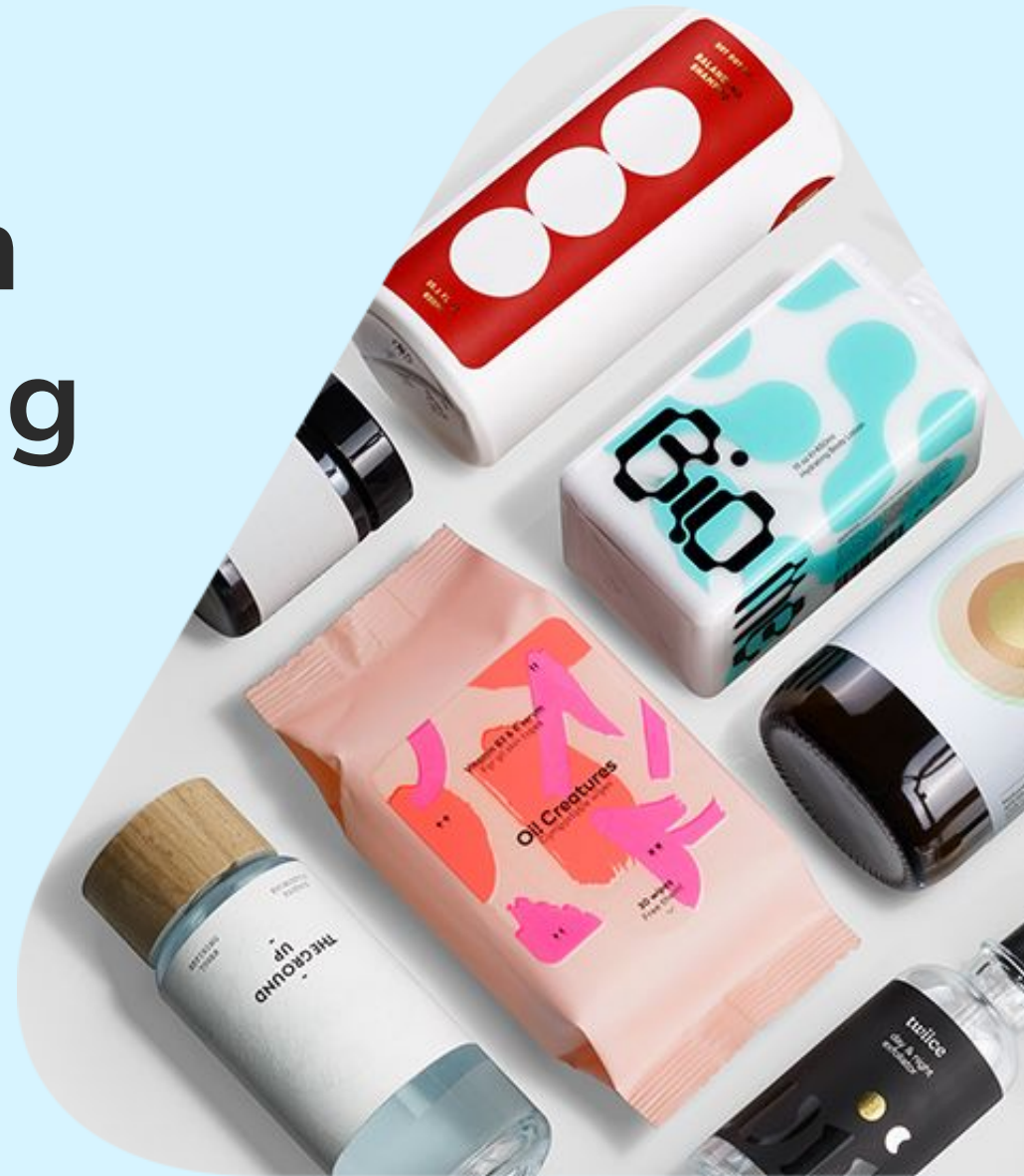


Trends and Solutions in the Label and Packaging Industry

May 2024



Today's Speakers



Ivy Wong

ASEAN Product Manager, Paper & VI
Avery Dennison

Having 8 years of experience with Avery Dennison. Ivy has had various responsibilities in Sales and Marketing, giving her extensive understanding industry trends and the needs of converters.



Yvonne Chung

ASEAN Product Manager, Film
Avery Dennison

With more than a decade of experience in plastic manufacturing and 3 years experience with Avery Dennison, Yvonne possesses the technical expertise and insights on solutions for the the current packaging trends.

