



WALMART RFID PLAYBOOK

Fashion

For Walmart U.S. Stores

The requirements in this version supersede all previous playbooks.

General Overview

Industry Standards to Follow

- Walmart follows all industry standards set forth by the GS1 EPC Tag Data Standard, Auburn RFID tag placement standard, GS1 tag placement standard, and Auburn University RFID Lab ARC inlay standard. All tagging requirements must meet these standards and should be validated through the Auburn RFID Lab ALEC Program prior to arriving in our stores.

In Scope:

- All items within the following Walmart Fashion departments are required to have RFID tags, unless listed in the Out-of-Scope section of this playbook.

23 - Men's	31 - Accessories
24 - Boys	32 - Jewelry
25 - Shoes	33 - Girls
26 - Baby & Toddler	34 - Women's
29 - Intimates	41 - Team Sports Merchandise

- All items in these departments are in scope for RFID with no minimum price. Walmart will not decide or grant approval on tag spec and location. All items must be validated and approved by Auburn RFID lab.

Out-of-Scope:

- 3P Marketplace items
- Ecommerce only brands (i.e., brands not carried in stores)
- Note: If the brand is carried in stores, all items under that brand must be RFID tagged except for 3P Marketplace items.
- "Championship" team sports merchandise (e.g., Superbowl, World Series, NCAA Championship, etc.)
- Pay-from-Scan items
- Items where RFID tags are not compatible with the product, as determined through the Auburn University RFID Lab ALEC Program.

General Merchandise

- All items carried within the above listed Fashion departments are required to have RFID tagging unless otherwise noted in the Out-of-Scope section of this Playbook. Certain items, such as Souvenirs, Team Sports Hardgoods, and other General Merchandise-type products, may require tagging standards or placement guidance outlined in the General Merchandise RFID Playbook. Supplier should refer to the General Merchandise RFID Playbook when tagging these item types.
- General Merchandise RFID Playbook: https://rfidlab.org/wm_rfid_gm_playbook/

Getting Started

- The following outlines a standard framework to integrate RFID into packaging. This includes major points and areas that should be considered; however, every company must tailor these steps to fit the needs of their business and supply chains.
 - Develop an internal team.
 - Identify the ways that RFID can help improve your operations.
 - Engage with your Packaging Provider to determine their RFID capabilities, if needed, also engage with an approved RFID Inlay Manufacturer.
 - Begin procurement discussions and be prepared to provide forecasts, products tagging and estimated timelines.
 - Begin data management/serialization discussions with your RFID Packaging Provider.
 - Develop an internal quality check process to ensure compliance according to all requirements within this Playbook.

Select RFID Inlay Spec

- Walmart references a set of inlay specifications that are performance approved from the Auburn University RFID Lab. Refer to the chart below to see what spec has been assigned to each department/subcategory. **You can only use an approved inlay from an item's associated inlay list.**

Department	Subcategory	Inlay Spec	Approved Inlay List
D23 - Men's	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
D23 - Men's	Non-Apparel & Accessories (e.g., souvenirs)	Contact RFID Lab	https://rfidlab.org/alecontactform/
D24 - Boys	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
D25 - Shoes	Footwear	R	https://rfidlab.org/arc/spec-r.php
D25 - Shoes	Shoe Care & Accessories	Contact RFID Lab	https://rfidlab.org/alecontactform/
D26 - Baby & Toddler	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
29 - Intimates	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
31 - Accessories	All	R	https://rfidlab.org/arc/spec-r.php
32 - Jewelry	Watch Batteries, Small Boxed/Carded Jewelry, Jewelry Parts/Hardware	Contact RFID Lab	https://rfidlab.org/alecontactform/
32 - Jewelry	All Else	R	https://rfidlab.org/arc/spec-r.php
33 - Girls	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
34 - Women's	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
41 - Team Sports Merchandise	Apparel & Accessories	R	https://rfidlab.org/arc/spec-r.php
41 - Team Sports Merchandise	Non-Apparel & Accessories (e.g., sports hardlines)	Contact RFID Lab	https://rfidlab.org/alecontactform/

Determine Inlay Manufacturer & Packaging Resources

- Suppliers may only use RFID inlays from approved inlay manufacturers. The latest version of the ARC approved RFID inlay manufacturer contact information is available at <https://rfidlab.org/inlaycontacts/>.

