1000	
New SY7121	Synthetic Paper/C2076C/BG40Wh Imp	ASEAN	1525	4575	**Chilled pasteurization options for food
New 79846	Fasson® Clear Print Treated Polyester/ R1490/8M Heat Seal Polyester	NA	1524	508	
New SY7008	TransCode Plus White/C7501/BG40Wh Imp	ASEAN	1000	2000	
New SW7068F	DT200HD FSC/C7501/BG40 Wh Imp	ASEAN	1000	2000	
New SY7087	Direct Thermal PP85 TC/C7501/BG40Wh Imp	ASEAN	1000	2000	
New SY7125	Synthetic Paper/ S2800/BG40Wh Imp	ASEAN	1000	2000	
New SY7047	PPNg Top Pearlized White/ C7501/BG40Wh Imp	ASEAN	1000	2000	

Holographic



Few packaging technologies can compete with holographic labels for pure shelf impact. Their dynamic, shifting patterns grab consumers' attention – a winning choice for premium product differentiation, special offers and promotional campaigns.

The premium polyester range provides optimal brightness and unbeatable shelf appeal for high value applications such as spirits and cosmetics. Polypropylene laminated to paper offers conversion-friendly packaging promotions, festive gift or home care product labelling.

Selected products are now available under the Ready Width program, with minimum order quantity at 1000 sqm across the rest of the range.

Key features

- Ultimate shelf impact
- Conversion-friendly paper laminates
- Six patterns available for rapid delivery
- Low MOQ
- Wide variety of adhesives
- Full sales support in choosing new patterns

Application areas

- Cosmetic products
- Promotional or seasonal campaigns
- Wine and spirits
- Home and personal care products
- Food
- Security and pharmaceutical applications

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
BW9100	Fasson® HGF PP60 Large Lens Seamless TC/S692N/PET30 ni	China		
2391	Fasprism Iridesce/S246/40#SCK	NA		
79579	2M RAINPETSMLS/S692N/50#	NA		
SY7067	PET Iridescent TC/S692N/BG40Wh Imp	ASEAN	1000	3000

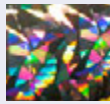
Customized and non-standard patterns are available upon request.



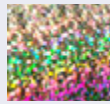
Point



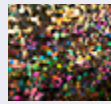
Shimmer



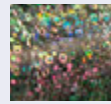
Kaleidoscope



Universe



Cristaline



Bubble

Piggyback



For sheer flexibility, operational time saving and brand impact, Piggyback labelling is a technology hard to match. The Avery Dennison Piggyback range enables a whole spectrum of applications, from a simple shipping label through to highly decorative promotional features.

Piggyback labels are multi-layer constructions featuring one self-adhesive label on top of another. The top label can be released and can be reapplied elsewhere, while the bottom label is stationary, remaining affixed to the original surface. Dynamic and versatile, piggyback labels can be created in constructions that adhere to paper, plastics, cardboard or metals, and standard products are compatible with using all conventional printing techniques.

Key features

- Multi-layer constructions with two adhesive layers and two release liners
- Easy automatic dispensing
- Wide variety of face materials and adhesives
- Combinations of permanent and/or removable adhesives available

Application areas

- Shipping and tracking
- Inventory management
- Promotional labels (coupons)
- Administration
- Healthcare

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
Prime Paper				
New SW7045AF	Fascoat 2 PB FSC/S2090/BG40Wh Imp	ASEAN	1000	2000
F02553	Vellum P-Back FSC/ S2045*2/BG40WHN*2	ASEAN	1525	6000
New SW7038AF	Fascoat 2 PB FSC/S2420/BG40Wh Imp	ASEAN	1000	2000
Prime Film				
AE036P	PB PP NG TOP WHITE/2xS2045N/BG40WH/BG40BR	EUR	1000	1000
AH867P	PB PE85 TOP WHITE/2xS692N/2xBG40BR	EUR	1000	1000
Variable Information				
SW7004F	Transtherm 2C PB FSC/S2090/BG40Wh imp	ASEAN	1000	2000
AG603P	PB THERMAL TOP S8 FSC/2xS2045N/BG40WH/BG40BR	EUR	1000	1000
New SW7075F	Direct Thermal Premium PB FSC/S2090/BG40Wh Imp	ASEAN	1000	2000

Wash-Off



Returnable bottles demand labelling that stays firmly in place during use, and which can be removed easily after return to enable reuse of the bottles.

Wash-off label technology is suitable for all returnable glass bottles, using an innovative dual layer construction and a unique adhesive.

The label detaches easily from the bottle in a conventional bottle washer, making Wash-off the portfolio of choice for beverage manufacturers who need a reliable clear-on-clear 'no label' look for returnable bottles.

Key features

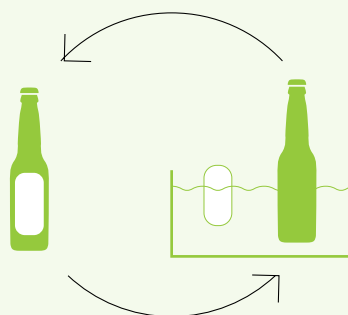
- Facilitates easy label removal in a conventional bottle washer
- No adhesive residues on bottle or in washer
- No contamination of the washing water - adhesive and inks remain on the label
- A clear-on-clear label material that is not affected by humid environments
- Labels remain firmly in place at point of sale, and with the consumer
- Supports complex shapes and neck labels
- Compatible with a wide variety of printing techniques including letterpress, flexo and gravure

How it works

The Wash-off facestock contains two film layers that expand at different rates in a hot washer. This makes the label curl for easy removal.

Both the adhesive and the inks remain on the label, reducing contamination of the water in the bottle washer.

The material can be supplied either ready for the converter to overlaminate or as a complete construction with an over-lamination layer already in place.



Product information

Code	Description	Location	Width	MOQ (m ²)
• BN997	CC HOAV45K - S6000 - PET30	EU	2000	2000
NEW • BW1231	45um PET/S6000/PET30 ni	China	1070	3210
NEW • AO541	MP PLUS SILVER FSC - WLA - BG45WH	EU	1000	1000
NEW • AB240	MC PROMECOAT - WLA - BG45Wh	EU	1000	1000
NEW • AB217	VERGE BLANC FSC - WLA- BG45WH FSC	EU	2000	2000

• ClearIntent™ products

Digital Labelling



Digital labelling solutions offer exceptional speed, flexibility and customisation – allowing businesses to create bespoke labels for printing on demand.

The technology is growing fast. Digital solutions greatly reduce inventory and revision costs after initial OEM investment, and give versatile labelling that adapts quickly to branding requirements. Sheer flexibility, along with multiversioning capabilities, also deliver improved sustainability and supply chain efficiency by printing only on demand to reduce stock on hand and eliminate waste.

Our digital materials portfolio supports all major digital labelling presses in different technology groups including HP Indigo, Xeikon, UV Inkjet, and water-based Inkjet. The portfolio includes newly developed UV Inkjet wine stocks that give maximum colour vibrancy, uniformity and text clarity. UV Inkjet and water-based Inkjet offer a number of performance and cost benefits compared with flexo, and in some cases with electrophotography. Digital Inkjet has the highest projected growth rate for digital label printing over the next five years.

Key features

- Supports all major digital labelling presses and technologies
- High quality printing on demand
- Performance and cost benefits
- Multiversioning
- Rapidly growing market

Application areas

- Mass customisation
- Printing on demand
- HP Indigo, Xeikon, UV Inkjet, water-based Inkjet

Product information

Water-based Inkjet

Code	Description	Location	Width (mm)	Comments
Paper				
OW2350	Gloss Inkjet Paper/AP103/BG40Wh Imp	ASEAN	1070	High ink hold out and quick drying properties Moderate water and smudge resistance
New SW7069	WB inkjet Matt paper/S1010/BG40Wh Imp	ASEAN	1060	High ink hold out and quick drying properties Excellent water and smudge resistance
Film				
OZ2180	127µ Inkjet Synthetic Paper Premium/AF101/BG40Wh Imp	CH	1530	High ink hold out and quick drying properties Specially designed for harsh-environment applications, e.g. GHS label for chemicals, and demanding healthcare applications"
New SY7122	WB inkjet synthetic paper/S4700N/BG40Wh Imp	ASEAN	1000	High ink hold out and quick drying properties Excellent water resistance of ink images
AW393	DIG WBIJ PP Top Gloss White/S692N/BG40Wh	ASEAN	1000	High ink hold out and quick drying properties Excellent water resistance of ink images
AW404	DIG WBIJ PP Top Clear/S692N/BG40Wh	ASEAN	1000	High ink hold out and quick drying properties Excellent water resistance of ink images
BH351	WBIJ PET50 Top Silver/S692N/BG40Wh	EU	1000	High ink hold out and quick drying properties Excellent water resistance of ink images

HP Indigo

Code	Description	Location	Width (mm)	Comments
Paper				
DI2010.330	Highgloss Paper ITC/S1010/BG40Wh	ASEAN	1000	High gloss paper with a proprietary top coating for HP Indigo printing.
Film				
BW0220.330	PP80 WH DIG/S692N/BG40WH N	AU	1000	A white BOPP film with a proprietary top coating for HP Indigo printing.
AV595	DIG INDI PP50 TOP WHITE/S7000/BG40WH	EU	2000	50 micron top-coated white polypropylene film with a proprietary top coating for HP Indigo printing.
AX616	DIG INDI PP50 TOP CLEAR/S7000/BG40WH	EU	2000	50 micron top-coated clear polypropylene film with a proprietary top coating for HP Indigo printing.
BE920	DIG INDI PP60 CAV TOP WHITE/S692N/BG40WH	EU	2000	60 micron white pearlescent bi-axially oriented polypropylene film with a proprietary top coating for HP Indigo printing.
AZ268	DIG INDI PP50 TOP SILVER/S692N/BG40WH	EU	2000	50 micron metalised polypropylene film with a proprietary top coating for HP Indigo printing.
AQ206	DIG INDI PE85 TOP WHITE/S692N/BG40WH	EU	2000	A white, top-coated Polyethylene film with a proprietary top coating for HP Indigo printing.
AQ814	DIG INDI PE85 TOP CLEAR/S692N/BG40WH	EU	2000	A clear, top coated Polyethylene film with a proprietary top coating for HP Indigo printing.

Apparel



The new Avery Dennison Select Solutions Apparel portfolio gives you more pressure-sensitive options for greater opportunities with brand owners and retailers looking to differentiate their products at the store level. A range of clear and white transcode films featuring exceptional thermal transfer printability, our new Apparel Portfolio provides the application flexibility you need for brand-focused apparel and textile labeling.

Apparel label materials are offered with liners in various weights and thicknesses, as well as a range of adhesives designed for good adhesion to and easy removal from many fabrics, including sports performance fabrics.

For sizing strips, the Apparel portfolio's thinner material options provide greater conformability for easier folding when stacking garments on shelves.

Key features

- A range of clear, white and natural-looking materials
- A range of liner materials in various weights and thicknesses
- Adhesives specifically designed for application to and easy removal from fabrics without residue

Application areas

- Apparel – jeans, pants, sportswear, menswear, children's wear, socks, shoes, sweaters and more
- Textiles – blankets and bedding

Product information

Code	Description	Location	Width (mm)
SY0038A	Transcode Clear Plus/S4905/P140Wh Imp	ASEAN	1530
SY0039A	Transcode White Plus/S4905/P140Wh Imp	ASEAN	1530
SY0046A	Transcode White Plus/R115/P140Wh Imp	ASEAN	1530
SY0047A	Transcode White Plus/S4905/BG50#WH NI	ASEAN	1530
SY0048A	Transcode Clear Plus/R115/P140Wh Imp	ASEAN	1530
SY0054A	Transcode Clear Plus/R115/50#Brown SCK NI	ASEAN	1530
BW0031	50 micron Clear BOPP TC/S4900/P95Wh	China	1530
BW9565	PE85 White NTC/S4900/BG50#WH	China	1530
BWS388	LW Synthetic Paper/S4900/P95Wh Imp	China	1530

Low Migration

Avery Dennison now offers low-migration adhesives that are pretested to meet regulatory requirements in the North American and European markets. By choosing pretested, low-migration adhesives in combination with low-migration base materials, inks and varnishes for plastic containers, pharmaceutical companies can minimize the time and money they spend on migration certification, and in some cases can bypass it altogether. Other benefits include faster product approval and time to market, and the peace of mind of knowing that their medicinal products are safe for patients.

Key features

- High initial tack and very good adhesion to glass, PE, PP
- Excellent mandrel performance on glass, PE and PP containers
- Complies with the European food directives and legislations, FDA 175.105 and the German recommendations XIV as published by BfR. BfR (Bundesinstitut für Risikobewertung) is the German Federal Institute for Risk Assessment.
- The adhesives can be used in direct contact with dry, nonfatty foodstuffs.
- Dramatically reduce the risk of contamination with our industry proven low-migration adhesives

Application areas

- OTC (over-the-counter) products
- Low migration labels for thin-walled LDPE containers

* Only applies to the following adhesives: S2000NP, S2045NP, S717P, S692NP



Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
New SW7076F	MC PRIMECT FSC/S2060NP/BG40WH NF	ASEAN	1525	4575
New SY7013	Pharma TC White PE85 / S692NP / BG40 Wh Imp	ASEAN	1000	1000
New SY7014	Pharma TC Clear PP50 / S692NP/ BG40 Wh Imp	ASEAN	1000	1000
SW7346F	LW60 FSC/S692NP/BG40Wh NI	ASEAN	1000	1000
New SW7077F	Pharma LW60 FSC/S2060P/BG40Wh	ASEAN	1000	1000
New SW7078F	LW60 FSC/S2000NP/BG40Wh Imp	ASEAN	1000	1000

The need for low migration

As per the European Union's 2005 guidelines around plastic packaging materials, & U.S. FDA guidelines for pharmaceutical industry: Container Closure Systems for Packaging Human Drugs and Biologics.” the “packaging components should be constructed of materials that will not leach harmful or undesirable amounts of substances to which a patient will be exposed when being treated with a drug product.” The chief way that regulatory agencies in the U.S. and Europe are encouraging pharmaceutical companies to address migration issues is by requiring that they use low-migration label materials.

The term low migration is used because some amount of migration will always occur in plastic packaging. However, if the migration or interaction happens within the accepted window determined by regulatory authorities, the packaging components are deemed safe for use. There are two certifications that pharmaceutical companies can obtain to certify low-migration label materials.

Certifications can be secured through the independent, globally accepted testing agency, under ISEGA (As per EU guidelines) & 21 CFR 175.105,(US Regulation) guidelines. Typically, ISEGA certification can take up to two years to complete before the label is cleared for companies to use in production, making it a long and costly process for businesses that want to get their products to market quickly and efficiently. At the same time, this certification is necessary for pharmaceutical companies if they want to sell products with plastic containers to the European or the U.S. markets.

Small-diameter



Pharmaceutical containers, are small – with typical volumes of 10-150 ml and diameters of 15-50 mm. Only a label adhesive with excellent mandrel performance can ensure successful conversion and dispensing.

There is growing demand for self-injection devices across the medical segment, thanks to many different benefits including better dosage security and sterility. The challenge to label converters is how to address such small diameters and low energy (e.g. PE/PP) substrates.

Avery Dennison offers a sophisticated portfolio of labelling solutions designed for small-diameter pharmaceutical labelling applications. It provides outstanding tight mandrel performance, a low risk of adhesive migration, edge lift, and 12-month advance change notification*.

Options include low-migration pharmaceutical adhesives S692NP and S717P. The first delivers exceptionally low migration (important as plastic use grows), while S717P minimises edge lift on low surface-energy substrates, down to 10 mm in diameter.

