

WALMART MX RFID PLAYBOOK

For Walmart MX Stores

Revised February 3, 2025

The requirements in this version supersede all previous playbooks.

General Overview

What Industry Standards to Follow?

Walmart MX is following all industry standards set forth by the GS1 EPC Tag Data Standard, GS1 RFID tag placement standard, and Auburn University RFID Lab ARC inlay standard. All tagging requirements must meet these standards prior to arriving in our stores.

In-Scope for RFID tags:

All items within the Walmart MX Apparel Departments are required to have RFID tags, unless listed in the Out-of-Scope section of this playbook.

Walmart MX

23 - Men's Formal/Casual	29 - Children's Interior Wear	35 - Junior Ladies Wear, plus sizes and maternity
24 - Boys 4-10	29 - Stockings for women	36 - Junior Men's Wear
25 - Shoes	30 - Bras & Shapewear	47 - Sports
26 - Babies	30 - Ladies Sleepwear	54 - Boys 12-16
27 - Men's Interior Wear	31 - Accessories	54 - Girls 12-16
27 - Men's Sleepwear	33 - Girls 4-10	
27 - Hosiery	34 - Ladies Formal/Casual	

• Out-of-Scope for RFID tags:

- 3P and Ecommerce only brands
- An ecommerce only brand is a brand that is only carried online (e. marketplace)
- 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 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.

- Identify the ways that RFID can help improve your operations. Refer to the "RFID Use Cases for Suppliers" section for details
- Develop an internal team
- Engage with your packaging provider and if needed you will also need to engage with an approved RFID Inlay Manufacturer
- Begin procurement discussions and provide forecasts to your packaging and RFID Inlay provider
- Begin data management and serialization discussions with your RFID packaging provider. Refer to the "RFID Encoding & Serialization Requirements" section for details
- Develop quality check process to ensure all items are tagged according to all requirements in this Playbook

Select RFID Inlay Spec

Walmart MX has a set of ARC inlay specifications that are performance approved from the Auburn University RFID Lab. The Auburn University ARC standard ensures RFID tags meet or exceed the levels of performance and quality necessary to provide benefit in a consistent and cost-effective manner.

NOTE: All items within the Apparel Departments are required to transition to an ARC approved **Spec R** inlay unless otherwise directed by the RFID Lab. To update the inlay on an existing submission, [click here](#).

Any on-going item tagged with a previously approved inlay spec will need to transition to the Spec R inlay no later than October 1, 2025, MABD (must arrive by date). New items should utilize the Spec R inlays at once.

A change in tagging location will require a submission update using the link above. You DO NOT need to resubmit tags if you are only changing the tagging location. If your tagging location is changing from external to internal, please ensure you add a visible EPC logo to the external packaging.

Walmart MX

Department	Subcategory	Inlay Spec	Approved Inlay List
D23 – Men’s	Apparel	R	https://rfidlab.org/arc/spec-r.php
D24 – Boys 4-10	Apparel, Sleepwear	R	https://rfidlab.org/arc/spec-r.php
D25 – Shoes	All	R	https://rfidlab.org/arc/spec-r.php
D26- Babies	Apparel	R	https://rfidlab.org/arc/spec-r.php
D27 – Men’s	Interior, Sleepwear	R	https://rfidlab.org/arc/spec-r.php
D27 – Hosiery	All	R	https://rfidlab.org/arc/spec-r.php
D29 – Children’s	Interior	R	https://rfidlab.org/arc/spec-r.php
D29 – Socks	All	R	https://rfidlab.org/arc/spec-r.php
D30 – Ladies Sleepwear	All	R	https://rfidlab.org/arc/spec-r.php
D30 - Bras & Shapewear	All	R	https://rfidlab.org/arc/spec-r.php
D31 – Accessories	All	R	https://rfidlab.org/arc/spec-r.php
D33 – Girls 4-10	Apparel, Sleepwear	R	https://rfidlab.org/arc/spec-r.php
D34 – Ladies	Apparel	R	https://rfidlab.org/arc/spec-r.php
D35 – Junior Ladies	Apparel	R	https://rfidlab.org/arc/spec-r.php
D36 – Junior Men’s	Apparel	R	https://rfidlab.org/arc/spec-r.php
D47 – Sports	Apparel	R	https://rfidlab.org/arc/spec-r.php
D54 – Boys 12-16	Apparel, Sleepwear	R	https://rfidlab.org/arc/spec-r.php
D54 – Girls 12-16	Apparel, Sleepwear	R	https://rfidlab.org/arc/spec-r.php

Determine Inlay Manufacturer

National, Proprietary & Supplier Brands

Suppliers may only select from the approved list provided on the Auburn University RFID Lab's Website from the appropriate Spec. Any inlay manufacturer not listed on the appropriate Spec cannot produce inlays for packaging being shipped to Walmart MX. Even if using an approved inlay provider, you must still submit the final production samples to the Auburn University RFID Lab for approval.

All Brands

All Walmart MX brands must use one of the following approved inlay manufacturers from Auburn University website using one of the approved specs. Note, this is not about serialization of the tags as it pertains to the manufacturing of the blank inlays only. Even if using an approved inlay provider, you must still submit samples to Auburn for final approval.