National Brands

- Any packaging resource can be used, so long as ARC approved inlays are sourced for your approved spec. A list of packaging resources can be found at <https://rfidpackagingresources.org/>. These are packaging providers that have supplied packaging for the Walmart RFID Program. This is NOT an endorsement or list of nominated suppliers.

Private Brands

- Product suppliers will continue to use the same packaging matrix we have in our private brand packaging toolkits posted on Retail Link. The only change is you will now incorporate RFID inlays into those branded or generic packaging types.
- Retail Link path to Fashion private brand packaging toolkits:
Retail Link >> Apps >> PLUM >> Packaging Toolkit (select appropriate brand/toolkit in drop down)

D32 Jewelry (all brands)

- Due to its complexity, Jewelry Suppliers are required to follow Walmart designated suppliers listed on the Jewelry packaging toolkits on Retail Link.

Identify Inlay Size

- Use the largest RFID inlay size available that fits your packaging.
- If your packaging does not fit the smallest inlay size available within the approved spec, add a generic embedded inlay hangtag or a separate paper-based sticker to your item.

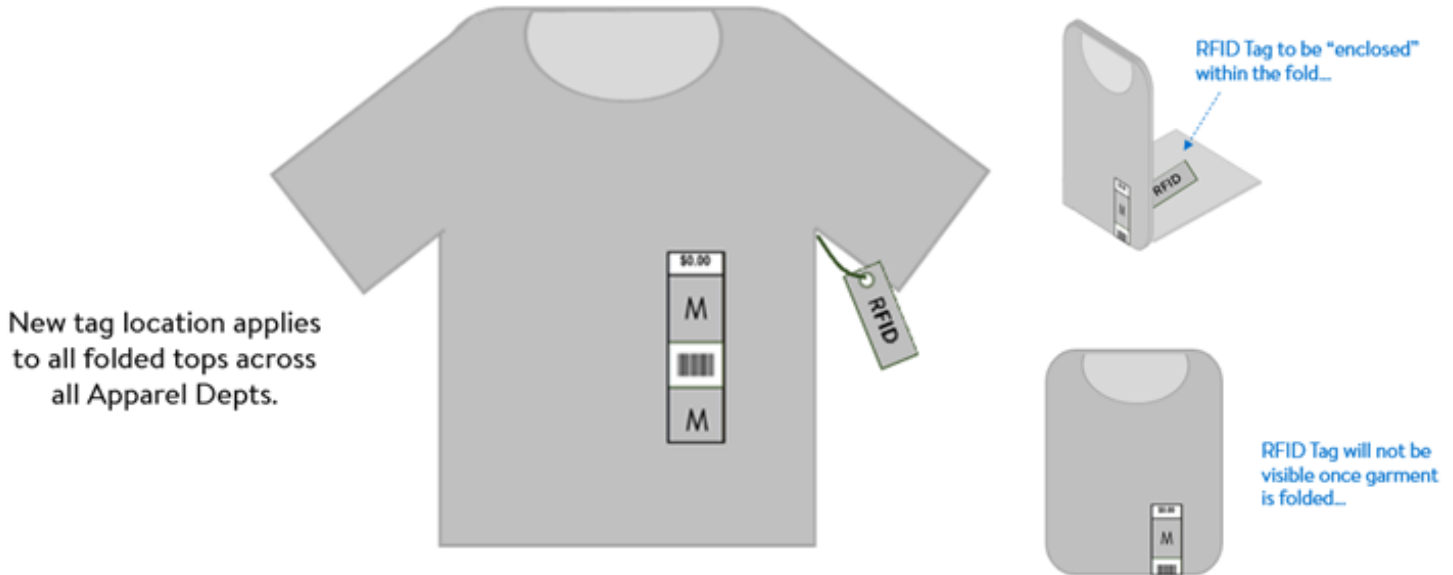
Determine Placement of RFID tag

- Please consult the GS1 Tag Placement Guidelines for product specific placement, and adhere to standards: <https://www.gs1us.org/content/dam/gs1us/documents/industries-insights/by-industry/apparel-general-merchandise/guideline-toolkit/Guideline-Format-And-Symbol-Placement-for-the-Electronic-Product-Code-EPC.pdf>
- If your item is not represented in the GS1 Tag Placement Guideline, please contact the RFID lab at <https://rfidlab.org/aleccontactform/>.