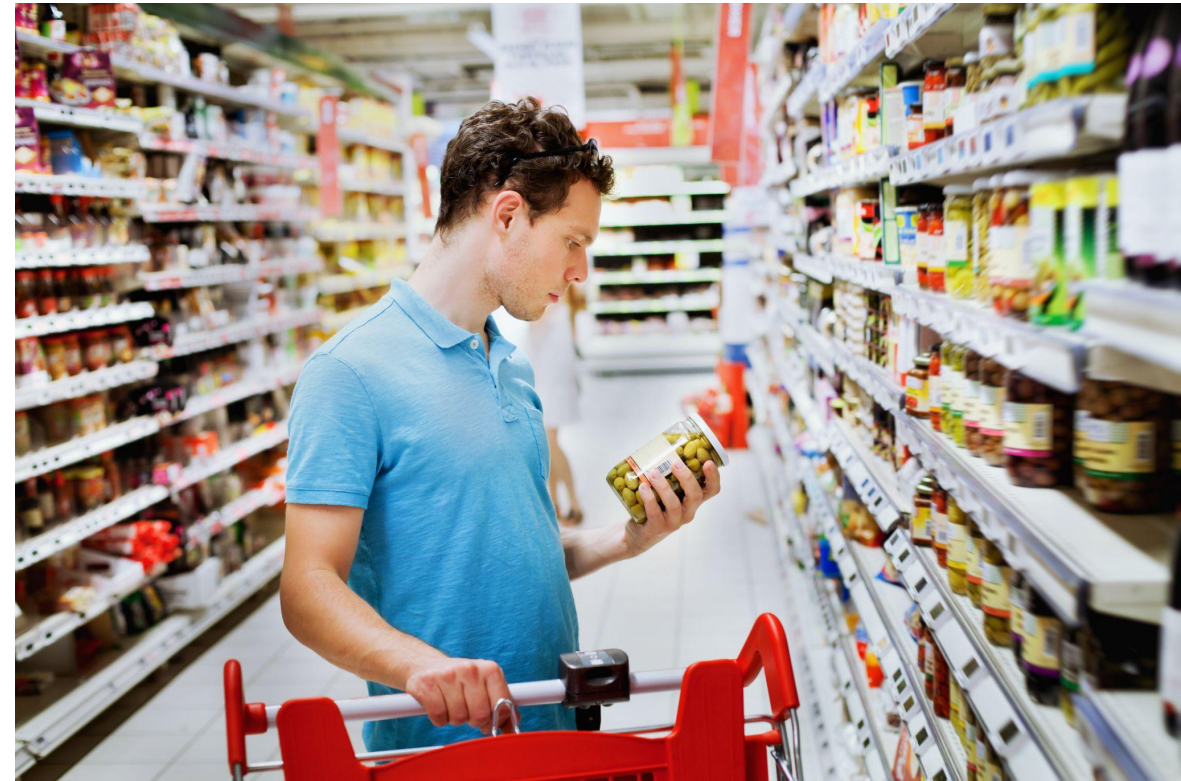
What are converters and brands looking for?



What are Converters & Brand Owners looking for?

1. Premium Look

- FMCG industries are competitive with many similar choices for end consumers
- Brand owners will need to attract consumers to buy their products and the first thing that customers see is the packaging design.



Premiumization trends across ASEAN countries



Thailand

Brick-and-mortar stores hold strong in retail alongside e-commerce growth. Manufacturers, even smaller brands, **focus on boosting visibility**. Soft drink prices set to rise due to input costs and health trends, allowing **rebranding as premium for better margins**.



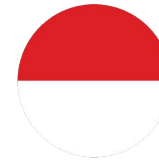
Philippines

Alcoholic drinks premiumization trend reemerged in 2022 post-COVID, with **demand for premium alcohol** picking up. Consumer openness to new drink experiences driving innovation in the sector.



Malaysia

Consumers prefer value-for-money deals, leading companies to **prioritize product value over price cuts**. Brand owners strive to increase sales and **brand awareness**.



Indonesia

Tirta Fresindo Jaya saw the biggest market share growth in 2023. They **boosted the "Le Minerale" brand with new packaging** and improved product availability in multiple channels.



Vietnam

As the economy recovers, major industry players are expected to focus on **meeting the growing demand for high-quality products**, intensifying market competition.

What are Converters & Brand Owners looking for?

2. Sustainability

- Allows brand owners to evaluate the packaging option, use sustainable product to improve brand's reputation and the entire value chain.
- Create differentiation amongst the informed consumers by offering sustainable products



What are Converters & Brand Owners looking for?

3. Differentiation

- Brand owners are looking for more customizable options to make their products stand out to customers.
- Easily customizable, portrays exactly what the designer wants.



What are Converters & Brand Owners looking for?

4. Efficiency

- Time is money, converters will want to run production as smoothly & efficiently as possible to maximize output and reduce scrap



Packaging Solutions Paper & VI



Types of Paper

	Cast Coated	Machine Coated	Uncoated
Also known as	Mirror Coat	Art Paper	Simili Paper
Paper Surface	Very smooth	Moderate	Rough
Print Quality	Excellent	Good	Fair
Stiffness	High	Moderate	Low
Glossiness	High	Moderate	N/A

AD Products - Prime Paper

Cast Coated		HPC F&B Pharmaceutical <ul style="list-style-type: none">• High Gloss Elite FSC (80gsm)• High Gloss Paper (80gsm)
Machine Coated		HPC F&B Pharmaceutical <ul style="list-style-type: none">• MC Prime FSC / Fascoat 2 FSC (80gsm)• MC Primecoat GP FSC (80gsm)• MC Elite FSC (70gsm)• rMC Primecoat FSC (80gsm) NEW
Uncoated		Price Tags Retail & Promotional Labelling <ul style="list-style-type: none">• Vellum FSC (70gsm)• Vellum Elite FSC (60gsm)

Increasing gloss, stiffness and print quality

rMC Primecoat FSC

Attain sustainability objectives while upholding superior print quality.

1. Key Features

- ✓ Made with 50% post consumer waste paper.
- ✓ Natural and sustainable appearance.
- ✓ Consistent label appearance and minimal colour discrepancies.
- ✓ Paired with bio-based hotmelt and thinner liner.