Key features

- Outstanding mandrel performance on small diameter containers
- Availability and change notification 12 months in advance*
- Compliance with FDA and European food regulations

Application areas

- Prescription medicines or drugs
- OTC (over-the-counter) products
- Auto-injector pens for diabetics, autoimmune deficiencies and more
- Pre-filled syringes and vials
- Small diameter containers: 15-50 mm diameter
- Glass, PE and PP substrates (including treated, slip-coated or varnished)
- Low migration labels for thin-walled LDPE containers
- Any application requiring excellent mandrel performance

* Only applies to the following adhesives: S2000NP, S2045NP, S717P, S692NP

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
SW7053F	LW 60 FSC/S2090/BG40Wh Imp	ASEAN	1525	3050
F16502.1525	Fasson®LW60 FSC/S2045N/BG40Wh	ASEAN	1000	1000
SW7054F	Fasson LW60/S2420/BG40Wh Imp	ASEAN	1525	3050

Meeting the pharmaceutical compliance challenge

All manufacturers of pharmaceutical packaging have to meet the challenges posed by new regulations and stronger packaging guidelines. There is growing pressure to understand rules in detail, and to make absolutely sure every package is compliant. That means rising demand from pharmaceutical companies for customised tests and individual packaging material certification.

The Avery Dennison Pharma and Complete Compliance Expert Team is always on hand to give converters and pharmaceutical companies detailed information, full transparency and technical support. These are essential resources when navigating the complexities of pharmaceutical applications and making sure the end result is both successful and compliant.

Label and plastic packaging solutions should comply with the following:

- European food regulation 1935/2004/EC, including 10/2011/EU guidance on plastic materials and articles intended to come into contact with food
- ISO 3826 - a norm that explains how to test plastics collapsible containers for human blood and blood components
- FDA 175.105 Food and Drug Administration (FDA) concerning indirect food additives, adhesives and components of coatings
- ISO 10993-5 dedicated test for vitro cytotoxicity
- ISO 10993-10 test for irritation and skin sensitization

Low Temperature



Blood and plasma bags in refrigerators and freezers pose unique labelling challenges, including reliable low-temperature performance and chemical exposure.

More than one million human tissue samples are collected, stored and transported each year – at temperatures as low as -196°C . Our comprehensive low temperature portfolio is designed for bottles, test-tubes, vials and other containers used in hospitals, clinics and research labs. It enables many printing technologies, across applications ranging from blood bags through to cryogenic and laboratory packaging.

Labels comply with FDA and European food regulations, and have been approved by ISEGA testing institute according to DIN ISO 3826 for “Plastic Collapsible Containers for Human Blood and Blood Components”.

Key features

- Extreme low cryogenic temperatures: -196°C
- Steam autoclave sterilisation (up to $+121^{\circ}\text{C}$)
- Good chemical resistance
- UV flexo, thermal transfer, direct thermal and UV inkjet
- White, opaque and clear versions

Application areas

- Blood bag and plasma bag labelling
- Human and animal health: blood fractioning, stem cells, serum
- Hospital, clinic and laboratory labelling
- Deep freeze applications
- Re-labelling with opaque labels

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)
Primary Blood Bag Label				
EC211	Fasson ® PVC8128 PPS N - MI465 - BG40BR	EUR	1000	1000
AD980	Transfer PP/AL171/BG40Wh	EUR	1000	1000
Secondary Blood Bag Label				
SY7022	Fasson Synthetic Paper II/C7501/BG40Wh	ASEAN	1000	1000
SY7074M	Synthetic Paper/AT20/BG40Wh Imp	ASEAN	1000	1000
BW0278	Synthetic Paper TR75/C2075/BG40Wh Imp	ASEAN	1525	1000
Cryogenic				
BB624	PP Light Top Clear/S2196/BG40Wh	EUR	1000	
AZ452	PP Top White/S2196/BG40Wh	EUR	1000	
BG470	PP95 Matt White/S2196/BG40Wh	EUR	1000	

Drum

Durable, proven materials featuring BS 5609 Section 2 and 3 certification

The Avery Dennison Select Solutions™ Drum portfolio offers an impressive track record of proven performance on a broad range of containers and surfaces.

Whether for painted steel or molded polyethylene drums, our film and heavyweight paper facestocks have been chosen for their ability to withstand harsh environments and outdoor exposures. In fact, all our drum portfolio facestocks have passed BS 5609 Section 2 and 3 Marine Immersion label testing, including a three-month exposure to saltwater, as part of International Maritime Dangerous Goods (IMDG certification).




Our Drum Portfolio facestocks are combined with our best-in-class adhesives to offer needed versatility. Because these labels are typically hand-applied, drum adhesives must be repositionable to amend misapplied or misaligned label applications. The adhesive must also wet-out quickly to become permanent, remaining highly durable over a drum's long-term exposure to the elements.

Key features

- Consistent adherence to a range of drum surfaces
- Strong enough to withstand ongoing outdoor exposure
- Weather- and temperature-resistant
- Impervious to contact with aggressive chemicals and saltwater
- Highly adaptable to varying container sizes and diameters
- A range of cost and performance options
- Materials suitable for thermal transfer and laser printing
- Repositionable adhesives



Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)	UL Recognised	BS5609 Section 3	BS5609 Section 2
Print Method: Laser								
78037	LASERCODE DRUM LABEL TC/S4600/79#MF	Singapore	1372		697		✓	✓
Print Method: Thermal Transfer & Flexo								
72197	TRANSCODE/S475/50#SCK	Singapore	1372		1372mm x 500m		✓	✓
75570	3MIL SYNTHETIC PAPER/S333/50#SCK	Singapore	1524		1524mm x 500m			✓
79572	3.7MIL SMUDGEPROOF KIMDURA/S4600/50#SCK	Singapore	1524		1524mm x 500m		✓	✓
79580	2.6MIL SYNTHETIC PAPER/S4600/50#SCK	Singapore	1524		1524mm x 500m		✓	✓
BW0264	SYNTHETIC PAPER 65/S4700N/BG40WH IMP	Thailand	1525		762/1525mm x 1000m			
New F50150.1000	DATA PE 80 CD303 BG40WH N	Thailand	1000	2000				✓
New F41675.1000	SYNTHETIC PAPER/CD303/BG40WHN	Thailand	1000	2000				
New 9171.106	DATAFLEX/CD303/B100	Thailand	1060	2120				
Print Method: Inkjet								
79348	5Mil Matte White Kimdura Inkjet/S4600/50#SCK	Singapore	1524		1524mm x 508m		✓	✓
ADS1396	100mic InkJet Synthetic Paper/TS80/BG40Wh Imp	Thailand	1070		1070mm x 1000m			
ADS1399	5Mil InkJet Synthetic Paper/S6600/BG40Wh Imp	Singapore	1530		1530mm x 500m			✓
New SY7122	WB inkjet synthetic paper/S4700N/BG40Wh Imp	Thailand	1000	2000				



The Avery Dennison label materials above are recognized by UL. Representative samples of this component have been evaluated by UL and meet applicable UL requirements certified to BS 5609. File MH 61182.

BS5609 Section 3 Inks and Ribbons

79572

Thermal Transfer

- Cab: ITW B324 Black + B324 Red Resin
- ITW B128 Black + B120 Red
- Zebra: ITW B128 Black+B120 Red
- Zebra: limak SP330 Black + DC300 Ruby Red
- Zebra: Armor AXR 8 Black + AXR600R Red
- Zebra: ITW B324 Black + B324 Red Resin
- Zebra: ITW CP TR5940 Black+TR5440 Red
- Datamax: Armor AXR 8 Black + AXR600R Red
- Datamax: ITW B324 Black + B324 Red Resin
- Datamax: ITW CP TR5940 Black + TR5440 Red
- Microplex: AXR7/600
- DNP TRX-50 Black

Flexo

Flint corona treatment:

- Flint Force (UV) - Non varnish
- Flint Force (UV) - Varnish

Environmental Ink (corona treated):

- DR III FR Ink Water-Based - No Varnish
- Films III Ink (UV) - No Varnish
- Wikoff: PolyTech XV (all colors) - No Vanish

72197

Thermal Transfer

- Zebra DNP R300 Black + R510 Red
- Zebra: ITW B128 Black + B120 Red
- Zebra: limak SP330 Black + DC300 Ruby Red
- Zebra: Armor AXR 8 Black + AXR600R Red
- Zebra: limak SP575 Black + DC300 Ruby Red
- Zebra: ITW B324 Black + B324 Red Resin
- Zebra: ITW CP TR5940 Black + CP TR5440 Red
- Zebra: Astromed RY Black + RAE Red
- Datamax: DNP R300 Black + R510 Red
- Data: limak SP330 Black + DC300 Ruby Red
- Datamax: Armor AXR 8 Black + AXR600R Red
- Data: limakSP575 Black + DC300 Ruby Red
- Datamax: ITW B324 Black + B324 Red Resin
- Datamax: ITW CP TR5940 Black + CP TR5440 Red

Flexo

Flint no corona treatment:

- Flint Force (UV) - Non varnish
- Flint Force (UV) - Varnish

Environmental Ink (corona treated):

- DR III FR Ink (water-based) - No Varnish
- Films III Ink (UV) - No Varnish

Actega:

- Optifilm Ink (water-based) - Varnish
- Versifilm Ink (all colors) - Varnish
- Wikoff: PolyTech XV (all colors) - No Varnish

79580

Thermal Transfer

- Zebra: ITW B324 Black + B324 Red Resin
- Zebra: DNP R300 Black + R510 Red
- Zebra: ITW B128 Black + B120 Red
- Zebra: Armor AXR 8 Black + AXR600R Red
- Datamax: ITW B324 Black + B324 Red Resin
- Datamax: Armor AXR 8 Black + AXR600R Red

Flexo

Flint no corona treatment:

- Flint Hydrofilm Ace - Varnish

Environmental Ink (corona treated):

- DR III FR Ink (water-based) - No Varnish
- Films III ink (UV) - No Varnish

79348

- Epson Inkjet C831, TMC3400, TMC3500
- NeuraLabel 300

78037

- Lexmark Laser C792E
- Primera CX1200
- NeuraLabel 500e

Easing the BS 5609 certification process

Two certifications are important to converters who are helping clients adhere to GHS standards: BS 5609 Section 2 and 3. Section 2 certification deals with the actual label materials. Our Drum portfolio features BS 5609 Section 2-certified facestock, liners and adhesives. Meanwhile, various combinations of printers, ribbons and inks must be certified under BS 5609 Section 3. To make this process easier for converters and end users, Avery Dennison now offers both BS 5609 Section 2 and 3 certification.

Our certification library contains a multitude of certified materials, printers, ribbons and ink combinations. The portfolio matrix allows converters and end users to check various printing methods and descriptions at a glance.

Our laboratory, which is certified for BS 5609: 1986 by Underwriters Laboratory (UL®), helps you alleviate major bottlenecks for BS 5609 testing such as long waits and high prices. Typical testing can range from \$2,000 - \$4,000, and can take months to complete. But the Avery Dennison testing lab can quickly certify for Section 2 and Section 3 at no cost to you.

If you are already certified under Section 2, Section 3 certification can typically be achieved in under a month. But if you need both certifications, we can facilitate them concurrently, thus helping you achieve certification within two to three months.

Tyre



Productive and reliable materials for tread labels and vulcanising labels

Tyres present unique labelling challenges for brands and label converters alike, whether creating marketing or product identification labels. A rough, low energy surface makes specialist labelling technology essential. Missing labels mean lost profits and a tyre often has to withstand very heavy handling/storage challenges long before it ever makes its way on to a car wheel.

Avery Dennison offers the high performance labelling materials needed to make sure that labels look good and stay in position, whether applied to the tread or vulcanised along with the tyre. Extensive segment experience means we can ensure that productivity remains high throughout, from the conventional print converting phase all the way through to thermal transfer printing by end-users.

With our range of POP labels you get a consistent, premium look for better brand appeal, and our specially designed vulcanized labels are engineered to bond with the tyre during the vulcanization process and maintain excellent adhesion and readability for the lifespan of the tyre.

Key features

- Excellent heat and abrasion resistance for vulcanised labels
- Excellent thermal transfer printability where required
- Rubber-friendly higher adhesive coat weights
- Production-friendly gum patterns to eliminate bleeding
- Application specific coat weights (winter/summer, hairy/shaven)
- Special silicone systems for easy automatic dispensing
- Back-side siliconisation option to avoid labels sticking to liner

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)
PP Film					
New SD8380	PP Light Top Silver/TS79N/BG50Wh Double Silicone liner	ASEAN	1525	3050	1525mm x 1000m
New SD8380N	PP Light Top Silver/TS79N/BG50Wh ni	ASEAN	1525	3050	1525mm x 1000m
SD8310.1525	PP Top NG White /TS79N/BG50 Wh Double Siliconized	ASEAN	1525	1525	1525mm x 1000m
SYS508N	PP Top NG White/ TS79N/CCK80 Imp	ASEAN	1525	3050	1525mm x 1000m
PET Film					
New SY5008	Barrier Foil 25 micron White PET TC/TS79N/ BG50Wh Double Silicone Liner	ASEAN	1525	3050	1525mm x 1000m
SY5003N.1525	Barrier Foil 25 micron White PET TC/TS79N/ P140 Wh	ASEAN	1525	3050	1525mm x 1000m
SYS067	Barrier Foil PET TC/TS80/BG50	Thailand	1070	2140	1070mm x 2000m
Paper					
AFU475	Fasson Tyre Plus	Indonesia	1000	1000	1000mm x 1000m
Vulcanization					
MZ0469A	125µm White PET TC/TS8018/BG50Wh	Singapore	500	250	500mm x 500m
MZ0469L	125mic White PET TC/ TS8018/50mic PET ni	China	500	250	Indent

Overlaminates



Performance and versatility at the highest level of durable goods labeling

Overlamine materials are important components commonly used to ensure the performance of durable goods labels. In order for the label to maintain its desired function over life of the item it's adhered to — be it identification, tracking or branding — these film materials protect printed label graphics from scuffing and fading, which in turn keeps them functional. Avery Dennison offers an extensive collection of overlaminates built for a variety of end use applications. Our portfolio includes Lexan®, clear print-treated, clear topcoated, clear UV and matte polyesters.

UL® recognized

- Included in the Avery Dennison Select Solutions™ Overlamine Portfolio are UL®/CSA recognized clear PET films that meet UL 969 requirements. These qualified overlaminates and Lexan simplify the process for a label adoption, significantly reducing the time, cost and effort of adding a product to a UL file.

