

# **RFID PLAYBOOK**

Private Brand Apparel Packaging For Academy Sports + Outdoors

# **General Overview**

### What industry standards to follow?

Academy Sports + Outdoors is following all industry standards set forth by GS1 RFID serialized encoding standard, GS1 RFID tag placement standards, and Auburn University RFID Lab ARC inlay standards. All tagging requirements must meet these standards prior to arriving in our stores.

### What carries RFID tagging?

All Private Brand Academy Sports + Outdoors apparel and footwear brands that are being shipped into and sold at any of our Academy Sports + Outdoors retail stores.

- All Apparel, Accessories, Footwear, Hosiery, Belts, and Wallets for the listed Private Brands.
- All seasonal program items.
- All Basic/Replenishable SKU's.
- All Omni Channel items and Dot com items (sold in-stores and/or online)
- Chase Buys: in scope if it can be implemented in time without jeopardizing delivery and adhering to Academy Sport's retail specs. Otherwise, work back with your Academy Sport's Merchant to determine.

### Out of Scope:

• Items where RFID tags are not compatible with the product, as identified through the Auburn University RFID Lab

### **Getting Started**

The following outlines a standard framework to integrate RFID into the Academy Sports + Outdoors private brand apparel and footwear packaging. This includes major points and areas that should be considered; however, every company must tailor the steps to fit the needs of their business and supply chains. If at any time you have questions, please contact the Academy Sports + Outdoor Merchant team or the Avery Dennison RFID team.

### **Develop an Internal Team**

- Engage with nominated suppliers to begin procurement discussions.
- Be prepared to provide what products you are tagging and estimated forecasts.
- Develop an internal quality check process to ensure compliance according to all the requirements within this playbook.

# **Tagging Requirements**

- RFID inlay stickers should be placed on packaging only.
- RFID tags or inlays cannot cover any text or images.
- If an item is being stickered, the domicile with the country of origin should not be covered up it needs to be visible to the customer. The supplier can print the country of origin on the RFID sticker if needed.
- No staples, perforations, swift tach, folding or die cuts through the inlay as it could impact the inlay performance and become unreadable.
- No RFID inlay placement on bottom of polybags, bottom of boxed items or near the under wire for bras, on glass, on liquids, on Silvadur, or near metal/foil
- RFID <u>cannot</u> be applied to an EAS tag.
- No metal foils, holograms or metallic inks should be used on any packaging containing the RFID inlay. If so, you MUST receive approval from Academy Sports + Outdoors directly.
- Please make sure that there is only ONE RFID tag per product.

### Testing

• For materials containing metals or metallic inks, it's critical to conduct thorough testing. Testing is required annually for each fabric and RFID combination.

### Identify RFID Product - Label and Tags (all brands; mandatory)

Based on the Academy Sports + Outdoors inlay spec, use the largest inlay size available that fits your packaging.

	Existing non-RFID UPC item	New RFID item code
Apparel, Accessories & Hosiery	MAG-UPC-100	ACA-UPC-100
	ACA-UPC-103	ACA-UPC-106
	ACA-VT-UPCR	ACA-VT-RFID

 UPC RFID Label AD Sonic Academy Item Code: ACA-UPC-100 Base roll: 5-607087-000-01 Dimensions: 1.811" x 1.375" with perforation Inlay: AD Sonic u9 - Spec R certified Finished Goods Item: ACA-UPC-100\_4-248140-000-00



### 2. Generic Price Ticket for size strips/t-shirts Academy Item Code: ACA-VT-RFID

Cut Singles (packed per SKU) - 5-604942-23X-00 Dimensions: 1.5" x 3.25" Inlay: AD-23X u9 - Spec R certified Finished Goods Item: ACA-VT-RFID\_4-248138-000-00



\*\* Generic embedded hangtags should only be used when size strip is the core branded packaging, or if the inlay sizes available do not fit your current packaging. It must be placed behind the primary hangtag. \* \*\* Swift tack embedded inlay hangtag through the inside left neck/left waist seam. Swift tack length is ½ inch and the embedded hangtag will need to be tucked inside the shirt or pants. This is an exception from the GS1 placement guidelines, for folded programs only\*

Belt RFID Price Ticket
 Academy Item Code: R-T-PERY-ACAPFL100
 Cut Singles (sew in label)
 Dimensions 20mm x 120.65mm
 Inlay: EOS-402 r6, Spec R
 Finished Good Item: R-T-PERY-ACAPFL100