2. Product Name

	Item Code	Product Description
NEW	AW0501F	rMC Primecoat FSC/S1010/BG33Wh Imp FSC
NEW	AW0502F	rMC Primecoat FSC/S2010N/BG33Wh Imp FSC



rMC Primecoat FSC

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
rMC Primecoat FSC	0.63 kgCO ₂ E/sqm	-6%
Fascoat 2 FSC	0.67 kgCO ₂ E/sqm	Equivalent to 160,871 km driven by an average passenger vehicle

2. Water consumption comparison

Products	Water Consumed	Savings per 1,000,000 SQM
rMC Primecoat FSC	7.56 l/sqm	-6%
Fascoat 2 FSC	8.05 l/sqm	Equivalent to 51,597 minutes shower with an average flow



rMC Primecoat FSC

Understanding rMC Primecoat Performance

	Benchmark	
	AW0331AF Fascoat 2	AW0501F rMC Primecoat
FSC	Yes	Yes, 50% PCW
Basis Weight, GSM	80	80
Tensile Strength	★★★★★	★★★★★
Printability	★★★★★	★★★★★
Optical Appearance	★★★★★	★★★★
Glossiness	★★★★	★★★
Label Application	★★★★★	★★★★★

Compatible with ASEAN converters with running speed between 60-100 mpm

Good printability at par with incumbent material

Some visible impurities but no print aesthetic concerns.



MC Elite FSC

Thinner label for more flexible application

1. Key Features

- ✓ Good print performance on conventional single or multi colour print
- ✓ Converts well on moderate speed presses with optimal setting.
- ✓ Offers good flexibility for smaller diameter substrate application.
- ✓ Thinner construction that offers more label per roll.
- ✓ Reduced matrix wastage with lower basis weight construction.

2. Product Name

Item Code	Product Description
AW0486F	MC Elite FSC/S2025N/BG40Wh Imp FSC
AW0320F	MC Elite FSC/S1005/BG40Wh Imp FSC



MC Elite FSC

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
MC Elite FSC	0.64 kgCO ₂ E/sqm	-5%
Fascoat 2 FSC	0.67 kgCO ₂ E/sqm	Equivalent to 131,101 km driven by an average passenger vehicle

2. Water consumption comparison

Products	Water Consumed	Savings per 1,000,000 SQM
MC Elite FSC	7.71 l/sqm	-4%
Fascoat 2 FSC	8.05 l/sqm	Equivalent to 36,632 minutes shower with an average flow



MC Elite FSC

Understanding MC Elite Performance

	Benchmark	
	AW0331AF Fascoat 2	AW0320F MC Elite
FSC	Yes	Yes
Basis Weight, GSM	80	70
Tensile Strength	★★★★★	★★★★
Printability	★★★★★	★★★★
Optical Appearance	★★★★★	★★★★★
Glossiness	★★★★	★★★★
Label Application	★★★★★	★★★★★

Converts well on moderate speed presses with optimal setting.

Good print performance on conventional presses on single or multi colour print

offers a good flexibility



Adhesive Solution for Paper & VI



Types of Adhesives for Paper

Emulsion Acrylic



Advantages

- ✓ Wide service temperature range
- ✓ Excellent clarity
- ✓ Excellent long term adhesion
- ✓ Excellent converting
- ✓ Better resistance against heat, UV, plasticizers, chemicals

Limitations

- ⊗ Less affinity to low energy substrates

AD Products

- Biomass emulsion adhesive

Rubber Hotmelt



- ✓ High initial tack
- ✓ Best in class for carton-board
- ✓ High affinity to low energy substrates
- ✓ Excellent low application temperature

- ⊗ Limited heat & solvent resistance
- ⊗ Limited UV resistance, not recommended for clear films

- Bio-based hotmelt adhesive

Biomass Emulsion Adhesive

REDCert certified — gives an edge with sustainability

1. Key Features

- ✓ 30% renewable based content and APEO free
- ✓ Wide service temperature range (-20°C to 80°C)
- ✓ Excellent clarity and long term adhesion
- ✓ Equal performance to incumbent emulsion adhesive
- ✓ Available with all paper and VI labels.



Biobased hotmelt adhesive

Meet evolving end user expectations with a stronger, cleaner and sustainable new and improved adhesive.

1. Key Features

- ✓ Powerful initial tack and strong adhesion on difficult substrates.
- ✓ Low ooze and bleeding in tropical ASEAN conditions.
- ✓ Excellent high-speed converting and dispensing.
- ✓ Made with 30 % renewable content.
- ✓ Available with all paper and specific filmic labels.

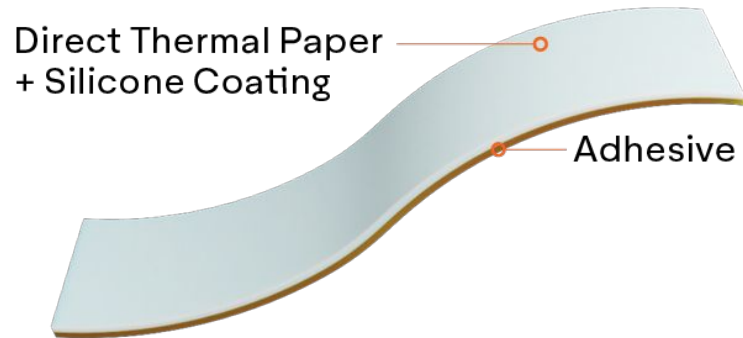


New Innovation — AD XeroLinr DT™



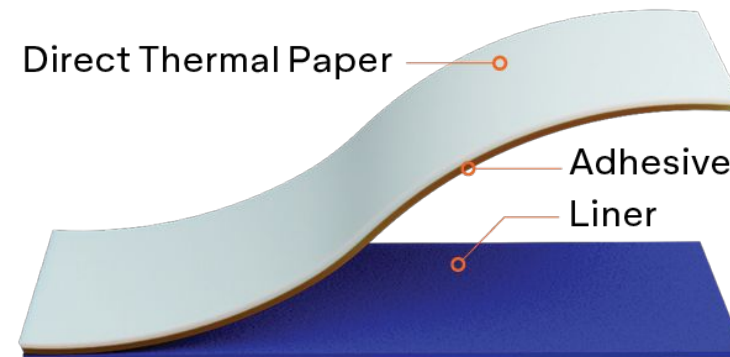
An innovative label structure

AD XeroLinx DT™



A PS label with a self-wound structure, eliminating the need for a silicone-coated release liner