Proven functionality

Avery Dennison overlaminates have been tested in our Mentor Innovation Center to meet the requirements of a variety of environments, conditions, temperatures and OEM standards. The tests include:

- Legibility
- Defacement
- Chemical Exposure
- Humidity
- Heat Aging
- Adhesion
- Taber Abrasion
- Water Resistance
- Environmental Resistance (Cold/UV)

Aesthetic versatility

In addition to functionality, our overlaminates have been chosen based on their high-performance aesthetics. The elements include:

- A richer look that appeals to consumers
- The ability to stiffen a construction for better application alignment creating a flush, no-label look

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)	UL Recognition	c-UL Recognition
MZ0111	1M CL PET TC/S8020/PET30	ASEAN	1000	500	Exact in some region	Indoor / Outdoor	
MZ0111N	1M CL PET TC/S8020/BG40Wh Imp	ASEAN	1000	500	Exact in some region	Indoor / Outdoor	
MZ0112	1M Matte PET /S8020/G80	Malaysia	1065	1065	1000mm x 1065m	Indoor / Outdoor	
79325	1Mil Clear UV PET/S3000/1Mil PET	USA	1524		Indent	Indoor / Outdoor	Indoor / Outdoor
77843	1Mil Matte Clear Polyester/S8020/40#BG	USA	1372		Indent	Indoor / Outdoor	Indoor / Outdoor
75849	3Mil Velvet Lexan/S730/1.5Mil Polyester	USA	1372		Indent	Indoor / Outdoor	Indoor / Outdoor
75850	5Mil Velvet Lexan/S730/1.5Mil Polyester	USA	1372		Indent	Indoor / Outdoor	Indoor / Outdoor
MZ1081	1M CL PET TTR/S8020/23PET	Vietnam	1065	2130	1065mm x 2000m		
MZ0321	Polycarbonate/S333/30micron PET	China	1070		Indent		

Feasibility testing

Not sure whether a label construction with an overlamine will meet other UL standards or OEM specs? Our Innovation Center can help there, too. Our technical experts can evaluate a label construction against any standard. For instance, when seeking UL recognition we can let you know whether the construction is likely to gain recognition when submitted for testing. Our no cost feasibility testing can save you time and money while boosting confidence about the constructions you're suggesting to your customers.

Outdoor Overlaminates



New specialized overlaminates offer longer-lasting legibility for critical product messaging

When you need to protect critical outdoor product messaging over time, including lot numbers, safety warnings and warranty information, our enhanced portfolio of specialty overlaminates offers a variety of choices to consider when pursuing outdoor application opportunities. The Select Solutions Outdoor Overlaminates Portfolio offers enhanced durability, superior conformability and excellent abrasion resistance for applications which require two-, three-, or even five-year durability. Testing has been conducted on all elements of the label construction – including inks, overlaminates and base label material – to ensure performance.

Overlaminates: whole construction legibility tested to ensure print readability over time

For standard outdoor applications, choose our existing UV PET overlaminate. For a more critical requirement upgrade to our two calendered vinyl overlaminates (gloss and matte). For your most critical applications, our new cast vinyl and urethane overlaminates offer legibility performance of at least five years.

The testing of the complete product construction verifies real-world legibility and durability, validating the construction you choose will perform for the specified duration.

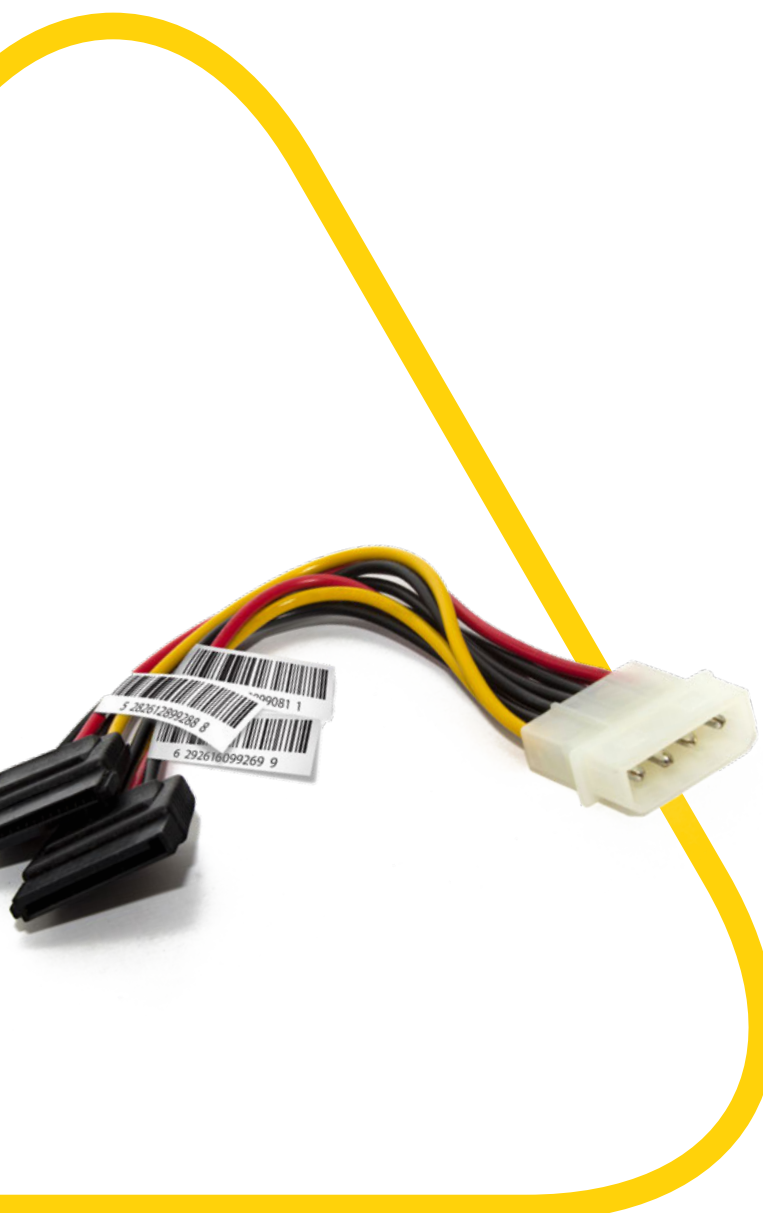
Key features

- Enhanced Durability for Consistent Readability
- Aesthetic Versatility

Product information

Code	Description	Location	Width (mm)	Service Program / Width (mm)
80051	2Mil Cast Gloss Vinyl/S659/1.5Mil PET	USA	1524	Indent
80052	3Mil Calendered Gloss Vinyl/S8072P/1.5Mil PET	USA	1524	Indent
80053	1.5Mil Gloss Urethane/S659/1.5Mil PET	USA	1524	Indent
80054	3Mil Calendered Matte Vinyl/S8072P/1.5Mil PET	USA	1524	Indent

Cable



Identify every cable with a cable label

Keeping track of cables in cabinets, workstations and offices is essential when installing, repairing or troubleshooting. Reliable part identification and branding depend on good printability, usually with thermal transfer printers and ribbons.

Smaller diameter cables need more flexible films and higher performance adhesives. Avery Dennison materials minimize 'butterflying' by combining a flexible film with a high cohesion, high shear adhesive.

Key features

- Good printability
- Good resistance to 'butterflying'
- High performance adhesive and flexible facestock
- UL-recognised, flame retardant and UV-resistant options
- White, highly flexible materials for flag labels
- Transparent, highly flexible materials for wrap around solutions

Application areas

- Supports wide range of cable applications
- Flag labels with space for text/barcodes
- Wrap-around labels where space is limited

Product information

Code	Description	Location	Width (mm)	Service Program / Width (mm)	UL Recognition
MZ4119	3Mil Synthetic Paper 3/DS128S/BG50# ni	China	1070	Indent	Indoor
79554	3.25 Mil Clear Vinyl NTC/S8025/50#SCK	China	1372	Indent	
79139	4 Mil White Flexible Vinyl TC/S8025/50#SCK	China	1372	Indent	
BWS707	63Mic FasClear 250/S8040/BG50# Wh	China	1000	Indent	Indoor
BWS708	Primax250/S8040/BG50# Wh ni	China	1070	Indent	Indoor

UL 969 ('Marking and Labelling Systems') is the most commonly used UL standard for labels, but it applies only to labels on smooth and flat surfaces. Avery Dennison offers materials that comply in addition with the following standards:

UL 817 – cord sets and power supply cords

UL 2238 – cable assemblies and fittings for industrial control and signal distribution

Federal Motor Vehicle Safety Standards (FMVSS) are US federal regulations. Standard FMVSS 302 relates to the burning behaviour of materials used inside road vehicles such as passenger cars, trucks, buses and agriculture machinery. Most automotive OEMs specify flammability testing based on FMVSS 302.

Products meeting these specifications are available, please contact your local Avery Dennison sales representative for details.

The standard UL 94 is used to indicate the flammability of plastic materials used in devices and appliances. Avery Dennison offers materials complying with UL 94 VTM-0, the most stringent classification, when tested as a flag label.

Durables Advantage NextGen portfolio



Avery Dennison's vast portfolio of general purpose label solutions for Durables goods provides numerous options from simple to more complicated substrates and applications.

Introducing the Durables NextGen portfolio, Avery Dennison now offers a range of more competitive PET products that come in a wide variety of choices including thickness, color, and adhesion that are suitable from low to medium/high volume general application projects such as product labeling, asset tagging, and instruction labeling, where good performance and affordability are key.

On top of its competitiveness, the NextGen product range delivers performance in printability, heat resistance and tear resistance that are found in the polyester based label materials in our standard range.

With the new Durables NextGen in place, you now have access to a complete set of solutions to address your varying needs – ranging from the most stringent applications requiring UL certification, down to the very fundamental labeling projects.

Key features

Facestock

- Various colors (white, silver, clear) and thickness that suit common market needs
- Excellent top coating layer suitable for most conventional presses, e.g., UV letterpress, Flexographic
- Excellent thermal transfer printability with the right choice of industrial ribbon

Adhesive

- Emulsion, solvent, and hotmelt based adhesives featuring various adhesion for different surfaces and application environments

Liner

- Standard glassine liners (80gsm - BG50; 60gsm - BG40)
- Super-calendered for excellent convertibility and dispensability
- Suitable for roll-to-roll application
- Low to medium dispensing speed is advised

Application areas

- Electronics parts
- White goods products
- Promotional and work-in-progress labels
- Asset tagging
- Applications requiring heat and chemical resistance

More about Durables NextGen adhesives

S8020

- A general purpose permanent adhesive exhibiting good clarity with medium initial tack and adhesion strength
- Suitable on a wide range of substrates, from medium to high surface energy
- Resistant to a small degree of chemical and heat exposure

S369

- An emulsion based permanent adhesive exhibiting medium to high initial tack and adhesion strength
- Excellent on a wide range of substrates, from medium to high surface energy, with a small degree of roughness and curvature
- Excellent resistance against a small degree of chemical and heat exposure

DS015U

- A solvent based permanent adhesive exhibiting medium to high initial tack and peel strength
- Excellent on a wide range of substrates, from low to high surface energy, with a small degree of roughness and curvature
- Recommended on more demanding applications such as electronic parts involving heat and mild chemical cleaning

Durables Advantage product information

NextGen

NEW

Code	Description
25 micron series application requiring good conformability	
MZ0420	25mic White PET TC5/S8020/BG50Wh ni
MZ0421	25mic White PET TC5/DS015U/BG50Wh ni
MZS1247	25mic Matte Chrome TC5/S8020/BG50Wh ni
MZ3002	25mic Bright Silver PET TC/S8020/BG40Wh ni
MZ0497	25mic Clear PET TC5/S8020/BG50Wh ni
MZ0426	25mic Clear PET TC5/DS015U/BG50Wh ni
50 micron series standard label application	
MZ0212	2mil WH PETC TC/S369/BG50Wh Imp
MZS1324A	50mic White PET TC5/S369/BG50Wh ni
MZ0487	50mic White PET TC5/DS015U/BG50Wh ni
MZS1327	50mic Matte Chrome PET/S369/BG50Wh ni
MZS1228	50mic Matte Chrome PET/DS015U/BG50Wh ni
MZ3001	50mic Bright Silver PET TC/S8020/BG50Wh ni
MZ0425	50mic Clear PET TC5/S8020/BG50Wh ni
MZ0496	50mic Clear PET TC5/DS015U/BG50Wh ni

Competitive

- Non-UL
- Hotmelt, emulsion, and solvent based adhesives
- General Purpose application

MOQ

Get in touch with your local Avery Dennison sales representative to select the right service program for your needs.



Standard

MZ0102	2M WH PET TC/S333/BG50Wh Imp
MZ0097	50mic Matte White PET TC/S333/BG50Wh Imp
MZ0098	50mic Matte White PET TC/S333/BG50Wh ni
MZ0104	2M Matte Chrome PET TC/S333/BG50Wh Imp
MZ0054	50mic Bright Silver PET TC/S333/BG50Wh Imp
MZ1067A	2M CL PET TC3/S8020/G80
72823	2mil Clear Polyester TC/S333/50#SCK

General purpose

- UL recognized
- Emulsion based adhesives
- Suitable for MSE and HSE substrates
- Battery information label, product label on white goods, electronic and electrical appliances

Engineered

040443	2mil White Polyester TC/S730/50#SCK
079453 *	2mil White Polyester TC/S8049/50#SCK
041044	2mil Matte Chrome PET TC/S730/50#SCK
079534 *	2mil Matte Chrome PET TC/S8049/50#SCK
061320	2mil Clear PET TC/S730/50#SCK ABC

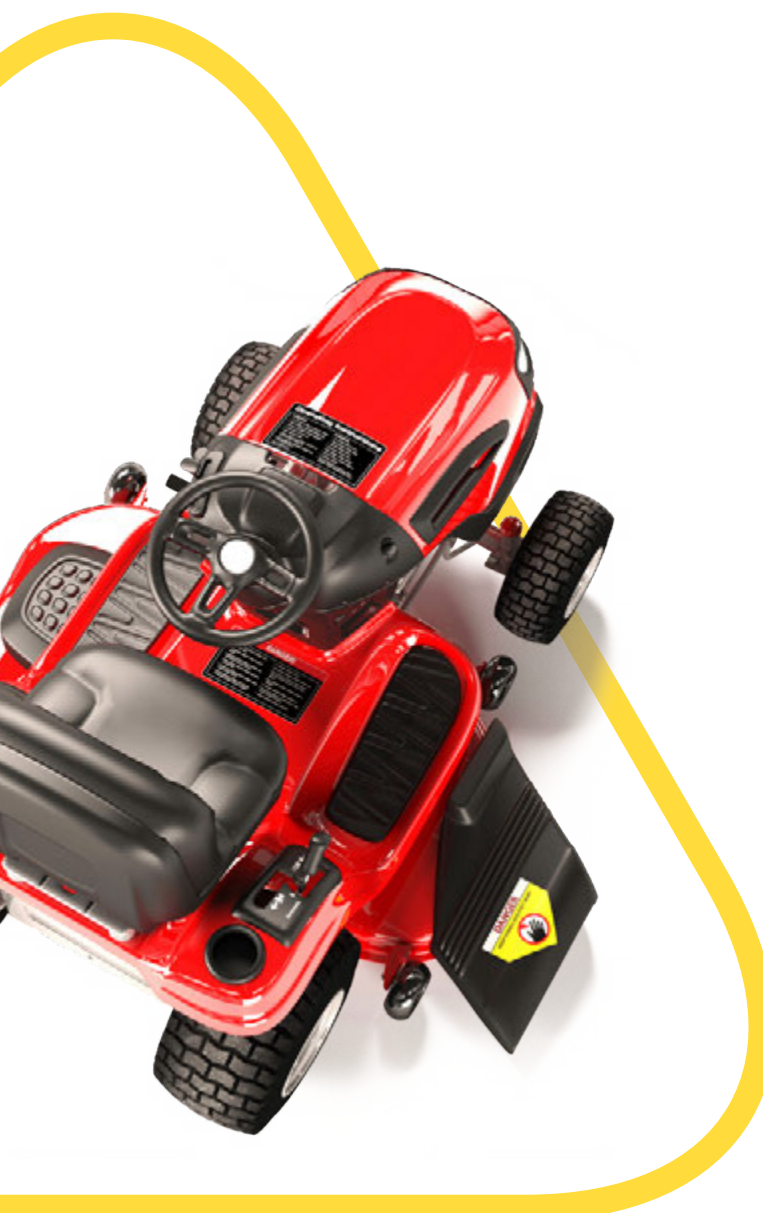
High performance

- UL recognised
- Solvent and RHA (Rubber Hybridized Acrylic) adhesives
- Suitable for LSE and difficult substrates
- Specific applications, e.g., automotive, electronics

Price

* RHA (Rubber Hybridized Acrylic) adhesive

Durable Goods



The one-fits-all solution for basic durable goods labelling

The Avery Dennison Industrial Portfolio gives you the performance you need for price-sensitive durables applications. It suits a wide range of substrates, including those used in domestic appliances, electronics and industrial goods.