EXISTING PRODUCT/PACKAGING TYPE	RFID APPLICATION
Backer Card	Add a separate paper-based sticker.
Bellyband	Add a separate paper-based sticker.
Blisters/Clamshells	Add a separate paper-based sticker.
Collar Card	Add a Branded embedded inlay hangtag.
Folding Carton	Add a separate paper-based sticker.
Graphic Tee	Add a secondary RFID hang tag under wearer's left armhole.
Hardware/Parts	Place sticker as far away from metal as possible within the packaging.
Header Card	Add a separate paper-based sticker.
Jewelry - Fine	- No metal foils, metal containers, holograms or metallic inks should be used on the packaging. If so, you must receive Auburn approval prior to bulk production of the packaging. - RFID sticker to be placed on bottom of fine jewelry box. - Out of box chains will use a rattail label.
Jewelry - Fashion & Bridge	- No metal foils, metal containers, holograms or metallic inks should be used on the packaging. If so, you must receive Auburn approval prior to bulk production of the packaging. - RFID sticker to be placed in the back of carding, as far away from metal as possible.
Jewelry - Care	- RFID Sticker cannot be placed on bottom; place on backside or side of packaging. - For items containing liquid or metal, Contact Auburn.
Jewelry Carding/Box	Add a separate paper-based sticker/ For further direction, Contact Auburn.
Joker Ticket/Sunglasses	Add a separate paper-based sticker or embed inlay into joker.
Metal Can	Contact Auburn.
Plastic Bottle	Add a separate paper-based sticker.
Polybag	Add a separate Generic RFID embedded hangtag into the polybag.
Primary Branded Hangtag	Embed inlay into hangtag.
Size Strip	Add a joker ticket or embed inlay into primary hangtag; RFID <u>cannot</u> be placed within the size strip.
Wallet/Belt/Watch	Add a separate paper-based sticker or attach hangtag directly to item.
Watches - Cuff Stands	- Watches displayed in a watch cuff only, requires a special inlay. - If the base is thicker than 15 mm the RFID sticker should be placed in the top of the base, otherwise Contact Auburn.
Watches - Boxes	- RFID Sticker cannot be placed on the bottom; side of box is preferred. - No metal foils, metal containers, holograms or metallic inks should be used on the packaging. If so, you must receive Auburn approval prior to bulk production of the packaging.
Watches - Batteries	Packaging may need to be redesigned to accommodate RFID inlay, Contact Auburn.

Folded Tops

Tag to be placed in the seam under left armhole of folded tops (previous direction was to tag at neck); New location reduces risk of RFID tags contacting metal fixtures in stores – e.g., spinner racks, shelves, etc.



Review RFID Application Formats

- Please refer to the Auburn University RFID Lab Tag Placement Guideline for all available application formats. Please contact the RFID lab at <https://rfidlab.org/aleccontactform/> for any questions.
- We recommend integrated RFID packaging solutions, as they help preserve the packaging's visual appeal and ensure reliable RFID performance. Always consult with your merchant partner to determine the final design of your RFID-enabled packaging.

Branded Embedded Hangtag (Private Brands Only)



- Any changes to die lines or artwork will be managed through Walmart U.S. Packaging Team.
- Inlays must be embedded into branded hangtag.
- 4 mm gutter or greater around the embedded inlay.