Conventional DT label



A PS label containing a sandwich structure of liner plus silicone coating with an adhesive layer and facestock

Key Benefits



Efficient and accurate

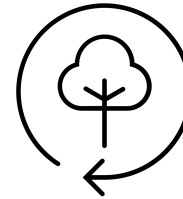
Reduce chances of introducing errors in the kitchen and packing wrong items into the wrong bag

Carries up to **2.3x** more labels per roll — Fewer roll changeover, increased machine uptime



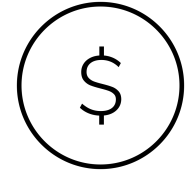
Resistance to heat and moisture

Reliable in all types of environments — hot or cold, moist or dry — strongly adhering on takeaway packaging up to 65°C, and suitable for cold beverages and microwaveable foods



Safe and sustainable

BPA free and the elimination of liner significantly reduces label waste and helps cut down carbon emissions by up to **21%** compared to traditional DT labels.



Better price-to-value

Labels are printed at variable lengths based on the need, minimizing empty space, enabling more labels per area — Reduction in total applied cost by **24%**

AD XeroLitr DT™

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
AD XeroLitr DT™	0.56 kgCO ₂ E/sqm	-21%
Linered DT	0.70 kgCO ₂ E/sqm	Equivalent to 609,579 km driven by an average passenger vehicle

2. Water consumption comparison

Products	Water Consumed	Savings per 1,000,000 SQM
AD XeroLitr DT™	6.36 l/sqm	-10%
Linered DT	7.09 l/sqm	Equivalent to 77,163 minutes shower with an average flow



Linerless Direct Thermal - Product Portfolio

Item Code	Product Description	Adhesive Type	Application
NW5900	Fasson® Premium-Therm TC25 Linerless/HP103	HMA (Permanent)	Logistic
NW5920	Fasson®Direct-Therm TC24 Linerless/HP103	HMA (Permanent)	Retails / QSR
NW5940	Fasson®Direct-Therm TC25 Linerless/HR630	HMA (Removable)	Retails / QSR
NW1900	Fasson®Premium-Therm TC30 Linerless/AP103	EMA (Permanent)	Logistic
NW1930	Fasson®Premium-Therm TC30 Linerless/S692N	EMA (Permanent)	Retails / QSR
NW1940	Fasson®Premium-Therm TC30 Linerless/AR700	EMA (Removable)	Retails / QSR

AD Products — Direct Thermal Papers

Price (Standard → Premium)


**rDT 300 LD (15%)
DT 200 LL**

- Non-Food Retail
- Dry Condition



DT 200 GPL

- Carton Box
- Transportation
- Limited Water resistance



DT 150 RL

- Food Retail
- Moderate water & heat resistance




DT 200 GP

- General Purpose
- Contamination resistant (no alcohol)
- Good water & heat resistance



DT 200 WS

- Weighing scale
- Contamination resistant (moderate)



DT Premium

- Pharma/Industrial
- Alcohol resistant



AD XeroLinr DT

- Great environmental & heat resistance




Performance (Left to Right in increasing Environmental Resistance)




Direct Thermal rDT300LD FSC

Sustainable labelling solution specifically designed for non food retail and logistic at dry condition

1. Key Features

- ✓ Made with 15% recycled content. First in the market.
- ✓ Non top coated direct thermal paper.
- ✓ Paired with bio-based hotmelt and thin liner.

2. Product Name

Item Code	Product Description
 NW0072F	rDirect Thermal 300LD FSC/S2010N/BG33Wh Imp FSC



Direct Thermal 200LL FSC

Tackle cost challenge with no compromise on quality

1. Key Features

- ✓ Cost effective through total applied cost.
- ✓ Designed to have minimal ooze during converting.
- ✓ Paired with bio-based hotmelt and thinner liner.

2. Product Name

Item Code	Product Description
NEW NW0083F	Direct Thermal 200LL FSC/S2025N/BG33Wh Imp FSC