Avery Dennison can help you to choose the right facestock/adhesive combination for any application - including both white and silver labels. Both A4 and roll samples are available for trial.

Key features

- Cost effective durable goods applications
- White PET, silver PET and white PP facestocks
- Compatible with standard pressing printing and thermal transfer
- High performance, all substrates permanent adhesive
- Broad application window
- Sample rolls available for your conversion and application trials
- Greater performance due to excellent adhesive performance on a wide range of substrates
- Suitable for rough, LSE-MSE-HSE substrates and applications
- Competitive pricing, suited for value-driven projects
- Reliable product performance, including for non-UL recognised applications

Application areas

- Domestic appliances
- Electronics
- Industrial goods

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)
White PET					
MZ0102	2M WH PET TC/S333/BG50Wh	ASEAN	1000	500/1000	Exact in some region
MZ0204	50micron Matte White PET TC/S333/BG50Wh ni	ASEAN	1000	1000	1000mm x 1000m
40443	2M WH PET TC/S730/50#SCK	Singapore	1372	686	1372mm x 500m
79453	2M WH PET TC/S8049/50#SCK	Malaysia	1372	686	1372mm x 500m
Chrome/Silver PET					
MZ0104	2M MAT CH PET TC/S333/BG50Wh	ASEAN	1000	500/1000	Exact in some region
MZ0054	50micron Bright Silver PET TC/S333/BG50Wh	ASEAN	1000	2000	1000mm x 1000m
79534	2M MAT CH PET TC/S8049/50#SCK	USA	1372		Indent
ESD Featured					
New MZ2057	2M Gloss White PET ESD TC/DS015U/BG50Wh ni	China	1070	1070	Indent
New MZ2058	2M Gloss White PET ESD TC/DS015E/BG50Wh ni	China	1070	1070	Indent
Durables Digital					
OZ2120	100u Inkjet Synthetic Paper/AF101/BG40Wh Imp	Singapore	1070	2140	1070mm x 2000m

Tamper-evident



The Avery Dennison Tamper Evident portfolio increases awareness among end users about brand protection and security issues. It suits a wide range of applications, resists tampering at all stages of end users' supply chain.

Avery Dennison can help you choose the right security products and applications that work for you and your customers. Our Technical Excellence Team is here to help with converting and application troubleshooting.

Key features

- Ready Width™ service offers products at standard per slitted widths and lengths
- Compatible with standard press printing and thermal transfer
- High performance security adhesive
- Customisable void text and colour with competitive price and flexible MOQ
- Sample rolls available for conversion and application trials
- Films destructible upon removal from substrate
- RoHS compliance film available
- Available in clear and white facestock

Transferable Void materials: Irreversible void message on substrate when label is detached

Non-Transferable Void materials: Irreversible void message on facestock, leaves no residual when label is detached

Customisation of Void materials

- Facestock: 25mic, 38mic, 50mic
- Color: white, silver, red, blue, yellow, black
- Void text: Fully customisable

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)
Transferable void					
ADS1410	Fasson® 25mic Matte White VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	134	267mm x 500m
ADS1411	Fasson® 25mic Gloss White VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	134	267mm x 500m
ADS1411INC	Fasson® 25mic Gloss White VOID PET TC/Transferable Permanent Inc/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1419	Fasson® 38mic Matte Red VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1424	Fasson® 50mic Clear VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1425	Fasson® 25mic Holographic VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1426	Fasson® 25mic Gloss Red VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1427	Fasson® 38mic FlexSecure Matte White 'VOID OPEN' Pos/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1428s	Fasson® 25mic FlexSecure Matte White VOID Neg-Sm/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1437	Fasson® 25mic Gloss White VOID Neg PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	134	267mm x 500m
ADS1438	Fasson® 50mic Gloss White VOID Neg PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1441s	Fasson® 25mic Matte White VOID Neg-Sm/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1445	Fasson® 50mic Matte White VOID PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1446	Fasson® 50mic Gloss Blue VOID Neg PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1447s	Fasson® 25mic Gloss Black VOID Pos-Sm PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1448s	Fasson® 25mic Gloss Clear VOID Pos-Sm PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1449	Fasson® 50mic Matte Black Checkerboard PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1450	Fasson® 50mic Grey Checkerboard PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1453	Fasson® 25mic Gloss Blue VOID Neg PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1454s	Fasson® 50mic Bright Silver VOID Pos-Sm PET TC/Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1458	Fasson® 25mic Matte Silver VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1463	Fasson® 25mic Gloss Black VOID PET TC/Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1465	Fasson® 25mic Matte Silver VOID PET TC /Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1467	Fasson® 50mic Matte Silver VOID PET TC /Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
AMH3602	Fasson® 2M White Void Treated PET/Permanent/CK40	Singapore	1000mm	125	250mm x 500m
LMH9602	Fasson® 2M Matte Chrome Void PET/Permanent/CK40	Singapore	1000mm	125	250mm x 500m
Non-transferable void					
ADS1412	Fasson® 38mic Matte Red "VOID OPEN" PET TC/Non-Transferable Permanent/BG50WH	Singapore	1070mm	1070	Indent
ADS1413	Fasson® 38mic Matte Blue "VOID OPEN" PET TC/Non-Transferable Permanent/BG50WH ni	Singapore	1070mm	134	267mm x 500m
ADS1414	Fasson® 25mic Clear VOID PET TC/Non-Transferable Permanent/BG50WH ni	Singapore	1070mm	134	267mm x 500m
ADS1420	Fasson® 38mic Matte White "VOID OPEN" PET TC/Non-Transferable Permanent/BG50WH ni	Singapore	1070mm	1070	Indent
ADS1439	Fasson® 38mic Matte Black 'VOID OPEN' PET TC/Non-Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1440	Fasson® 25mic Clear VOID PET TC/Non-Transferable Permanent/50mic PET Liner	Singapore	1070mm	1070	Indent
ADS1455	Fasson® 25mic Matte Silver VOID PET TC/Non-Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
ADS1456	Fasson® 50mic Matte Silver VOID PET TC/Non-Transferable Permanent/BG50#WH ni	Singapore	1070mm	1070	Indent
Destructible film					
ADS1409	Fasson® Tamperfas™ Film/Permanent/BG50WH ni	Singapore	1070mm	133.5	267mm x 500m
ADS1415	Fasson® Tamperfas™ Film Vinyl/Permanent/BG50WH ni	Singapore	1070mm	106.8	267mm x 400m
ADS1421	Fasson® Tamperfas™ Film Vinyl Clear/Permanent/BG50WH ni	Singapore	1070mm		Indent
ADS1434	Fasson® Tamperfas™ Vinyl Film EZ MX/Permanent/BG50#WH ni	Singapore	1070mm	107	267mm x 400m
ADS1442	Fasson® Tamperfas™ Vinyl Film/Permanent/P150 ni	Singapore	1070mm		Indent
SY0035	Fasson® FoamTac II/AP104/BG40#White ni	Singapore	1000mm	125	250mm x 500m
AB079	Fasson® PE HD Tamperevident/S700/BG45WH	Singapore	1000mm	125	Indent
Water contact indicator					
ADS1429	Fasson® Water Contact Indicator Label	Singapore	760mm		Indent
ADS1430	Fasson® 1M Clear PET Laminated Water Contact Indicator Label	Singapore	760mm		Indent

Automotive



Performance that goes the distance

Labels for the automotive segment have to cope with a range of challenges – harsh chemical environments, challenging substrates and the stresses imposed by vehicle wear and tear.

The Select Solutions Automotive portfolio contains materials with proven performance in the most extreme environments, meeting the needs of all supply chain processes, industry regulations and OEM testing parameters.

Key features

- Full range of self-adhesive materials, including multiple facestocks and adhesives
- Excellent adhesion to a wide range of substrates, including rough and low surface energy plastics
- High temperature and chemical resistance
- Durable performance in harsh environments
- Compliant with REACH, RoHS, IMDS and common testing parameters specified by automotive OEMs

Application areas

- Exterior: Fuel cap, tire pressure and tracking/ service labels
- Interior: Airbag, security/anti-counterfeit, warning, instruction and tracking labels
- Under-the-hood: Labels for heat/chemical-resistant warnings, engine component instructions, tracking, fluid containers, car batteries and cables

Product information

Code	Description	Location	Width (mm)	MOQ (m2)	Service Program / Width (mm)	Substrate			UL Recognition	c-UL Recognition
						Metal	Painted and Plastic	Rough/ Low Surface Energy		
79732	2Mil White PET TC/ S8029/50#SCK ABC	USA	1372		Indent	✓	✓	✓		
79453	2Mil White Polyester TC/S8049/50#SCK ABC	Malaysia	1372	686	1372mm x 500m	✓	✓	✓	Indoor / Outdoor	Indoor / Outdoor
79534	2Mil Matte Chrome Polyester TC/ S8049/50#SCK	USA	1372	686	Indent	✓	✓	✓	Indoor / Outdoor	Indoor / Outdoor
79653	2 Mil White Polyester TC/S8049A/90# EZ liner	USA	1372		Indent	✓	✓	✓	Indoor / Outdoor	Indoor / Outdoor
79654	2Mil Brushed Chrome Polyester TC / S8049A/90#EZ liner	USA	1372		Indent	✓	✓	✓		
Overlaminations										
MZ0082G	CLPET16TCY/ S8020D/23PET	Korea	1065		Indent	✓				
MZ0111N	1M CL PET TC/S8020/ BG40Wh Imp	ASEAN	1000	500	Exact in some region	✓		✓	Indoor / Outdoor	
77855	1Mil Clear Polyester TC/S730/1M PET	USA	1372		Indent	✓		✓	Indoor / Outdoor	Indoor / Outdoor

Polyimide Labels

Peak temperatures, peak performance

Printed circuit boards (PCBs) are found inside every electronic device, used to hold and connect electronic components.

Reliable tracking is required during production, and labels must survive exposure to extreme heat (up to 280°C) and cleaning agents. Avery Dennison polyimide label constructions are specially designed to maintain their physical integrity, and their high-performance heat-resistant topcoats ensure dependable legibility.

Minimising costs depends on finding a good match between application requirements and label performance, and Avery Dennison offers a complete polyimide portfolio.

Key features

- Materials tolerate peak soldering temperatures (up to 300°C)
- Resistant to PCB cleaning agents
- Options for different temperature profiles and cleaning processes
- Meets all PCB labelling requirements

Application areas

- PCB labelling before wave soldering/reflow process
- Computers, IT peripherals, telecommunications and consumer electronics
- Industrial and medical devices
- Automotive, aerospace and military components



Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)	UL Recognition
Non ESD						
MZ2000W	25µm Matte White PI HTC/S8088S/BG50#Wh ni	Singapore	250	125	250mm x 250m	Indoor
MZ2020	25µm Matte White PI HTC/S8088/BG50#Wh ni	China	500		Indent	Indoor
MZ2000	25µm Matte White PI HTC/S8088/BG50#Wh ni	Thailand	250	125	250mm x 500m	Indoor
MZ2001W	25µm Gloss White PI HTC/S8088S/BG50#Wh ni	Singapore	1000	125	250mm x 500m	Indoor
MZ2002W	50µm Matte White PI HTC/S8088S/BG50#Wh ni	Singapore	1000	125	250mm x 500m	Indoor
MZ2003W	50µm Gloss White PI HTC/S8088S/BG50#Wh ni	Singapore	250	125	250mm x 500m	Indoor
ADS1403	Polyimide II WH TC14/ S8088/PET50	China	1000		Indent	Indoor
MZ2000B	25µm Matte Bule PI HTC/S8088S/BG50#Wh ni	China	500		Indent	
MZ2000G	25µm Matte Green PI HTC/S8088S/BG50#Wh ni	China	500		Indent	
MZ2000P	25µm Matte Pink PI HTC/S8088S/BG50#Wh ni	China	500		Indent	
MZ2000Y	25µm Matte Yellow PI HTC/S8088S/BG50#Wh ni	China	500		Indent	
ESD Feature						
MZ2051	25um matte white PI HTC/S8095SD/BG50#Wh ni	China	500		Indent	
MZ2053	50um Matte white PI HTC/S8095SD/BG50#Wh ni	China	500		Indent	

Heavy Industrial



Applying tracking information onto raw materials such as metals, timber, stones and other building materials can be done in many ways - including the use of hanging tags and adhesive labels. Some materials can be hot at the point when they need to be labelled, while others can be rough, dusty or oily. Conventional solutions include handwriting, riveting or welding plates onto parts.

The Avery Dennison Heavy Industrial Labelling range allows label converters to offer a highly effective alternative labelling solution. It ensures traceability throughout the manufacturing process. Materials for conversion into both hanging tags and adhesive labels are available, covering different temperature ranges.

Labels and hanging tags applied at ambient temperatures can use cost effective solutions based on polyolefines. For peak temperatures up to +220°C, Avery Dennison offers heat stabilised polyester films. Topcoated aluminium films, featuring high abrasion and solvent resistance for thermal transfer print, can be used at temperatures up to +550°C.

Key features

- Productive labelling technology for raw material processors
- Performs in extreme conditions
- Barcodes can be applied very soon in the value chain
- Eliminates manual marking of parts, automating track-and-trace
- Tracks and traces inventory from initial manufacture to final delivery
- Helps reduce material reworking costs
- Complete portfolio covering a wide range of applications

Application areas

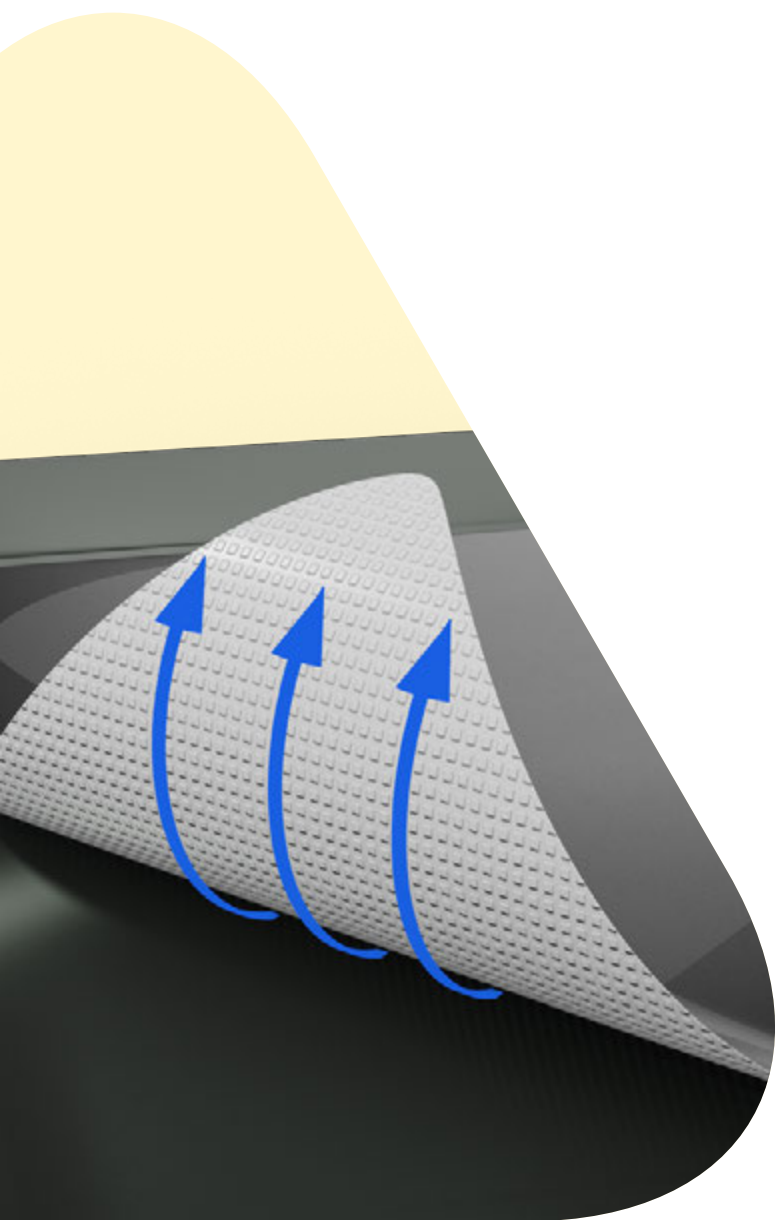
- Metal processing
- Building material industry
- Timber industry
- Manufacturing

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)
BJ213	Transfer HDPE 95 Matt Wh S8094 SGP BG45WH	Europe	1000		Indent
BJ237	HDPE Tag 190 Matte White	Europe	1000		Indent
BH655	Transf PET Wh Top HT S8093 BG50WH	Europe	1000		Indent
BG479	PET Tag 125 WH TOP HT	Europe	1000	6000	Indent
BG479	PET Tag 190 Matte White	Europe	500	Indent	



Air Egress



Reduce risks of bubbles for durable goods labeling

Label appearance can be impacted by wrinkles and bubbles, distorting the finish and spoiling the end result. This can be a particular issue for injection-molded plastics, such as PC and ABS, commonly used in the durable goods segment.