Generic Embedded Hangtag Format



- Generic embedded hangtags should only be used when size strip or hanger collar card 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.
- Swiftach embedded inlay hangtag through the inside left armhole seam. Swiftach length is ½ inch and the embedded hangtag will need to be tucked inside the shirt or pant.
- If the item contains a joker ticket, embed inlay into joker or wet inlay sticker on back of Joker.
- Hangtag dimensions: 83mm x 25mm
 - Specifications:
 - Embed inlay between C2S paper stock
 - Material: ~14pt. C2S (minimum; glossy both sides)
 - Font: 12pt. Bogle Regular (centered vertically & horizontally from left side of logo to right side of swift tack hole)
 - EPC logo: Centered vertically and placed as shown
 - Prints: Black ink on one side of tag
 - 4 mm gutter or greater around the embedded inlay
- Minimum Copy Requirements:
 - UPC # (no bars; human readable)
 - EPC Logo
 - Prints: Black ink on one side of tag
 - Additional information is allowed

Hanging Programs - Long Sleeve (all brands)

- Armhole placement is allowed.

D25 Shoe Hangtags (all brands)

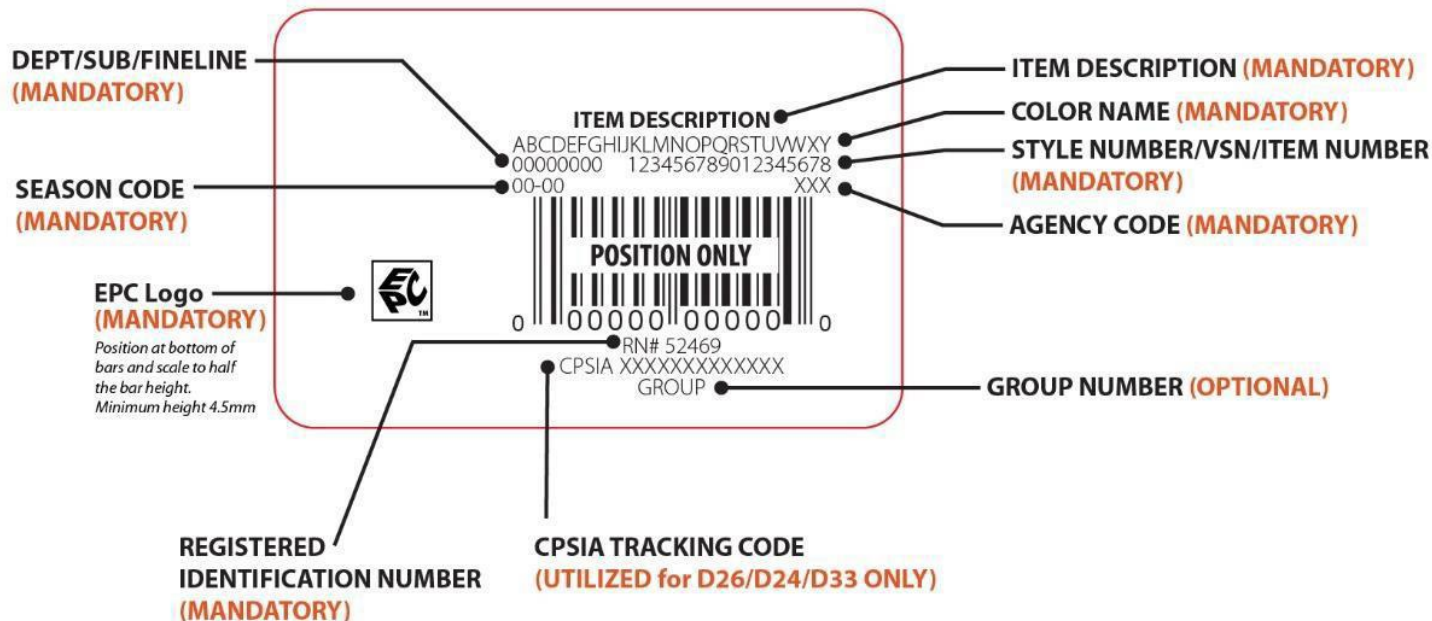
- RFID hangtag must be affixed to shoe (Only ONE RFID tag per pair of shoes).
- Embed inlay into branded hangtag.
- RFID stickers cannot be used or attached anywhere on the shoe box.