Non Topcoated Direct Thermal Paper

Understanding rDT300LD and DT200LL performance

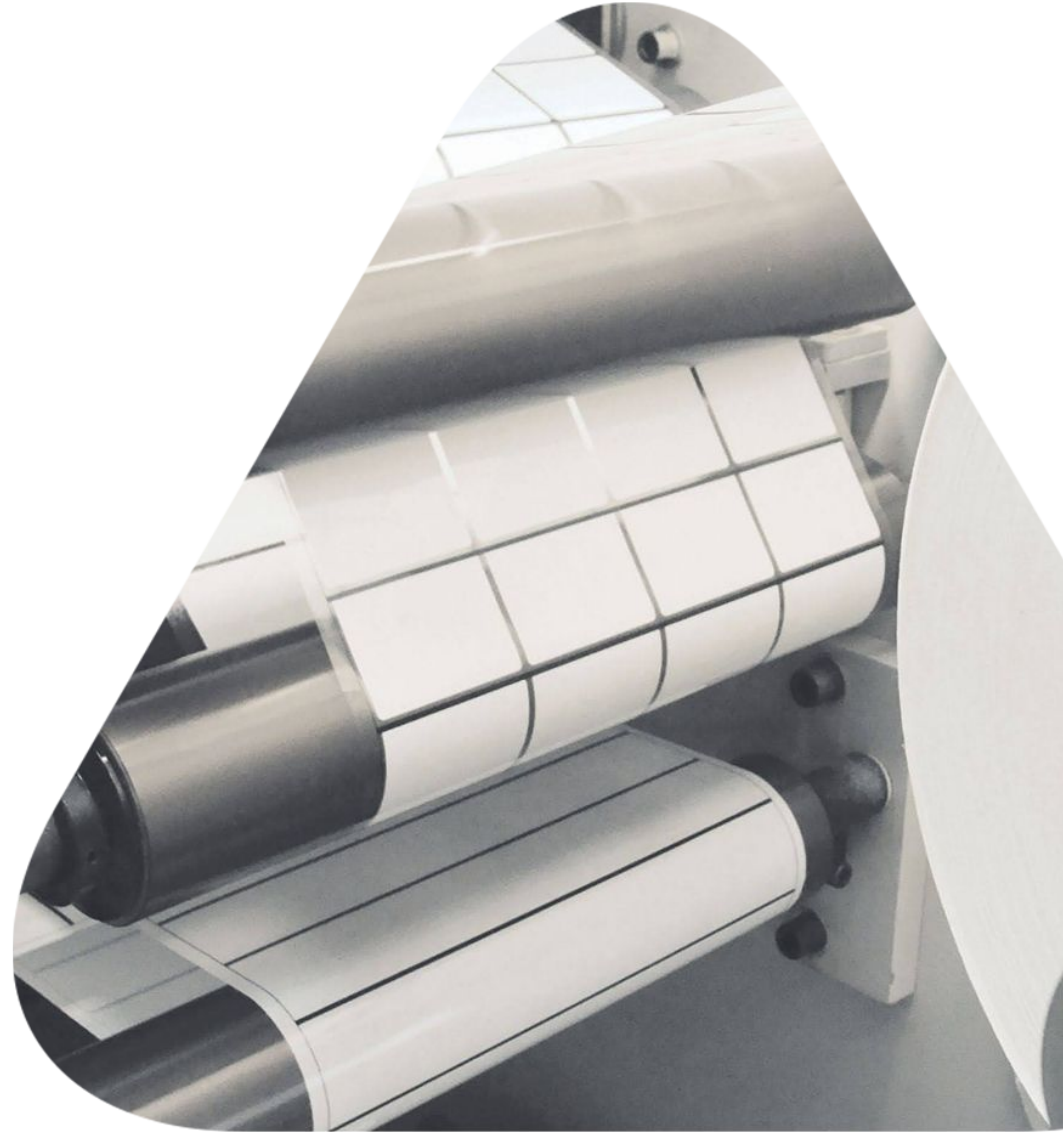
	r300LD	DT200LL
Water/ Moisture	★★★	★★★
Oil	★★	-
Environment (heat/UV)	★★★	★★★
Alcohol	-	-
Abrasion	-	-
Normal barcode	★★★	★★★★★
Ladder barcode	★★★	★★★

Suitable for applications in dry environment

Moderate heat & UV resistance for shipping label

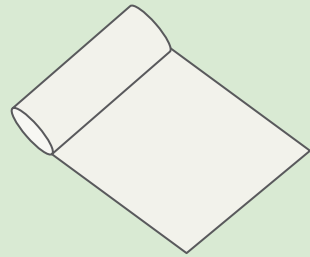


Packaging Solutions Film



Types of Film

Polyethylene

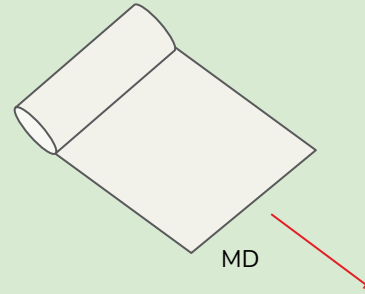


No Orientation

Conformable

Slightly hazy

Polyolefin

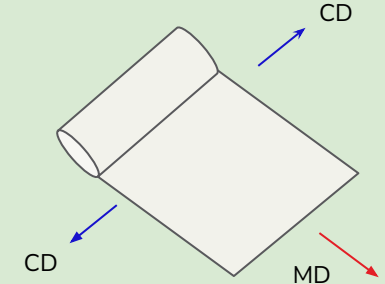


Machine Direction

Semi Conformable

Clear

Polypropylene



Biaxially oriented

Rigid

Clear

Orientation

Conformability

Clarity

Polyethylene, PE

Polyethylene is known for its excellent conformability which makes it an ideal film face for squeezable substrate.

1. Key Features

- ✓ Soft & flexible
- ✓ Slightly hazy, not 100% clear
- ✓ Limited heat and shrink resistance
- ✓ Not resistant to baby oil, causes swelling
- ✓ Can be stretched and torn

2. Application:



Home & Personal Care



Polyolefin, PO


Polyolefin has the mix of features from Polyethylene and Polypropylene film. It is designed to provide a balance of conformability and rigidity.

1. Key Features

- ✓ “Mixing” the properties of PE and BOPP
- ✓ Good conformability designed for semi squeezable applications (preferred PET, HDPE substrate)
- ✓ Enhanced clarity for “no-label” look
- ✓ Maintains excellent register during printing
- ✓ Not suitable for tube product

2. Application:

 Home & Personal Care

 General Purpose






Polypropylene, PP

Polypropylene has excellent clarity and it is used in applications where high clarity or “no-label” look is required.