Injection molded materials can also contain volatile elements that can diffuse at elevated temperatures above 40°C and cause an 'outgassing' phenomenon. This phenomenon, as well as entrapped air during label application, can contribute to undesired bubble formation under the label material.

The conventional way to deal with bubbles under labels is to perforate the label surface to release trapped air, but this leaves undesirable holes in labels. Another method involves repeatedly reapplying the label, however this makes it more likely an applied label will be misaligned.

The Air Egress solution

Avery Dennison Air Egress technology uses a micro-embossed texture to create a nearly flawless, even finish. The textured adhesive creates a complex grid and allows trapped air to escape while the label is being applied.

The result are labels that go on smoothly and stay that way, without the unsightly wrinkles and bubbles that can cause application scrap and wasteful reworking. Larger labels on injection-molded plastics are especially prone to bubbles or wrinkles. Air Egress adhesive technology enables optimum label aesthetics, whether labels are applied manually or automatically. Excellent print performance on different facestocks, together with Air Egress technology, mean that eye-catching designs can be created over a larger surface area for an outstanding brand image.

Product information

Code	Description	Location	Width (mm)	MOQ (m ²)	Service Program / Width (mm)
New MZ0330E	50micron White PET TC/S333/Embossing Poly-coated liner	Malaysia	1070	2140	1070mm x 2000m
New MZS903	50micron White PET TCY/S692N/Embossed Polycoated liner ni	China	1070	2140	Indent
New MZS1290	50micron Matte White PET TC/S692N/Embossed Polycoated liner	China	1070	2140	Indent
New MZ0328	75u Matte White PET TC/S333E/Embossing polycoated liner ni	China	1070	2140	Indent
New MZ1118	2M CL PET TCY/SP4200N/G80Em	Korea	1065	2130	Indent

Durable Goods Labelling



Solving the low surface-energy labelling challenge

Automotive and other manufacturers are increasingly using low surface energy (LSE) plastics, thanks to their performance, low weight and attractive cost. Such LSE materials offer smooth, modern finishes, and lightweight benefits automotive components such as treated metal bumpers, body trim and interior panels are often now being made with lighter LSE plastics.

The durable and easy-to-clean finishes offered by these materials are also ideal for medical equipment, household appliances and a range of industrial applications.

Unfortunately, conventional adhesives designed to provide long-term stability do not bond easily to LSE materials. A simple way to understand this is to consider a waxed car, where water forms beads instead of spreading out across the surface. LSE plastics have a similar effect on a conventional label adhesive, making adhesive adhesion to the labelled substrate difficult. The lower the surface energy, the weaker the bond.

Strong and durable - RHA technology

Today's manufacturers need labels that not only adhere well but also withstand the harsh chemicals and high temperatures common in automotive and industrial applications. Rubber adhesives are tacky enough, but lack the necessary chemical and temperature resistance. Acrylic adhesives provide chemical and temperature resistance, but are not tacky enough.

Avery Dennison offers an innovative adhesive technology to address this challenge, enabling the creation of labels that retain crucial information on products or personal safety, and which stay in place and remain legible over a product's lifetime.

Product information

Code	Description	Location	Width (mm)	Service Program / Width (mm)	UL Recognition	c-UL Recognition
S8049 Adhesive						
79453	2M WH PET TC/S8049/50# SCK	Malaysia	1372	1372mm x 500m	Indoor / Outdoor	Indoor / Outdoor
79534	2M Matte Chrome Polyester TC/S8049/50# SCK	USA	1372	Indent	Indoor / Outdoor	Indoor / Outdoor
79786	2Mil Brushed Chrome Polyester TC/S8049/50# SCK ABC	USA	1372	Indent		
79653	2Mil White Polyester TC /S8049A/90# EZ Liner	USA	1372	Indent	Indoor / Outdoor	Indoor / Outdoor
79654	2Mil Brushed Chrome Polyester TC/S8049A/90# EZ Liner	USA	1372	Indent		
AL850	Transfer PET 75 Matt Silver - S8049 - BG42Wh BSS	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
AL851	Transfer PET 75 Matt White-S8049-BG42Wh BSS	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
AL854	Transfer PET Matt White-S8049-BG42Wh BSS	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
AO530	TT BG50Wh-S8049-BG50Wh BSS	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
BN515	Transfer PET Trans TOP-S8049-BG42Wh BSS	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
S8029 Adhesive						
79732	2Mil White PET TC/S8029/50# SCK ABC	USA	1372	Indent	Indoor / Outdoor	Indoor / Outdoor
BH781	Transfer PET Matt Chrome TOP-S8029-BG45Wh	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
BN949	Transfer PET Matt White-S8029-BG45Wh	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor
BN950	Transfer PET Matt Silver-S8029-BG45wh	Europe	1000	Indent	Indoor / Outdoor	Indoor / Outdoor





Rubber hybridized acrylic (RHA) adhesive technology uses an acrylic network for high cohesion/strength, along with domains of rubber for high adhesion on challenging substrates.

Key features

- Label materials engineered for LSE - plastics and lacquers
- Different adhesive coatweights for various surface structures
- High coatweight version S8049 for rough and also for oil contaminated surfaces (often found in automotive applications)
- Lower coat weight S8029 for smooth surfaces (including lacquers and LSE plastics in home appliances and electronics)
- Available on different polyester films
- Fulfills requirements of automotive OEM specifications
- UL and C-UL recognised

Application areas

- Automotive industry
- Appliance
- Lawn and garden (Outdoor)
- Industrial segments

Fasson® S8049, S8039 and S8029 adhesives

S8049 and its lower coatweight versions are proprietary RHA products, well-suited for use in applications where labels must adhere to rough and smooth LSE substrates.

Compared to widely used alternatives, S8049, S8039 and S8029 - based on Avery Dennison RHA technology - are easier to convert, with higher final adhesion values and better chemical resistance.



Conversion recommendations

The innovative formulation of Avery Dennison RHA adhesive ensures less adhesive ooze than alternative products, but the high adhesive coat weight requires special care during die cutting in order to minimise bleed. Recommended precautions include using sharpened dies (contact your tool supplier with sample material); setting up the correct die cutting depth; using rounded corners; maintaining minimum winding tension within shorter rolls; avoiding unnecessary heat exposure during conversion and storage; and ensuring immediate stripping after die cutting.

RHA technology combines rubber and acrylic performance to achieve the best of both worlds.

Key features

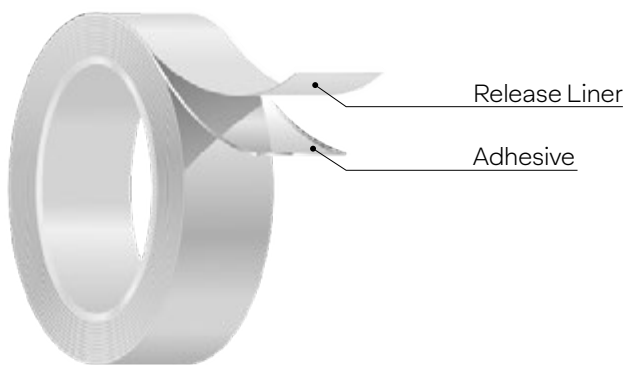
- Copes with rough, slightly oily or very low surface energy substrates (including PE, PP and lacquers)
- Provides high peel adhesion on the most difficult substrates
- High chemical, temperature, UV and ageing resistance
- Up to 20% higher conversion speed than common alternative, with less cleaning on press
- Available with a wide range of facestocks

Application areas

- Suits a majority of durables applications requiring a high tack adhesive and a long life time.

Code	Description	Recognition	Indoor/Outdoor	Ribbons included in the UL recognition												Surface included in the UL recognition																		
				Armor AXR600	Armor AXR7 +	Armor AXR8	DNPR300	DNPR510	DNP TR4070	DNP TR6070	DNP TR6075	Limak SP-330	Limak SP-410	ITW B324	Ricoh B110C	Ricoh B110CR	Ricoh B110CX	Ricoh B120EC	Others (see UL site or data sheet)	Aluminium	Stainless Steel	Acrylic paint	Alkyd paint	Polyester paint	ABS	Polycarbonate (PC)	Polypropylene (PP)	Polystyrene (PS)	Others (see UL site or data sheet)					
General Purpose Product EM/SV Silver Polyester Materials (continued)																																		
MZ0104	Fasson® 2M MAT CH PET TC/S333/BG50Wh	UL I O		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
#72826	*Fasson® 2 Mil Matte Chrome Polyester TC/S333/50#SCK ABC	UL I O		●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
#41044	*Fasson® 2 Mil Matte Chrome Polyester TC/S730/50# SCK	UL I O c-UL I O		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet		
#76660	Fasson® 2 Mil Matte Chrome Polyester TC/S8015/50#SCK ABC	UL I O c-UL I O		●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet			
#79534	Fasson® 2M Matte Chrome Polyester TC/S8049/50# SCK	UL I O c-UL I O		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet			
MZ0106	Fasson® Copy Code CH PET Plus/S333/BG50Wh	UL I O		●	●									●		●	●	●	●	●	●	●	●	●	●		●	●		●	●			
Synthetic Paper																																		
BW9664	Fasson® 3 Mil Synthetic Paper/S333/BG50#WH .1000	UL I O							●						●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
High Temperature																																		
MZ2001W	Fasson® 25mic Gloss White PI HTC/S8088S/BG50# WH ni	UL I			●	●	●					●	●				●	●		●											●			
MZ2000W	Fasson® 25mic Matte White PI HTC/S8088S/BG50# WH ni	UL I			●	●	●					●	●				●	●		●											●			
MZ2003W	Fasson® 50mic Gloss White PI HTC/S8088S/BG50# WH ni	UL I			●	●	●	●				●	●				●	●		●											●			
MZ2002W	Fasson® 50mic Matte White PI HTC/S8088S/BG50# WH ni	UL I			●	●	●					●	●				●	●		●											●			
MZ2000	Fasson® 1M Matte White PI TC/S8088/BG50#WH ni	UL I			●	●	●	●				●	●				●	●		●											●			
MZ2020	Fasson® 25mic Matte White PI HTC/S8088/BG50# WH ni	UL I			●	●	●	●					●				●	●		●											●			
Air Egress																																		
MZ0330	Fasson® 50micron White PET TC/S333E/ Embossed Polycoated Liner	UL I															●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MZS1337	Fasson® 50micron Gloss White/S8040E/ Embossed Polycoated Liner	UL I																										●	●		●			
MZ0336A	Fasson® 50micron Matte White/S8040E/ Embossed Polycoated Liner	UL I																										●	●		●			
MZS215A	Fasson® 50micron Matte Chrome/S8040E/ Embossed Polycoated Liner	UL I																									●	●		●				
MZS1320	Fasson® 50micron Bright Silver PET TC/S333E/ Embossed Polycoated Liner	UL I			●	●	●	●				●	●				●	●		●								●	●		●			
MZS0337A	Fasson® 75micron Matte White PET TC/S8040E/ Embossed Polycoated Liner	UL I																										●	●		●			
Cable & Wire																																		
MZ4119	Fasson® 3 Mil Synthetic Paper 3/DS128S/BG50#WH	UL I			●							●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Automotive																																		
#79453	Fasson® 2M WH PET TC/S8049/50# SCK ABC	UL I O c-UL I O		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet		
#79534	Fasson® 2M Matte Chrome Polyester TC/S8049/50# SCK	UL I O c-UL I O		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet			
AL854	Fasson® TRANSFER PET Matt White/S8049/BG42Wh BSS	UL I O c-UL I O		●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet			
AL851	Fasson® TRANSF PET75 MATT WHITE/S8049/BG42WH BSS	UL I O c-UL I O		●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet			
AL850	Fasson® TRANSF PET75 MATT SILVER/S8049/BG42WH BSS	UL I O c-UL I O		●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	refer data sheet			

Core Tape Products



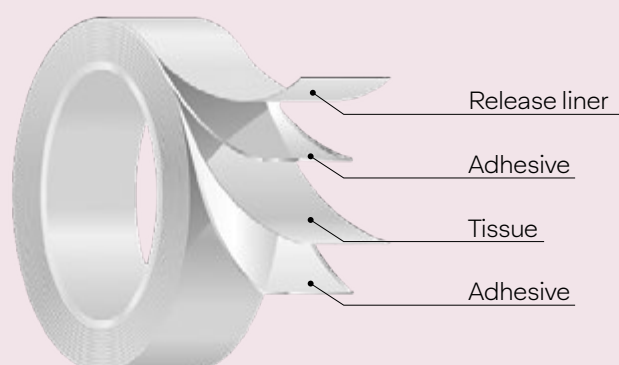
Transfer Tapes

A film of unsupported adhesive is coated directly onto a siliconized release liner. The release liner is coated with silicone on both sides to ensure that the tape unwinds easily and can be laminated to various substrates.

Double lined transfer tape constructions may be offered.

- Offers superior conformability
- Ideal for nameplate mounting and foam bonding

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
High Performance							
FT 1270	Clear	Modified Acrylic	70				China
HPA 1932	Clear	Crosslinked Acrylic	55		✓	✓	China
HPA 1934	Clear	Crosslinked Acrylic	100		✓	✓	China
HPA 1935	Clear	Crosslinked Acrylic	130		✓	✓	China
HPA 2922	Clear	Crosslinked Acrylic	50		✓	✓	Europe
HPA 2925	Clear	Crosslinked Acrylic	110		✓	✓	Europe
Economical							
FT 1370	Clear	Acrylic	70	✓	✓	✓	India
Low VOC							
FT 2150	Clear	UV cured	60	✓	✓		Europe
FT 2151	Clear	UV cured	80	✓	✓		Europe
FT 5808	Clear	Emulsion Acrylic	80	✓	✓	✓	China



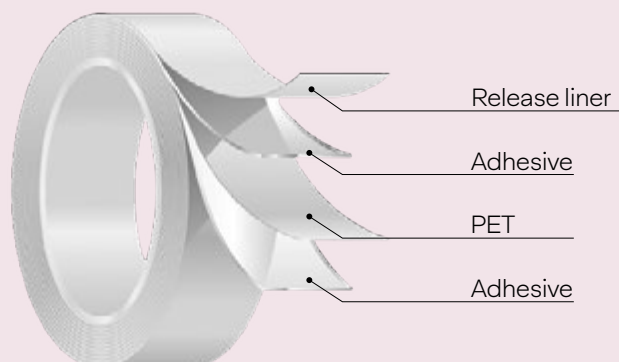
DC Tissue Tapes

Pure acrylic adhesive with low VOC / fogging performance for a broad range of industrial applications across a variety of industry segments.