License Hangtags (All Brands)

- May use RFID embedded Walmart generic price ticket.

Generic Embedded Sticker WITH Scannable UPC Code

- If you DO NOT already have a scannable UPC barcode already shown on pack, Walmart prefers to use an EPC combo sticker as shown below. Review private brand packaging toolkit for UPC information requirements.



- Specifications:
 - Embed Inlay: 50x30mm (+/- 2mm).
 - Tag dimensions: Supplier determines.
 - Material: Minimum 2pt Label stock.
 - Font: Bogle 5.5pt.
 - Prints: Black ink.
 - Non-removable adhesive must be used when the label includes the UPC.
- Minimum Copy Requirements - Private/Proprietary Brands:
 - Barcode/UPC #
 - EPC Logo
 - Item Description (picked up from other primary packaging)
 - Replenishment code
 - Season code
 - Dept/Sub/Fineline
 - Simplified color name
 - Style number/VSN number
- Minimum Copy Requirements - National/Supplier Brands:
 - Barcode/UPC #
 - EPC Logo
 - Item Description (picked up from other primary packaging)
 - Additional information is allowed

Private Brands Only

- Tag options for plastic packaging are:
 - If the packaging contains both paper and plastic, suppliers must place the RFID tag on the paper instead of plastic.
 - If plastic is the only packaging for the product, suppliers must choose one of the following options:
 - Place the RFID tag loosely inside the packaging. Ensure that the tag won't reach the bottom of the package during transportation/handling and touch the metal shelves.
 - A hangtag attached to the packaging or product.

Tagging Requirements

- Please make sure that there is only ONE RFID tag per product
- 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 country of origin can be printed on the RFID sticker if needed.
- No staples, perforations, swiftachs, folding or die cuts through the inlay as it will make the inlay unreadable.
- No RFID inlay placement on bottom of polybags, bottom of boxed items, near under wire for bras, on glass, on liquids, on Silvadur, or near metal/foil.
- RFID cannot be applied to an EAS tag.
- No two (2) scannable UPC barcodes are allowed on the same item.
- No metal foils, holograms or metallic inks should be used on any packaging containing the RFID inlay. If so, you MUST receive approval from the Auburn RFID Lab's ALEC Program.

EPC Symbol

- Walmart requires that the EPC Symbol be shown externally on your packaging to communicate to customers and store associates that your product is RFID tagged.



- The EPC symbol should not be shown on any packaging that does not contain an RFID inlay.
- See this link for the EPC Symbol image file and related documentation:
 - <https://www.gs1.org/standards/epc-rfid/guidelines>

Encoding & Serialization Requirements

- All inlays must be encoded per the EPC Tag Data Standards (TDS), resulting in unique serialization for each item. The SGTIN-96 tag encoding standard maintained by GS1 must be used.

$$\text{UPC} + \text{Unique Serial Number} = \text{EPC (RFID)}$$

- Each RFID inlay must be uniquely serialized. Please ensure unique serialization is managed when using multiple packaging providers for the same UPC. Learn more about serialization below:
 - <https://documents.gs1us.org/adobe/assets/deliver/urn:aaid:aem:5f88064e-0dbb-495b-9f29-a9ce3758caed/Developing-an-RFID-Serialization-Plan.pdf>
- Inlays must be permalocked to prevent tampering.
- All inlays must undergo quality and data integrity checks prior to entering the Walmart supply chain.

Private Brands Only

- Private brands MUST use one of our current nominated packaging suppliers from our packaging toolkits for all serialization.