1. Key Features

- ✓ Rigid, high tear resistance
- ✓ Dimensionally stable
- ✓ Excellent clarity for “no-label” look
- ✓ Limited/No conformability for squeezable application
- ✓ Top coating is recommended for best results of printing

2. Application:

-  Food & Beverage
-  Cosmetics
-  General Purpose



Polyester, PET

Polyester provide excellent protection against moisture, chemicals, scuffing, and extreme temperatures.

1. Key Features

- ✓ High strength, maximum durability
- ✓ High temperature resistance
- ✓ High chemical resistance
- ✓ High tear resistance due to biaxial orientation
- ✓ Excellent clarity or good opacity
- ✓ Good resistance to outdoor environment
- ✓ Limited conformability, not suitable for squeezable application

2. Application:



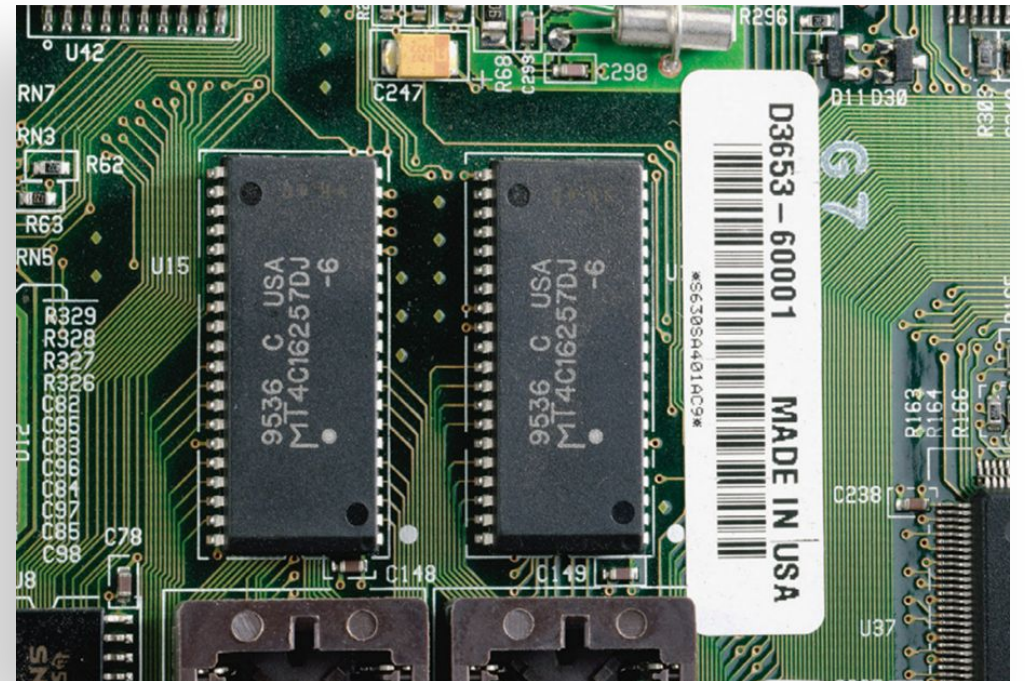
Electronics and Appliances



Automotive



Industrial



AD Products - Prime Film

Polyethylene - PE



Home & Personal Care

- PE85 Top White / Trans (Clear) / Silver
- PE85 NTC White / Trans (Clear)
- PE75 NTC White / Trans (Clear)

Polyolefin - PO



Home & Personal Care | General Purpose

- Flex+ White / Clear
- Global Co-Ex | Global MDO
- Fasclear | Primax

Polypropylene - PP



Food & Beverages | Cosmetics | General Purpose

- PP60 & 50 - Pearl White
- PP60, 50 & 40 - Gloss White / Clear / Silver

Polyester - PET



Electronic Appliances | Automotive | Industrial

- 1M PET TC (Matte Chrome/Clear)
- 2M PET TC (White / Matte White / Bright Silver / Matte Chrome / Clear)
- 3M PET TC (Matte White)

Increasing conformability

Recycled Polyethylene - rPE

Innovative filmic solution to help brands achieve sustainability goals

1. Key Features

- ✓ Made with 30% Post-Industrial Waste for sustainable advantage while being cost neutral compared to virgin PE
- ✓ Available in rPE white without compromising aesthetic, printing and dispensing performance.
- ✓ Ideal for home & personal care products, labels curved, contoured containers.

2. Next Steps

Item Code	Current Status
rPE 85/75 White	Available to try
rPE Clear	Under development



Recycled Polyethylene - rPE

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
rPE85	0.70 kgCO ₂ E/sqm	-6%
vPE85	0.66 kgCO ₂ E/sqm	Equivalent to 16,181 km driven by an average passenger vehicle

2. Water consumption comparison

Products	Water Consumed	Savings per 1,000,000 SQM
rPE85	4.25 l/sqm	-2%
vPE85	4.19 l/sqm	Equivalent to 7,270 minutes shower with an average flow



AD Flex+

Striking the perfect balance of flexibility, clarity and printability.