- Excellent resistance to solvents, chemicals, plasticizers, moisture and UV light
- Low VOC and fogging performance
- Immediate initial adhesion for part placement

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
High Performance							
FT 7700N	Translucent	Modified Acrylic	120	✓			China
FT 8716I	Translucent	Modified Acrylic	150		✓	✓	China
Economical							
FT 5201	Translucent						India
FT 7508	Translucent	Modified Acrylic	80	✓	✓	✓	China
FT 7512	Translucent	Modified Acrylic	120	✓	✓	✓	China
FT 7515	Translucent	Modified Acrylic	150	✓	✓	✓	China
Low VOC							
FT 7770	Translucent	Emulsion Modified Acrylic	115	✓			Europe
FT 8270	Translucent	Emulsion Modified Acrylic	175	✓			USA
FT 5212	Translucent	Emulsion Modified Acrylic	120	✓	✓		China

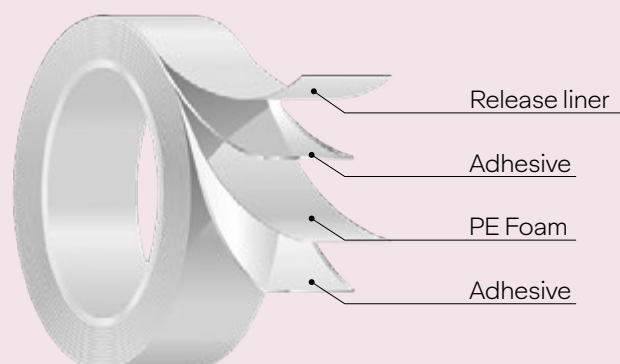
DC PET Tapes



This adhesive family offers high strength bonding to a wide variety of materials including low surface energy (LSE) plastics

- Thin PET carrier provides excellent conformability and dimensional stability
- Immediate adhesion on curved substrates
- Range of calipers fit a wide variety of application needs
- Wide bonding range of different materials including low surface energy (LSE) plastics (PMMA, ABS, PP, and nonwovens)
- Flexible gap filling performance on irregular surfaces
- Narrow shape die-cutting (+/- 1 mm gaskets), light shielding and detection capabilities

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
DC PET Tapes - Acrylic/Acrylic							
FT 7535	Clear	Modified Acrylic	50		✓	✓	China
FT 7540	Clear	Modified Acrylic	100		✓	✓	China
FT 7545	Clear	Modified Acrylic	150		✓	✓	China
DC PET Tapes -Rubber/Rubber							
FTE8	Clear	Rubber/Rubber	90	✓	✓		USA
FT 8109	Clear	Modified Acrylic	100		✓	✓	China
DC Differential Tape - Acrylic/Silicone							
FT 9302A	Clear	Acrylic/Silicone	100	✓	✓	✓	Korea
FT 9302SF	Clear	Acrylic/Silicone	140	✓	✓	✓	USA
DC Differential Tape - Perm/Rem							
FT 310	Clear	Perm/Rem	80	✓	✓	✓	Europe
FT 7327	Clear	Perm/Rem	40	✓	✓	✓	Europe



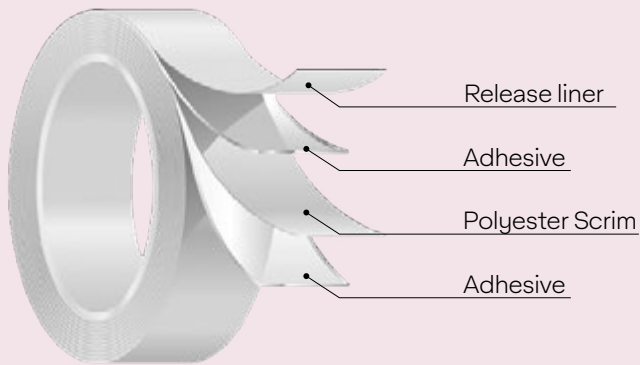
PE Foam Tapes

Designed for hi-end mounting applications in smart devices and electronics such as mobile phone assembly, window/lens bonding and gasket mounting. Suitable industrial applications where high temperature, UV resistance, good moisture and dimensional stability are required.

- Excellent adhesion to window lens and frame bonding, low and high surface energy substrates such as PP, ABS and painted steel, glass, PC and other
- Stable performance with waterproof resistance, IPX7 and IPX8
- Excellent push, drop and rotary drop resistance provides reliable performance with lens bonding
- Easy release, easy to apply

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
FM 2116	White	Rubber	1730		✓		USA
FM 2132	White	Rubber	900		✓		USA
FM 7600	White	Rubber	1100		✓		Europe
FM 2404L	Black	Modified Acrylic	400	✓	✓	✓	China
FM 2405L	Black	Modified Acrylic	500	✓	✓	✓	China
FM 2411L	Black	Modified Acrylic	1100	✓	✓	✓	China
FM 2454C	Black	Modified Acrylic	900	✓	✓	✓	China
FM 7669I	Black	Modified Acrylic	200		✓	✓	China
FM 7675I	Black	Modified Acrylic	250		✓	✓	China
FM 7680I	Black	Modified Acrylic	300		✓	✓	China
FM 7685I	Black	Modified Acrylic	350		✓	✓	China

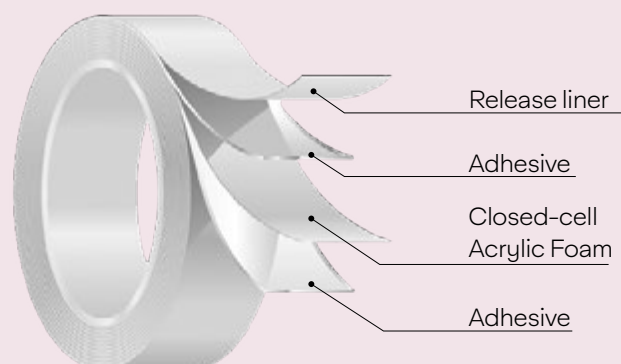
Scrim Tapes



Solvent free, emulsion based modified acrylic adhesive engineered for easy conversion in foam and fiber bonding applications. This adhesive family is soft enough to allow easy conversion on foams while providing sufficient cohesive strength to meet industry requirements for automotive interiors.

- A more sustainable adhesive solution
- Good immediate adhesion on various substrates
- Easy conversion

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
DC PET Tapes - Acrylic/Acrylic							
FTY 6663	Translucent	Hot melt rubber	220	✓	✓		Europe
FT 7951	Translucent	Modified Acrylic	90	✓	✓		Europe
FT 5859	Translucent	Emulsion	90	✓	✓		China



Acrylic Foam Bond Tapes

Our versatile acrylic foam bond portfolio of solutions is suitable for a wide range of component assembly, mounting and fixation applications in appliances, electronic devices, signage and graphics.

AFB is constructed of acrylic foam that is viscoelastic in nature with flow and self adhesion properties which offers excellent bonding to a broad range of substrates. The unique composition of acrylic foam chemistry provides exceptional durability

- Designed for a wide range of industrial applications requiring a high level of bonding strength.
- Engineered to provide strong tack and adhesion to a multiple range of substrates such as PC, ABS, PMMA and metal.
- Available in colored options

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
Multi Purpose							
AFB 6111G	Grey	Red imprinted PE Liner	1100		✓		Korea
AFB 6111WA	White	Red imprinted PE Liner	1100		✓		Korea
AFB 6180GW	Grey	White CP Liner	800		✓		Korea
AFB 8140G	Grey	Red PE Liner	400	✓			Korea
New AFB 5120G	Grey	Red PE liner with white logo	2000	✓	✓		China
New AFB 5115G	Grey	Red PE liner with white logo	1500	✓	✓		China
New AFB 5115B	Black	Red PE liner with white logo	1500	✓	✓		
New AFB 5115W	White	Red PE liner with white logo	1500		✓		
New AFB 5111G	Grey	Red PE liner with white logo	1100	✓	✓		China
New AFB 5111B	Black	Red PE liner with white logo	1100	✓	✓		China
New AFB 5111W	White	Red PE liner with white logo	800		✓		China
New AFB 5108G	Grey	Red PE liner with white logo	800	✓	✓		China
New AFB 5108B	Black	Red PE liner with white logo	800	✓	✓		China
New AFB 5108W	White	Red PE liner with white logo	800		✓		China
New AFB 5106G	Grey	Red PE liner with white logo	600	✓	✓		
New AFB 5106B	Black	Red PE liner with white logo	600	✓	✓		
New AFB 5106W	White	Red PE liner with white logo	600		✓		
New AFB 5104G	Grey	Red PE liner with white logo	400	✓	✓		
New AFB 5104B	Black	Red PE liner with white logo	400	✓	✓		China
New AFB 5104W	White	Red PE liner with white logo	400	✓	✓		China

Acrylic Foam Bond Tapes (continued)

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
General Purpose							
AFB 6610C	Clear	Red PE Liner	1000		✓		Korea
AFB 6625GR	Grey	Red PE Liner	250		✓		Korea
AFB 8612G	Grey	Red PE Liner	1200	✓			Korea
AFB 8640G	Grey	Red PE Liner	400	✓			Korea
AFB 8640GW	Grey	White CP Liner	400	✓			Korea
AFB 8660G	Grey	Red PE Liner	600	✓			Korea
AFB 8680G	Grey	Red PE Liner	800	✓			Korea
New AFB 5620G	Grey	Red PE liner with white logo	2000	✓	✓		China
New AFB 5615G	Grey	Red PE liner with white logo	1500	✓	✓		China
New AFB 5615B	Black	Red PE liner with white logo	1500	✓	✓		China
New AFB 5615W	White	Red PE liner with white logo	1500		✓		China
New AFB 5611G	Grey	Red PE liner with white logo	1100	✓	✓		China
New AFB 5611B	Black	Red PE liner with white logo	1100	✓	✓		China
New AFB 5611W	White	Red PE liner with white logo	800		✓		China
New AFB 5610C	Clear	Red PE liner with white logo	1000		✓		China
New AFB 5608G	Grey	Red PE liner with white logo	800	✓	✓		China
New AFB 5608B	Black	Red PE liner with white logo	800	✓	✓		China
New AFB 5608W	White	Red PE liner with white logo	800		✓		China
New AFB 5606G	Grey	Red PE liner with white logo	600	✓	✓		China
New AFB 5606B	Black	Red PE liner with white logo	600	✓	✓		China
New AFB 5606W	White	Red PE liner with white logo	600	✓			China
New AFB 5605C	Clear	Red PE liner with white logo	500		✓		China
New AFB 5604G	Grey	Red PE liner with white logo	400	✓	✓		China
New AFB 5604B	Black	Red PE liner with white logo	400	✓	✓		China
New AFB 5604W	White	Red PE liner with white logo	400	✓	✓		China

Tamper-evident Sealing Tapes

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
APT 2001	Red Voidable PET	Self wound, Linerless	25		✓		China
APT 2002	Blue Voidable PET	Self wound, Linerless	25		✓		China

Single Coated Tapes

Code	Product Color	Adhesive type	Adhesive Thickness (micron)	Application			Product Origin
				Automotive	General	Electronics	
FT 0411	Clear PP	White CP Liner	125	✓	✓		China
FT 0418	Clear PET	Red imprinted PE Liner	120	✓	✓		China

General Industries Tape Solutions

Appliances

The global market for home and industrial appliances continues to grow with the push to engineer lighter, more energy efficient products. In addition to labels, graphics and branding, our appliance adhesive solutions provide today's manufacturers with metal to glass bonding chemistries designed to affix advanced gasketing and sealant materials that help contain air and moisture, minimize vibration and contribute to improved operational efficiencies. Many of our appliance tape solutions are UL approved.

Glass assembly

- High conformability and extremely high internal strength
- Excellent durability
- Easy converting to increase efficiency

Nameplate

- High initial adhesion and tack
- Excellent converting and handling properties
- Outstanding resistance to solvents, chemicals, plasticizers, moisture, temperature and UV light



Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
Glass assembly						
AFB 61/51 series	Acrylic Foam Bond (White, Grey, Clear)	150 - 3000	Acrylic	900 x 16.5/33/50 600 x 33	Korea/ China	Multipurpose Acrylic Foam tape
FM 76 series	Double Coated PE Foam (Black)	150 - 300	Modified Acrylic	1040 x 50	China	Thin PE foam, waterproof resistance, IPX7 and IPX8
Nameplate						
HPA 193 Series	Transfer Tape	25 - 125	Crosslinked Acrylic	1235 x 50/100	China	High holding power and converting performance, High temperature & UV resistance
FT 75 DC Tissue Series	Double Coated Tissue	80 - 150	Modified Acrylic	1200 x 100	China	General purpose bonding application
AFB 61 Series	Acrylic Foam Bond (White, Grey, Clear)	150 - 3000	Acrylic	900 x 16.5/33/50	Korea	Multipurpose Acrylic Foam tape
FT7420	Double Coated PET	145	Rubber	1000 x 250	Europe	Aggressive adhesive with extremely high shear resistance. Allows repositionability and removability without leaving traces of adhesive
Display/Control panel/Membrane switch Mounting						
HPA 193 Series	Transfer Tape	25 - 125	Crosslinked Acrylic	1235 x 50/100	China	High holding power and converting performance, High temperature & UV resistance
HPA 2922, 2925	Transfer Tape	50, 110	Crosslinked Acrylic	1000 x 250	Europe	For LSE substrate
FT 75 Tissue Series	Double Coated Tissue	80-150	Modified Acrylic	1200 x 100	China	General purpose bonding application
FT 73 series	Double Coated PET	23 - 200	Modified Acrylic	1005/1070/ 1235 x 100	China	Great adhesion performance on a wide variety of substrates, including LSE plastics
Exterior trims/Decorative panel/Bumper rails mounting						
FM 76 Series, FM 24 Series	Double Coated PE Foam (Black)	150 - 1100	Modified Acrylic	1040 x 50	China	Waterproof resistance, IPX7 and IPX8 Excellent push, drop resistance
AFB 61/51 Series	Acrylic Foam Bond (White, Grey, Clear)	150 - 3000	Acrylic	900 x 16.5/33/50 600 x 33	Korea/ China	Multipurpose Acrylic Foam tape
FT 75 DC Tissue Series	Double Coated Tissue	80 - 150	Modified Acrylic	1200 x 100	China	General purpose wide range bonding application
FT 73 series	Double Coated PET	23 - 200	Modified Acrylic	1005/1070/ 1235 x 100	China	Great adhesion performance on a wide variety of substrates, including LSE plastics
Evaporator plate						
FT7420	Double Coated PP	145	Rubber	1000 x 250	Europe	Aggressive adhesive with extremely high shear resistance. Allows repositionability and removability without leaving traces of adhesive
FT 5212	Double Coated Tissue	120	Emulsion Modified Acrylic	1240 x 250	China	Versatile modified acrylic adhesive with great wetting performance
FT 75 DC Tissue Series	Double Coated Tissue	80-150	Modified Acrylic	1200 x 100	China	General purpose wide range bonding application
FT 8716l	Double Coated Tissue	150	Modified Acrylic	1230 x 100	China	High initial tack for quick bonding, Good adhesion on LSE such as PP, PE
Condenser plate						
FT 75 DC Tissue Series	Double Coated Tissue	80 - 150	Modified Acrylic	1200 x 100	China	General purpose wide range bonding application
FT 8716l	Double Coated Tissue	150	Modified Acrylic	1230 x 100	China	High initial tack for quick bonding, Good adhesion on LSE such as PP, PE



Packaging

To help meet the diverse packaging and closure system requirements of our global customers, we offer a wide range of custom closure options. These include pressure-sensitive splicing tapes, self adhesive box closures, adhesives for flexible packaging, tamper evident adhesives, and liner and carrier configurations designed to add assurance that important packages will arrive at their destination unopened.