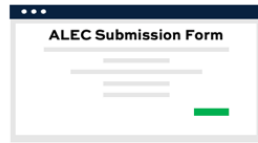
ALEC - Approval of Production RFID Packaging Samples

- Auburn University RFID Lab's ALEC program helps Product Suppliers ensure their RFID tagged items meet all industry requirements. Before any shipment of RFID-tagged goods can begin, you must receive RFID Lab approval.
- Refer to the ALEC website for questions and submission instructions:
 - <https://rfidlab.org/alec-validation>

ALEC – Submission Process



**Group Like Items &
Identify Tagging Solution**



**Complete Online
Submission Form**



**Print Confirmation and
Ship 5 Tag Samples**



**Validation at Auburn
RFID Lab**

**Approval for RFID
Tagging Solution**



- ALEC submission form: <https://rfidlab.org/alec-submissionform/>
- Submit one representative UPC per Submission Form
 - 5 RFID tag samples are required only for the representative UPC
- Like-items to the representative UPC should be included in the submission item file, and must share the same:
 - Brand, packaging type, packaging provider, RFID inlay model, and tagging location
- Print the confirmation of your submission form after submitting and include it with your shipment of RFID tag samples.
- Actual product or packaging will only need to be sent when specifically requested by the RFID Lab. Any product sent to the RFID Lab will NOT be returned to the product supplier.

ALEC – Updating Previously Approved Submissions

- To add another retailer, change inlay models, change packaging providers, change tagging locations, or add additional UPCs to a submission, complete the Submission Update Form: <https://rfidlab.org/submissionupdate/>
- All submission updates should only reflect items that meet the same criteria as the representative UPC of the submission, including:
 - Product supplier, brand, packaging type, packaging provider, RFID inlay model, tagging location

Supplier Accountability

- Product suppliers should ensure all items delivered to Walmart have an ARC approved RFID tag.
- Product suppliers should ensure no duplicate serial numbers are used and that each tag is properly encoded with the correct GTIN for the item it is on.
- Product suppliers will be responsible for all costs incurred for any RFID errors at store level.

RFID Shipper Case Markings

- For the stores to easily identify on cases which items have packaging with RFID labels. The Shipper Case Markings must include the word "RFID".
- Please refer to the Walmart Packaging Standards Master Document [HERE](#)
- Carton or carton labels do not carry any RFID inlays. Only the selling unit packaging carries the RFID inlay.
- The RFID marking is in addition to all other case markings and should not interfere with any other printed case markings, case labels, federal and state laws, or any other compliance related markings.
- If the product inside the case is not RFID labeled, do NOT use the updated RFID marking.
- Please contact wmbarcodelabeling@walmart.com for any questions.

DSDC Suppliers

- All master cases must be labeled with the word "RFID" even if there are mixed SKUs that are currently out of scope.

Acronym Summary

Acronym	Meaning
EAS	Electronic Article Surveillance
EPC	Electronic Product Code
GS1	Global Standards Organization
RFID	Radio Frequency Identification
SGTIN	Serialized Global Trade Item Number
SKU	Stock Keeping Unit
TDS	Tag Data Standards
UPC	Universal Product Code

Contacts

Walmart Corporate

Retail Link Page: [LINK](#)

Supplier Academy RFID page: [LINK](#)

Helpful Documents: [LINK](#)

Sam's Club Playbook: [LINK](#)

Walmart Packaging Standards Master Document: [LINK](#)

Walmart Private Brand Packaging

Contact Email: RFIDpackagingUpdates@walmart.com

Include subject line "reference: Template or Sku-Level Artwork"

Generic sticker and hangtag templates: [LINK](#)

Sku-level artwork changes or template requests: [LINK](#)

Auburn University RFID Lab

General Questions: <https://rfidlab.org/aleccontactform/>

ALEC RFID Submission Form: <https://rfidlab.org/alec-submissionform/>

ALEC Submission Update Form: <https://rfidlab.org/submissionupdate/>

ALEC Item File Update Form: <https://rfidlab.org/wmitemfileupdate/>

RFID Lab Website: <https://rfid.auburn.edu/>

Source Tagging Workshop Video Series: <https://rfid.auburn.edu/webinar-videos.php>

GS1 U.S.

Website: www.gs1us.org

Supplier-oriented introduction to RFID: <https://site.gs1us.org/RFID-success.html>

Serialization Guide: [LINK](#)

Tag Data Standard: <https://www.gs1.org/standards/tds>

GS1 Encoder/Decoder Tool: <https://www.gs1.org/services/epc-encoderdecoder>