1. Key Features

- ✓ Semi conformable solution to provide a balance between conformability and rigidity.
- ✓ 55mic White & Clear Printable Polyolefin - High clarity film
- ✓ Improved on container blend and “no-label look” application.
- ✓ 32% more labels per roll enables higher efficiency throughout the entire value chain
- ✓ rFlex+ white is available with S692N and BG40 for sample trial

2. Product Name

Item Code	Product Description
BW7016	Flex+ Clear NTC/S692N/BG33Wh Imp FSC
BW7022	Flex+ White NTC/S692N/BG33Wh Imp FSC
BW7023	Flex+ White NTC/S692N/PET23



AD Flex+

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
AD Flex+	0.31 kgCO ₂ E/sqm	-54%
PE85	0.67 kgCO ₂ E/sqm	Equivalent to 144,810 km driven by an average passenger vehicle

2. Water consumption comparison

Products	Water Consumed	Savings per 1,000,000 SQM
AD Flex+	2.68 l/sqm	-12%
PE85	3.05 l/sqm	Equivalent to 39,159 minutes shower with an average flow



Recycled Polypropylene - rPP

Designed to meet brands' sustainability goals while being quality and price parity.

1. Key Features

- ✓ Crafted with 30% recycled Post Industrial Waste at the same cost as virgin PP - a first in the market
- ✓ Offered with Avery Dennison's industry-leading top coat for quality and durability.
- ✓ Launched with S7210 adhesive for PET and glass substrate at best price to value.
- ✓ Available in white without compromising on opacity or glossiness.
- ✓ rPP Pearlized White is available with S692N and BG40 liner



2. Product Name

Item Code	Product Description
BW7087	rPP Top White/S7210/BG33Wh Imp FSC
BW7022	rPP Top White/S7210/rPET23

Item Code	Product Description
BW7096	rPP Top White/S7210/rPET23
BW7115	rPP Pearlized White/S692N/BG40Wh Imp FSC

NEW

Recycled Polypropylene - rPP

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
rPP Top White	0.44 kgCO ₂ E/sqm	-14%
PP60 Top White	0.51 kgCO ₂ E/sqm	Equivalent to 28,238 km driven by an average passenger vehicle

2. Water consumption comparison

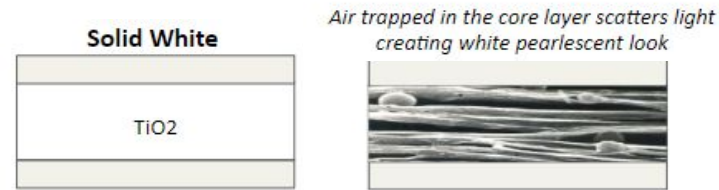
Products	Water Consumed	Savings per 1,000,000 SQM
rPP Top White	2.89 l/sqm	-8%
PP60 Top White	3.13 l/sqm	Equivalent to 24,944 minutes shower with an average flow



Positioning of PP White Products

Understanding PP White performance

Application -
GPP, F&B, Cosmetics



	PP50 Top White (Solid White)	PPNg Top Pearlized White	PP60 Top White	rPP Top White	Opalux 55
Thickness	50µm	60µm	60µm	60µm	56µm
Basis Weight, GSM	50	42	44	40	39
Top-coat	✓	✓	✓	✓	✗
Printability	★★★★★	★★★★★	★★★★★	★★★★★	★★★
Die cutting	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Stiffness	★★★★★	★★★★	★★★★	★★★★	★★★
Label application - Large Size (> 7cm x 16cm)	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Label application - Small Size (< 7cm x 16cm)	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

PP40

Thin and clear film design to achieve better blend with container and reduce material use

1. Key Features

- ✓ Thinnest PP material in the industry – less carbon footprint and carries more label per roll.
- ✓ Offered with Avery Dennison’s industry-leading top coat for quality and durability.
- ✓ Available in clear and colour for “no-label look” applications.
- ✓ Launched with S7210 adhesive for PET and glass substrate at best price to value

2. Product Name

Item Code	Product Description
BW7017	PP40 Top Clear/S692N/BG40Wh Imp FSC
BW7092	PP40 Top Clear/S7210/BG40Wh Imp FSC
BW7097	PP40 Top Clear/S7210/rPET23



PP40

Scope : Cradle to Gate + Transport + End of Life

1. Carbon emission comparison

Products	Carbon Emission	Savings per 1,000,000 SQM
PP40	0.46 kgCO ₂ E/sqm	-8%
PP50	0.50 kgCO ₂ E/sqm	Equivalent to 16,081 km driven by an average passenger vehicle

2. Water consumption comparison

Products	Water Consumed	Savings per 1,000,000 SQM
PP40	2.72 l/sqm	-4%
PP50	2.84 l/sqm	Equivalent to 12,488 minutes shower with an average flow