- **Hang tag**
Engineered to perform on all types of materials, surfaces and hang tag plastics – Avery Dennison hang tag adhesives offer the performance you need.
- **Box closure / Envelope closure**
To help ensure that our customers can produce envelopes with reliable and effective closure tapes, we develop adhesive finger lift tapes tailored to perform with a complete variety of paper and plastic envelope types, even difficult to splice substrates such as siliconized papers or films.

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
Hang tag						
FT 8345	Double Coated PET	145	Rubber	1372 x 229	USA	High tack and adhesion with excellent shear strength.
Box closure/Envelope closure						
FT 8413 PG	Double Coated PET	150	Rubber	43 x 657	USA	Fingerlift edge for Unvarnished clay coated boxes
FT 8455	Double Coated PET	200	Rubber	1524 x 229	USA	Fingerlift edge for varnished or linerboard boxes
Tamper-evident sealing						
APT 2001	Red PET Tamper Evident Sealing Tape	150	Hot melt	50 x 50	China	
APT 2002	Blue PET Tamper Evident Sealing Tape	200	Hot melt	50 x 50	China	
APT 2001EC	Red PET Tamper Evident Sealing Tape, Eco grade	150	Hot melt	50 x 50	China	Looks like plain tape until lifted or removed, cannot be resealed.
APT 2002EC	Blue PET Tamper Evident Sealing Tape, Eco grade	200	Hot melt	50 x 50	China	



Optical

Optical lens manufacturers use our custom developed torque and moisture resistant lens grinding tapes to place and stabilize lenses during various stages of their production processes. Tape solutions for pads and laminates designed to perform on glass surfaces, including coated, mineral and organic glasses.

- **Lens grinding**
Optical lens manufacturers use our custom developed torque and moisture resistant lens grinding tapes to place and stabilize lenses during various stages of their production processes. Tape solutions for pads and laminates designed to perform on glass surfaces, including coated, mineral and organic glasses.
- **Lens smoothing and polishing**
After Lens grinding, the lens must be carefully polished in order to give it a perfectly transparent finish. Polishing/ smoothing is conducted with polishing pads.
- **Lens edging**
Today's eyeglasses accommodate a variety of lens shapes to match the ever-changing configurations of eyeglass frames. To simplify the precision edging process for manufacturers, we have developed a tape with a specialized foam carrier that makes the lens pad extremely resistant to the torque and vibration present during grinding. Our lens edging tapes are residue free and function with coated, mineral and organic glasses.

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
Lens grinding						
OF 2429	Single coated Blue Heat sensitive film	100	Acrylic (Blue)	75 x 35 100 x 35	Europe	Highly comformable to curved surfaces
OF 2475	Single coated Blue Heat sensitive film	75	Acrylic (Blue)	100 x 35	Europe	Removes cleanly from most optical lenses
OF 2495 SW Green	Self-wound	90	Acrylic (Green)	100 x 70	Europe	
OF 2494 SW Blue	Self-wound	90	Acrylic (Blue)	100 x 70	Europe	
Lens smoothing and polishing						
FT 7358	Double Coated PET-Differential Rem/Perm	80	Rem Acrylic/ Perm Rubber	1000 x 500	Europe	Adhesive tailored for application of removable pads
FT 7376	Double Coated PET-Differential Rem/Perm	100	Rubber/ Rubber	1000 x 500	Europe	
Lens edging						
FM 503L	Double Coated PE Foam (Black)	800	Acrylic	1230 x 100	Europe	Repositionable adhesive
FM 7681	Double Coated PE Foam (Black)	800	Acrylic	1000 x50/100	Europe	

Signage and Graphics



Compared to mechanical attachment methods for signs and promotional materials, our industrial sign construction tape solutions offer excellent fixation, weather resistance qualities and a smoother, more aesthetically pleasing finished product with no screws, rivets or nails. From industrial sign mounting tapes for labels and road sign assembly to nameplate attachments or illuminating displays, our products help to simplify, enhance and accelerate the production of short and long term signage.

We offer a portfolio of adhesive solutions tailored to the cost effective construction of industrial signs, traffic sign mounting and other sign construction applications. Our tapes are easy to apply and provide a variety of assembly and cost saving advantages to mechanical sign production, helping to deliver a smoother and cleaner finished product.

Nameplates, control panel attachment

We offer adhesive solutions designed to work with challenging substrates to help ensure that our customers can create clean and attractive nameplates. We provide an array of bonding tapes suited for permanent or near-permanent attachment of industrial nameplates and other rigid materials in interior and exterior environments. Select solutions in our portfolio are UL 969 recognized

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
Signage						
AFB 51 series	Acrylic Foam Bond (White, Grey, Black)	150 - 1500	Acrylic	600 x 33	China	Multipurpose Acrylic Foam tape
AFB 62 series	Acrylic Foam Bond (White, Grey, Clear)	640 - 1500	Acrylic	900 x 16.5/33	Korea	LSE Acrylic Foam tape
AFB 56 series	Acrylic Foam Bond (White, Grey, Clear)	150 - 1500	Acrylic	600 x 33	China	General purpose Acrylic foam tape for Economical bonding solution
FM 7600	PE Foam Tape (White)	1100	Rubber	1000 x 100	Europe	Applications that require an aggressive adhesive with high shear resistance
Nameplates, control panel attachment						
HPA 193 series	Transfer Tape	25 - 125	Crosslinked Acrylic	1235 x 50/100	China	High holding power and converting performance, High temperature & UV resistance
AFB 51 series	Acrylic Foam Bond (White, Grey, Black)	150 - 1500	Acrylic	600 x 33	China	Multipurpose Acrylic Foam tape
AFB 56 series	Acrylic Foam Bond (White, Grey, Clear)	150 - 1500	Acrylic	600 x 33	China	General purpose Acrylic foam tape for Economical bonding solution
FT7420	Double Coated PET	145	Rubber	1000 x 250	Europe	Aggressive adhesive with extremely high shear resistance. Allows repositionability and removability without leaving traces of adhesive



Credit Card Attachment

Temporary bonding of credit card to letters

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 9394	Double Coated PET-Differential Rem/Perm	130	Rem Acrylic/Perm Rubber	1372 x 229	USA	Temporary fixation of credit cards and other lightweight items to paper or plastic substrates

Automotive Tape Solutions

Automotive exterior



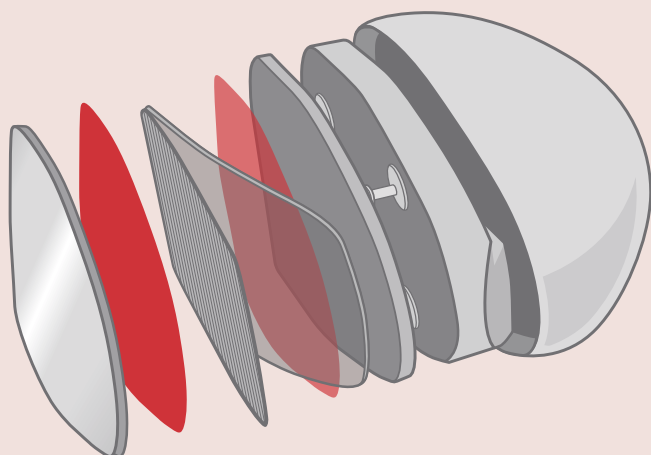
Badge and emblem

To help our customers deliver brand consistency and enhance the value of their products, we provide a variety of easily applied adhesive solutions used to affix exterior badges, emblems and decorative embellishments in place. Used with a wide variety of OEM paint systems and substrates, we engineer solutions to meet even the most demanding material attachment and mounting requirements.

- Bond to ABS, PP, stainless steel and aluminum
- Gap filling properties
- Resistant to fuels, waxes, greases and other chemicals
- Excellent bonding to a wide variety of car paints and clear coats
- Residue free removable tape for emblem and badge protection, and positioning foils

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
Badge and emblem protection						
FT 0411	Single Coated CPP	125	Removable Acrylic	1260 x 100	China	Long term removability
FT 0418	Single Coated PET	120	Removable Acrylic	1285 x 100	China	Long term removability
Badge and emblem mounting						
AFB 86xxG/56xxG	Grey Acrylic Foam	400 - 1200	Acrylic	900 x 33 600 x 33	Korea	High adhesion, good shear and High temperature resistance
FM 2454C	Black PE Foam	900	Modified Acrylic	1040 x 50	China	Excellent high temperature resistance & Moisture resistance
FM 2405L	Black PE Foam	500	Modified Acrylic	1040 x 50	China	Excellent high temperature resistance & Moisture resistance

Mirror mounting

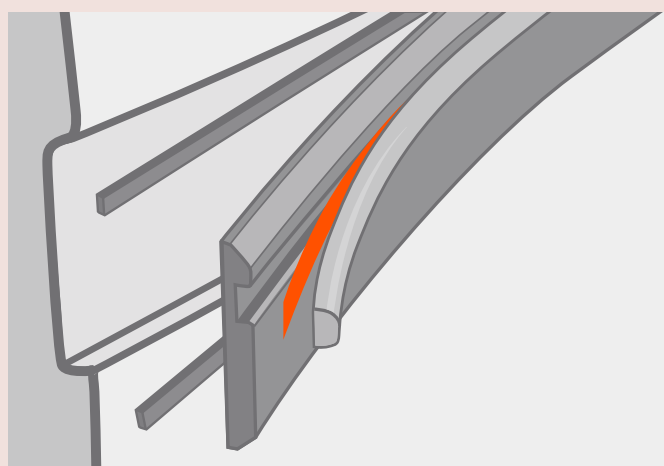


Our portfolio of automotive mirror mounting and assembly adhesives includes a selection of tapes designed for interior and exterior mirror assemblies. These specially formulated adhesive constructions perform through elevated heat, humidity and salt spray. With no heat or cure time required, our mirror bonding adhesives help reduce assembly times and improve manufacturing flexibility.

Our adhesive solutions help improve shatter resistance, reduce mirror vibrations and enhance opacity.

- Excellent bond to almost any surface
- Good heat, humidity and solvent resistance
- Good for filling and bonding rigid materials
- Adhesive is industry proven for bonding automotive OEM mirrors

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FM 2454C	Double Coated Black PE Foam	900	Modified Acrylic	1040 x 50	China	Excellent high temperature resistance & Moisture resistance
FM 2405L	Double Coated Black PE Foam	500	Modified Acrylic	1040 x 50	China	Excellent high temperature resistance & Moisture resistance
FT 7425	Double Coated White Polypropylene	250	Modified Acrylic	1040 x 50	China	Excellent high temperature resistance & Moisture resistance

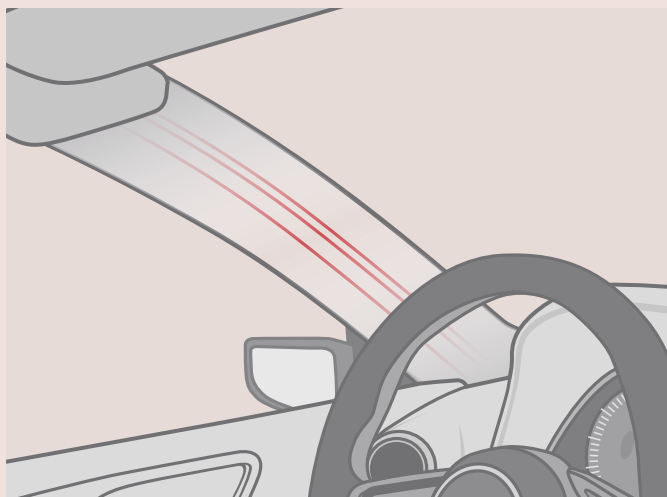


Body side molding

Our AFB range of product helps permanently laminates composite parts, plastic and metal parts to your vehicle's painted surfaces. You can install side body moldings to add style as well as instant protection against door dings and other hazards

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
AFB 83xxG/51xxG	Grey Acrylic Foam	400 - 1100	Acrylic	900 x 33 600 x 33	Korea	Still Plates & Body Side Molding

Automotive interior



Foam and felt bonding

We are a recognized industry leader with more than twenty years of experience providing automotive foam and fiber bonding solutions. Our solutions are essential to component assembly and production for many automotive OEM and suppliers, helping to reduce weight, improve fuel efficiency and reduce noise, vibration and harshness (NVH).

- Excellent adhesion to PUR and PE foam, and substrates such as PP, ABS and painted steel
- Stable performance under environmental conditions
- Excellent conformability to irregular and curved surfaces
- Easy release, easy to apply

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 1270	Transfer Tape	70	Modified Acrylic	1200 x 100	China	High Cohesion Acrylic adhesive. Excellent adhesion to PU and PE foam and substrates such as PP, ABS and painted steel
FT 1370	Transfer Tape	70	Acrylic	1000 x 100	India	Excellent adhesion to a variety of foam & fibers (PU, PE and EPDM foam)
FT 7700N	Double Coated Tissue	120	Modified Acrylic	1200 x 100	China	PU, PE and EPDM foam
FT 7701	Double Coated Tissue	150	Modified Acrylic	1020 x 100	China	High Cohesion Acrylic adhesive. Excellent adhesion to PU and PE foam and substrates such as PP, ABS and painted steel
FT 2150	Transfer Tape	60	Low VOC UV Cured Acrylic	1000 x 250	Europe	Low fogging properties



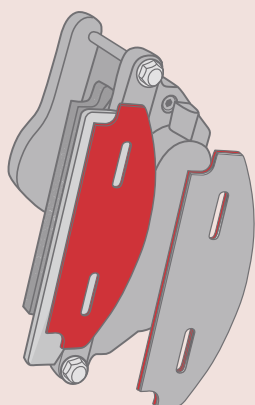
HVAC

Specially designed adhesive to bond PU, PVC, PE, EPDM and impregnated foams to HVAC system; Provide the high temperature and humidity resistant on irregular surface.

- Excellent adhesion to PUR and PE foam, and substrates such as PP, ABS and painted steel
- Stable performance under environmental conditions
- Excellent conformability to irregular and curved surfaces
- Easy release, easy to apply

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 1270	Transfer Tape	70	temperature and humidity resistant on irregular surface.	1200 x 100	China	High Cohesion Acrylic adhesive. Excellent adhesion to PU and PE foam and substrates such as PP, ABS and painted steel
FT 7700N	Double Coated Tissue	120	Modified Acrylic	1200 x 100	China	High Cohesion Acrylic adhesive. Excellent adhesion to PU and PE foam and substrates such as PP, ABS and painted steel
FT 7701	Double Coated Tissue	150	Modified Acrylic	1020 x 100	China	Long term removability without leaving traces when removed

Automotive interior (continued)

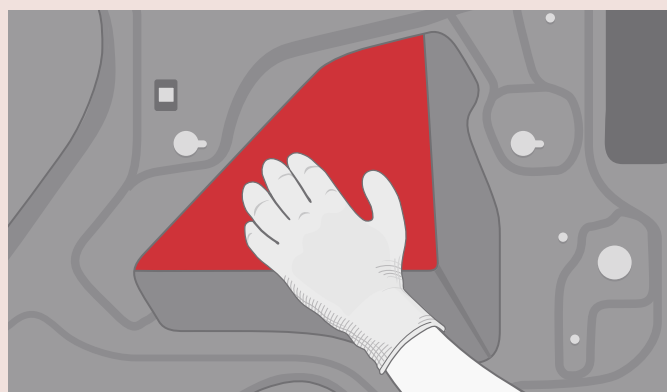


Buzz, squeak, rattle

Buzz originates from the structure or part itself, squeak is caused by friction between parts, and rattle is caused by impact. Buzz, squeak and rattle is a well-known source of extreme annoyance to the driver and the reason for many customer complaints and is an important part of the overall perception of a vehicle. Avery Dennison has a range of Transfer tapes and single coated flock and felt tape designed for anti-squeak applications.