Wallet RFID UPC Sticker
 Academy Item Code: RFID-PERY-MAG1000
 Base roll:
 Dimensions: 17mm x 73mm
 Inlay: EOS-430 u9, Spec R
 Finished Goods Item: RFID-PERY-MAG1000



	Existing non-RFID UPC item	New RFID item code
	GEN-ST-020_Generic UPC Sticker	GEN-ST-020 RFID_Generic RFID UPC Sticker
Apparel, Accessories	GEN-ST-001_Generic End Label REGULAR – R3	GEN-ST-001 RFID_Generic End Label REGULAR – R3
& Hosiery	ACA-UPC-103	ACA-UPC-106 RFID

5. Footwear Generic UPC Sticker

Academy Item Code: GEN-ST-020\_RFID Generic UPC Sticker Flat Sheet Dimensions:1.77165" x 1.44819" w Perf Inlay: AD Sonic u9 Finished Goods Item: GEN-ST-020 RFID



3.68 cm

6. Footwear Generic Shoe Regular End Label Academy Item Code: GEN-ST-001 RFID\_Generic End Label REGULAR – R3

Flat sheet

Dimensions 2" x 5" (will vary by brand/item).

Inlay #: AD Sonic U9

Finished Goods Item number: GEN-ST-001 RFID (will vary by brand/item. Refer to tech pack for appropriate. item number).



### 7. Hosiery

Academy Item Code: ACA-UPC-106

Base roll: 5-607087-000-01

Dimensions:1.811" x 1.375" with perforation

Inlay: AD Sonic u9

Finished Goods Item: ACA-UPC-106\_4-253931-000-00



### Ensure your product still maintains a human readable UPC and scan-able barcode on each individual selling product. RFID Nominated Suppliers

### **AVERY DENNISON CONTACTS: Apparel & Hosiery**

Region	Primary Contact for RFID Inquiries	Escalation Contact
South China	joni.chen@ap.averydennison.com, kari.mai@ap.averydennison.com	holly.chen@ap.averydennison.com
Taiwan	ally.chen@ap.averydennison, joey.huang@ap.averydennison.com, lisa.wang@ap.averydennison.com	cindy.shen@ap.averydennison.com
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### AVERY DENNISON USA CONTACT:

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Account Specialist

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Email: john.marshall@averydennison.com

#### **ARTECH CONTACT:** Footwear

Susan Lee

**Customer Service Manager** 

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# Determine placement of RFID label/tag

- Please consult with nominated supplier or the GS1 tag placement guideline for product specific placement, and adhere to standards: <u>https://www.gs1us.org/content/dam/gs1us/documents/industries-insights/by-</u> <u>industry/apparel-general-merchandise/guideline-toolkit/Guideline-Format-And-Symbol-Placement-for-the-</u> <u>Electronic-Product-Code-EPC.pdf</u>
- You may also want to refer to the Auburn RFID Lab tag placement guideline for product specific placement at <a href="https://rfid.auburn.edu/tagging-location-guide/">https://rfid.auburn.edu/tagging-location-guide/</a>
- Ensure your product still maintains a human readable UPC and scan-able barcode on each individual selling product.

# Select what type of RFID application to use based on packaging type

The below guidelines are general in nature. Please consult the GS1 Apparel Placement Guideline manual (see last page of this document for <u>link</u>) for product specific placement and adhere to GS1 standards.

EXISTING PACKAGING TYPE	RFID APPLICATION
Primary Branded Hangtag/Matchbooks	Add RFID label - ACA-UPC-100
Size Strip	Add a RFID hangtag ACA-VT-RFID; RFID <u>cannot</u> be placed within the size strip.
Wallet/Watch	Add RFID label - RFID-PERY-MAG1000
Belt	Attach/sew in RFID label directly to item
Sock Bellyband	Add RFID label - ACA-UPC-106

# RFID Tag and Label Suggested Handling Guidelines

#### SPECIAL HANDLING REQUIREMENT FOR RFID TAGS/ LABELS:

- Don't get wet.
- No electrostatic discharge
- Handle RFID tags and labels with reasonable care.
- Don't bend, fold, or crush.
- Damaged? When in doubt... get a new tag/label
- Avoid unsecured/un-attached RFID tags in product/packaging; they should always be secured to an item.
- Avoid placing RFID tags with metal, e.g., metal hanger clips.