Positioning of PP Clear Products

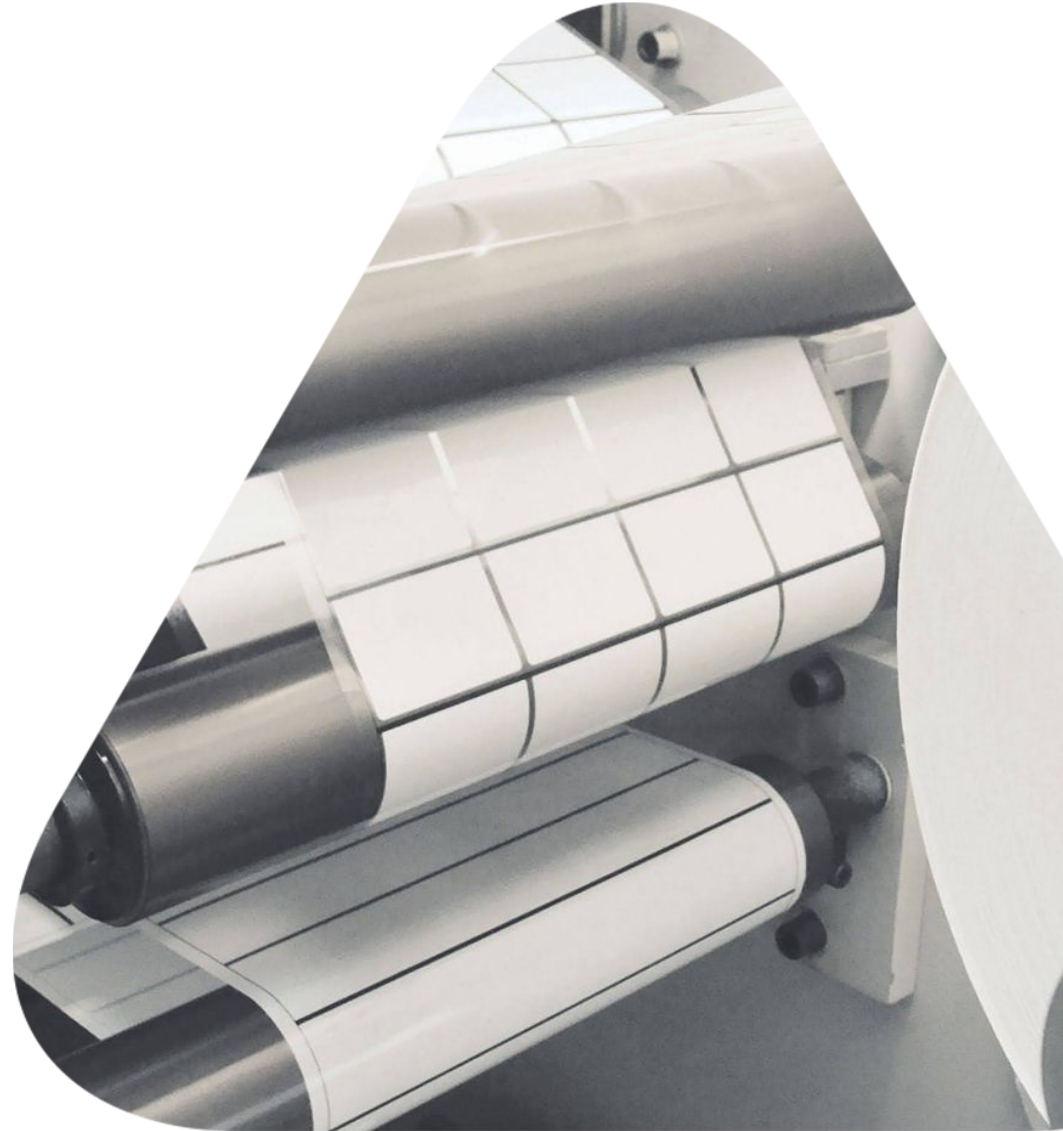
Understanding PP Clear performances

Application -
GPP, F&B, Cosmetics

	PP50 Top Clear	PP40 Top Clear
Thickness	50µm	40µm
Top-coat	✓	✓
Printability	★★★★★	★★★★★
Die cutting	★★★★★	★★★★★
Stiffness	★★★★★	★★★★★
Label application - Large Size (> 7cm x 16cm)	★★★★★	★★★★★
Label application - Small Size (< 7cm x 16cm)	★★★★★	★★★★★



Adhesive Solution for Film



S7210

Engineered for PET and Glass, tackle cost challenge without compromising quality

1. Key Features

- ✓ Enables short term repositionability.
- ✓ Low adhesive ooze for improved converting performance and dust-free labels.
- ✓ A clear adhesive that enables the 'no label look' with a clear film face material

2. Product Name

Item Code	Product Description
BW7087	rPP Top White/S7210/BG33Wh Imp FSC
BW7092	PP40 Top Clear/S7210/BG40Wh Imp FSC
BW7090	PPNg Top Trans/S7210/rPET30
BW7097	PP40 Top Clear/S7210/rPET23
BW7096	rPP Top White/S7210/rPET23



Services that fits your purpose



Services that suits your needs

EXACT™

Our EXACT™ program features more than 100 specifications for precise roll widths and lengths that match your slit patterns, enabling you to eliminate end-wasted roll remainders and offcuts.

Ready Width™

Low-volume products at standard widths and lengths currently not included in the EXACT™ program are available through our Ready Width™ program.

Indent

We can source constructions from around the world to meet your needs. Talk with your local Avery Dennison representative today to find an indent solution. Different MOQs and lead times may apply.

Full Deckle

Some of our product is sold with the complete web width. The trim will be charged, but not dispatched unless requested on your purchase order.



[Learn more about our product services](#)

Work with us to find the best solution

You're the expert in your business, we're the expert in labeling.

Work with us to find the best solution for your customers with the services below.

Mix & Match™

Choose from a set range of unconventional label constructions created to address your unique application and performance needs.

Engineered Solutions

Challenging problems sometimes require custom solutions, and our Engineered Solutions service allows you to differentiate your products with custom-made labels that defy the norm.



MyAvery Dennison™

Your one stop ordering solution

Access all product information at your fingertips

Search products and prices, download datasheets, review service programs, request quotes and samples, and submit claims – all with a few clicks.

Visualize your order

See all past and current orders, and request order-related paperwork — it's a great source of data for your business analytics.

Customize and optimize your rolls.

Our slit optimization feature lets you visualize and plan for how you want to slit each roll for maximum efficiency and productivity.

Access anytime, anywhere.

Available on multiple devices, you can access the portal wherever you are.



Thank you



**AVERY
DENNISON**