- Excellent initial tack and adhesion
- High adhesion to low surface energy (LSE) plastics
- Meets OEM fogging specifications

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 5808	Transfer Tape	80	Low VOC Emulsion Acrylic	1020 x 100	China	Anti-squeak
FT 0900X	Single Coated Black Flock	900	High Performance Low VOC Acrylic	1372 x 229	USA	Anti-squeak
FT 1270	Transfer Tape	70	Modified Acrylic	1200 x 100	China	Anti-squeak

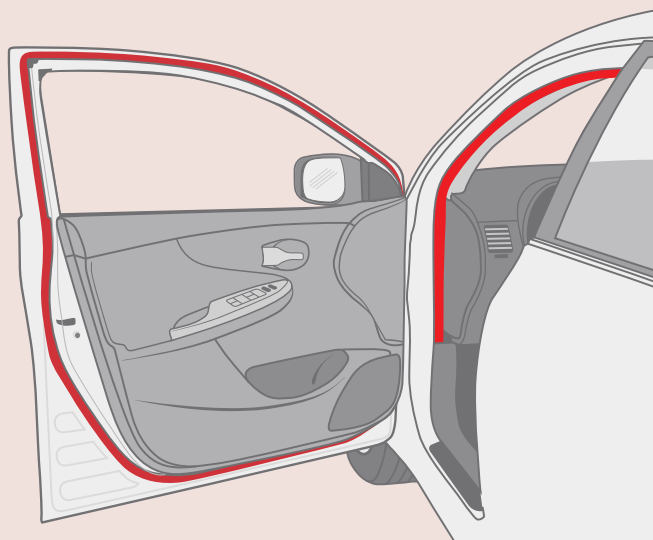


Temporary protection

Differential tapes with permanent adhesive providing strong adhesion to foam or film, and removable adhesive offering clean removable advantage on painting or plastic surfaces.

- Long term removability without leaving traces when removed
- Versatile laminating adhesives allowing easy conversion and offering good bond strength to a variety of substrates

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 310	Double Coated PET	80	modified acrylic / removable acrylic	1000 x 250	Europe	Long term removability without leaving traces when removed
FT 7327	Double Coated PET	40	modified acrylic / removable acrylic	1000 x 250	Europe	Long term removability without leaving traces when removed



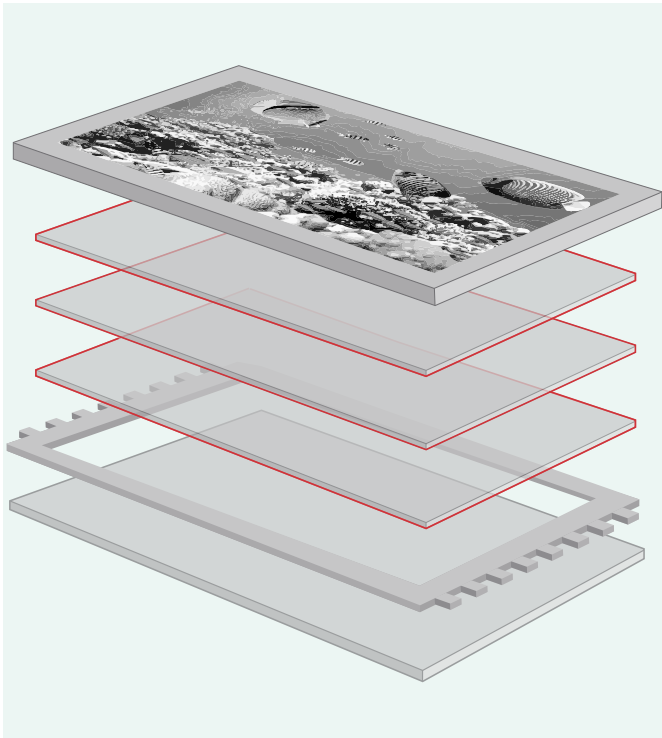
Gasket attachment

With the wide variety of urethane, EVA and rubber seals used in cars and trucks to keep dust, wind and rain at bay, reliable adhesives provide a simpler, lighter and more cost effective alternative to mechanical gasket attachments. Our high performance bonding tapes and adhesive solutions are used with a vast variety of gasket configurations to seal instrument panels, doors, door handles, speaker enclosures, firewall openings and headliners in many of today's vehicles.

- Suitable in applications when directly exposed to UV light
- Allows adhesion on transparent substrates
- Allows corrections during application
- Increased durability on softened plastics

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 5808	Transfer Tape	80	Low VOC Emulsion Acrylic	1020 x 100	China	conform very well to flexible gaskets/seals
FT 5859	DC Scrim	90	Low VOC Emulsion Acrylic	1020 x 100	China	conform very well to flexible gaskets/seals
FT 5832	Double Coated Tissue	120	Low VOC Emulsion Acrylic	1020 x 100	China	High adhesion to a variety of foams, felts, nonwoven and fibrous materials
FT 75 DC Tissue Series	Double Coated Tissue	80 - 150	Modified Acrylic	1200 x 100	China	High degree of clarity, Repositionable & Resistance to plasticizer migration
FT 109	Transfer Tape	60	High Performance Elastomer Adhesive	500 x 100	Europe	High Cohesion Acrylic adhesive. Excellent adhesion to PU and PE foam and substrates such as PP, ABS and painted steel

Electronics Tape Solutions



Light management

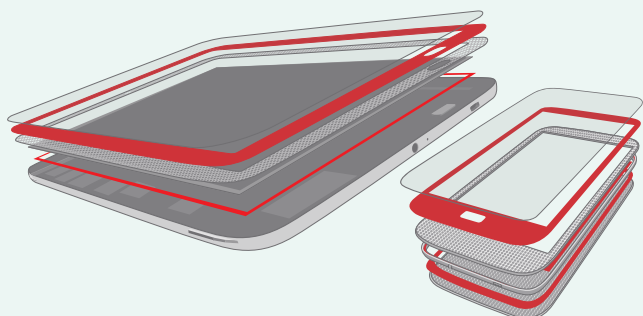
A range of light blocking black PET tapes designed for the bonding and assembly of LCD modules. Bonds well to most LCD components including reflectors, light guide plates, diffusion sheets and brightness enhancement films. These tapes offer multiple performance levels with varying degrees of temperature resistance and light blocking performance (up to 0% light transmission without pin holing per ASTM D1003)

- Solid black tape provides good opacity performance (no light reflection, eliminates the risk of pin hole) in back light unit or bonding back light unit to edge of the module
- Extra thin tape with optimal bonding strength designed for compact electronic devices
- Optimum outlook (PET carrier and liner) to eliminate the risk of wrinkle, shrinkage, fiber and article contamination in clean rooms
- Long-lasting; specially formulated adhesive and tape construction provides a strong, lasting bond in the back light unit and LCD display module

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 5262DL	Double Coated PET (Black)	60	Rem/Perm Modified Acrylic	1070 x 100	China	Designed for use with delicate electronic components that require a high level of light blocking and bonding strength
FT 5266DL	Double Coated PET (Black)		Rem/Perm Modified Acrylic	1070 x 100	China	Designed for use with delicate electronic components that require a high level of light blocking and bonding strength

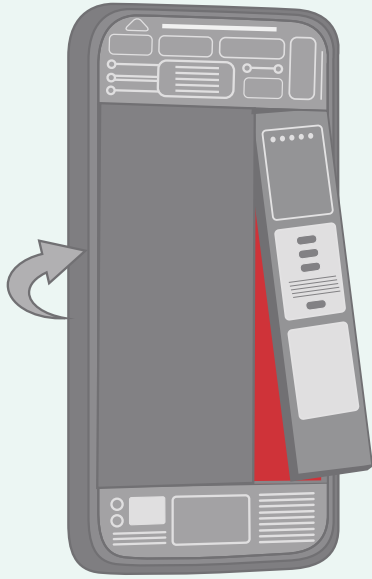
Window lens bonding

Avery Dennison Performance Tapes offers a range of highly engineered foam tapes designed to meet multiple performance level demands in lens bonding applications. These tapes provide excellent impact, push-out and adhesion performance for mounting display lenses or attaching LCMs (liquid crystal modules) and BLUs (back light units) in smart devices.



- Thin PET carrier provides excellent conformability and dimensional stability
- Immediate adhesion on curved substrates
- Range of calipers fit a wide variety of application needs
- Wide bonding range of different materials including low surface energy (LSE) plastics (PMMA, ABS, PP, and nonwovens)
- Flexible gap filling performance on irregular surfaces
- Narrow shape die-cutting (+/- 1 mm gaskets), light shielding and detection capabilities

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FM 92 series	Elastomer Foam	150 - 250	Black Cross-linked Elastomer	1000 x 50	China	Reworkable, Fit for narrow design (0.5-0.8mm) and High impact resistance
FM 93 series	Acrylic Foam	150 - 400	Black Acrylic	1000 x 50	China	Fit for narrow design, Water proof IPX 7, for curve surface bonding
FT 7831	Double Coated PET	30	Modified Acrylic	1235 x 100	China	Ultra thin DC PET tape designed for high precision mounting applications
FT 75 DC PET series	Double Coated PET	50 - 150	Modified Acrylic	1235 x 100	China	General purpose wide range bonding application

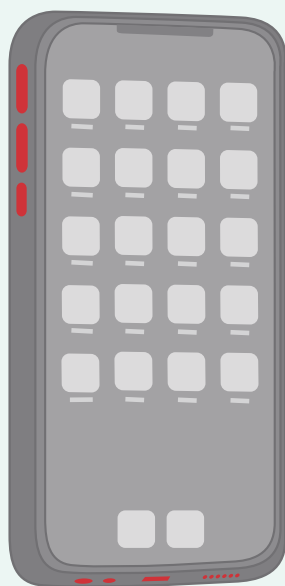


Component assembly

Avery Dennison Performance Tapes has a wide range of high performance pressure-sensitive tapes for mounting and securing components within mobile devices and electronics. Used for battery attachment, Flexible Printed Circuit (FPC) bonding, camera mounting and a range of other components. These tapes offer high adhesion, and help provide stability for delicate components.

- Long term removability without leaving traces when removed
- Versatile laminating adhesives allowing easy conversion and offering good bond strength to a variety of substrates

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 73 series	Double Coated PET	23 - 250	Modified Acrylic	1005/1235 x 100	China	Great adhesion performance on a wide variety of substrates, including LSE plastics
FT 75 DC PET series	Double Coated PET	50 -150	Modified Acrylic	1235 x 100		General purpose wide range bonding application
FT 9302A	Double Coated PET-Differential Silicon/Acrylic	100	Silicon/Acrylic	1000 x 100	China	Cost effective alternative to priming low surface energy (LSE) surfaces and apolar plastics or rubbers before application of tape.
FT 9302SF	Double Coated PET-Differential Silicon/Acrylic	140	Silicon/Acrylic	1372 x 229	USA	designed for bonding silicone foams and rubber adhesive to medium and high surface energy materials
HPA 193 series	Transfer Tape	25 - 125	Crosslinked Acrylic	1235 x 50/100	China	High holding power and converting performance, High temperature & UV resistance
HPA 2922, 2925	Transfer Tape	50 - 110	Crosslinked Acrylic	1000 x 250	Europe	High temperature holding power, LSE substrate
FT 0411	Single Coated CPP	125	Removable Acrylic	1260 x 100	China	Protection tape, long term removability
FT 310A	Single Coated PET	28	Removable Acrylic	1000 x 1000	Europe	Protection tape, long term removability
FT 310	Double Coated PET	80	Elastomer / Removable acrylic	1000 x 250	Europe	Long term removability without leaving traces when removed
FT 7327	Double Coated PET	40	modified acrylic / removable acrylic	1000 x 250	Europe	Long term removability without leaving traces when removed



Gaskets and mesh mounting

A broad array of gasket and mesh mounting tapes that bond to a wide range of foams, metals and plastics. These precise gasket mounting tapes feature high adhesion and good shear properties while helping to prevent rattling, provide cushioning and absorb shocks.

- Combines very high shear resistance with very good adhesion, even on low surface energy (LSE) substrates

Code	Product Construction	Thickness (um)	Adhesive	Roll Dimension (mm x m)	Country of Origin	Application Notes
FT 7831	Double Coated PET	30	Modified Acrylic	1235 x 100	China	Ultra thin DC PET tape designed for high precision mounting applications
FT 75 DC PET series	Double Coated PET	50 - 150	Modified Acrylic	1235 x 100	China	General purpose wide range bonding application
FT 75 DC Tissue Series	Double Coated Tissue (White & Black)	80 - 150	Modified Acrylic	1200 x 100	China	General purpose wide range bonding application
FT 8716I	Double Coated Tissue	150	Modified Acrylic	1230 x 100	China	High initial tack for quick bonding Good adhesion on LSE such as PP, PE
FM 76 Black Series	Double Coated PE Foam (Black)	150 - 1100	Modified Acrylic	1040 x 50	China	Waterproof resistance, IPX7 and IPX8 Excellent push, drop resistance

**Avery Dennison
Label and Packaging Materials
ASEAN**

Indonesia

Kawasan Industri Jababeka
Tahap 7 Blok B No 5,
Desa Wangunharja, Kecamatan Cikarang
Utara,
Kabupaten Bekasi 17550

Malaysia

No. 37 & 38, Jalan P4/6 Section 4,
Bandar Teknologi Kajang,
43500 Semenyih Selangor

Philippines

Unit 2925
L29 Joy Nostalg Center 17 ADB Avenue
Ortigas Center
Pasig Center 1600

General Enquiries:

lpm.ap.sapssa.marcom@averydennison.com

Singapore

5B, Toh Guan Road East
#05-03, 608829

Thailand

110/1 Moo 1 Tumbol Srisajorakhe Yai
Amphur Bangsaothong
Samutprakarn 10570

Vietnam

Lot I-11, CN13 Road Industrial Group 1
Tan Binh Industrial Park Ward Son Ky
Tan Phu District
Ho Chi Minh City

We would love to hear from you!

How do you find the Select Solutions magazine? Share your experience with us through this short anonymous survey.

[SURVEY
LINK](#)

label.sapssa.averydennison.com



DISCLAIMER – All Avery Dennison statements, technical information and recommendations are based on tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold with the understanding that purchaser has independently determined the suitability of such products for its purposes. All Avery Dennison's products are sold subject to Avery Dennison's general terms and conditions of sale, see <http://terms.averydennison.com>. © 2020 Avery Dennison Corporation. All rights reserved. Avery Dennison and all other Avery Dennison brands, this publication, its contents and product names and codes are owned by Avery Dennison Corporation. All other brands and product names are trademarks of their respective owners. This publication must not be used, copied or reproduced in whole or in part for purposes other than marketing by Avery Dennison.