#### Storage Guidelines:

- Shelf life of RFID tags and labels can vary greatly, depending on environmental conditions (heat, humidity, etc.), and can be stored, under ideal conditions (15°C (59°F) to 40°C (104°F), humidity 60%, ± 10%) for 24 months (Papers) and 12 months (Stickers) without any direct sunlight contact.
- Storage conditions out of the above-recommended condition could result in problematic issues such as brittle paper or liner, adhesive bleeding from edges, and paper curl. Most of these conditions are reversible by allowing materials to acclimate to ambient conditions before use.
- Whenever possible, store RFID labels and tags in the original packaging until the point of use to reduce the risk of mixing up tags.
- RFID tags could go through most apparel factory general-purpose metal detectors without triggering an alarm.

#### **Metal Detector:**

- RFID tags and labels can go through most apparel factory general-purpose metal detectors without triggering an alarm.
- RFID tags and labels can go through needle detectors without triggering an alarm.
- Even in the case of stacked garments, i.e., 10 or 20 pieces through the needle detecting process.

# RFID Use Case & Technology Options for Suppliers

Please refer to the following research papers published by Auburn University for potential uses of RFID in your own operations and supply chain.

https://rfid.auburn.edu/papers/rfid-item-level-quantity-auditing-for-apparel-supplier-distribution-centers-12/

#### **RFID Handheld Scanner**

- Scan, search, and locate items of a specific SKU.
- Allows you to inventory all the RFID tagged items in an area.
- Allows you to validate that the barcode and the encoding of the RFID tag matches.

### **RFID Isolation Cage:**

- Enclosure used to isolate and contain the Radio waves from a RFID scanner.
- Allows you to isolate and scan only a specific set of RFID tagged items.

### **RFID Tabletop Scanner:**

- Tabletop unit that can be used to read tags in a case or carton.
- Allows you to validate the contents of a carton or case.

#### **RFID Tunnels:**

- RFID systems designed to drop into existing conveyor systems.
- Reads RFID tags in a case or carton.
- Allows you to validate that the RFID tagged items matches the case label.

## Contacts & Helpful Links:

### Academy Sports + Outdoors

Vendor Portal: https://vendor.academy.com

### **Auburn University RFID Lab**

ARC Website: <a href="https://rfid.auburn.edu/arc/">https://rfid.auburn.edu/arc/</a>

ARC Specification List: https://rfid.auburn.edu/documents/

RFID Lab Tag Placement Guideline: <u>https://rfid.auburn.edu/tagging-location-guide/</u>

Auburn Research Papers: <a href="https://rfid.auburn.edu/research-papers-php/">https://rfid.auburn.edu/research-papers-php/</a>

### **GS1 U.S.**

6 - Steps to Getting Started with RFID: <u>https://www.gs1us.org/upcs-barcodes-prefixes/additional-ways-to-</u>identify-prod<u>ucts/epc-rfid/6-steps-to-get-started-with-</u>

<u>rfid? gl=1\*jt5q8x\*\_gcl\_au\*MTY3MDU3MzM1NC4xNzQwNjg4Njc5\*\_ga\*MTIwNTE3NDMxMy4xNzQwNjg4Njgw\*</u> <u>ga\_XFFEM4HHZZ\*MTc0MTI5MDMyOC41LjEuMTc0MTI5MDQwOC41Ny4wLjA</u>.

GS1 EPC/RFID Guidelines: https://www.gs1.org/standards/epc-rfid/guidelines

 Tag Data Standards: <a href="https://www.gs1.org/standards/epc/tag-data-standard/1-">https://www.gs1.org/standards/epc/tag-data-standard/1-</a>

 9#:~:text=GS1's%20EPC%20Tag%20Data%20Standard,information%2C%20and%20tag%20manufacture%20in

 formation

#### **Developing a RFID Serialization Plan:**

https://documents.gs1us.org/adobe/assets/deliver/urn:aaid:aem:5f88064e-0dbb-495b-9f29a9ce3758caed/Developing-an-RFID-Serialization-Plan.pdf

EPC Encoder & Decoder: <a href="https://www.gs1us.org/tools/epc-encoder-and-decoder">https://www.gs1us.org/tools/epc-encoder-and-decoder</a>

#### Apparel & General Merchandise Placement Guideline:

https://www.gs1us.org/content/dam/gs1us/documents/industries-insights/by-industry/apparel-generalmerchandise/guideline-toolkit/Guideline-Format-And-Symbol-Placement-for-the-Electronic-Product-Code-EPC.pdf