Walmart MX nominated packaging providers are required to purchase their blank inlays from:

- Avery Dennison Smartrac
- Arizon
- Checkpoint
- Hana
- Paragon ID
- SML
- Tageos

Determine Packaging Resource, RFID Encoder/Service Bureau

National, Proprietary, and Supplier Brands

Suppliers can utilize their own RFID packaging resource to develop and print their RFID inlays but must adhere to the GS1 standards and ARC standards and obtain approvals from the Auburn University RFID Lab. A list of packaging providers can be found at: <https://rfidpackagingresources.org/rfid-packaging-providers/>. It is encouraged to use one of the nominated providers from the private brands section below.

Private Brands (must use Walmart MX nominated service bureaus)

Private brands are required to use one of the 5 nominated packaging providers:

- R-PAC (local and International) - Elia Coto elia.coto@r-pac.com
- Avery Dennison (local and International) - Arantxa Cardenas - arantxa.cardenas@averydennison.com
- Natco (local and International) - Valeria Godinez - Valeria.Godinez@natcoglobal.com
- Etiflex (only local Mx) - Rebeca Jaimes rebeca@etiflex.com.mx
- AJ Labels (only local Mx) - Jose Luis Rosique j.rosique@ajlabels.com.mx

If you have any packaging related questions, email RFID_MX_etiquetado@wal-mart.com.

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, please contact Walmart_MX_RFID@wal-mart.com.

Determine Placement of RFID tag

The guidelines below are general in nature. For tag placement, please validate with the Walmart labeling guideline provided by your merchant.

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 the wearer's left armhole
Header Card	Add a separate paper-based sticker
Joker Ticket/Sunglasses	Add a separate paper-based sticker or embed inlay into joker
Metal Can	Contact Auburn: https://rfidlab.org/alecontactform/
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

RFID Tag Location | Folded Tops (new direction)

Changing tag location to 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.

New tag location applies to all folded tops across all Fashion Depts.

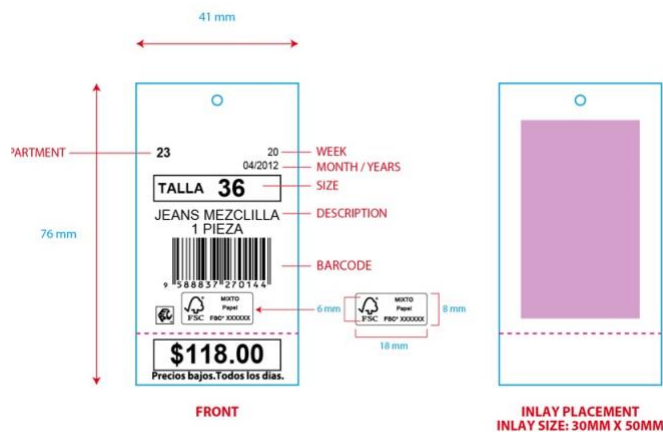


Review RFID Application Formats

Please contact RFID_MX_etiquetado@wal-mart.com for any questions.

Branded Embedded Hangtag

Self Service



Self Service Socks and Hosiery



Self Service Bellyband



- Any changes to die lines or artwork will be managed through Walmart Mexico Packaging Team
- Inlays must be embedded into branded hangtag.
- 4 mm gutter or greater around the embedded inlay
- All branded tags must have inlay embedded by Q3 2024

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
- In this case, omit the recommendation from the GS1 manual.

License Hangtags (All Brands)

- May use RFID embedded Walmart MX generic price ticket

Plastic Packaging (All Brands)

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:
 - A sticker attached to the packaging or product

Tagging Requirements

- **Please make sure that there is only ONE RFID tag per product**
- RFID tags should not be sewn into the physical item
- 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 tachs, 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 the RFID Lab approval prior to bulk production of the printed packaging

EPC Symbol

- The EPC logo example represents the bare minimum of information that should be shown on your packaging to identify RFID tagging
- The EPC logo is an industry standard to inform the customer and store associate that the product contains RFID
- 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>
- Download the EPC symbol and usage guidelines directly here: https://www.gs1.org/sites/default/files/epc_symbol_usage_guidelines.zip

RFID Encoding & Serialization Requirements

- **If you are not using a GS1 compliant UPC owned by your organization, your RFID tags may not encode properly.**
- All tags are to be encoded appropriately per EPC Tag Data Standards (TDS), resulting in unique serialization for each item. The SGTIN-96 tag encoding standard maintained by GS1 is to be used.

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

- Please keep in mind that each serial number must be unique to that item and can run a risk of having duplicate numbers if not managed properly throughout the development process. **Please ensure unique serialization is managed when using multiple packaging providers for the same SKU. See the link below for more information.**
<https://documents.gs1us.org/adobe/assets/deliver/urn:aaid:aem:5f88064e-0dbb-495b-9f29-a9ce3758caed/Developing-an-RFID-Serialization-Plan.pdf>
- Tags must be permalocked to prevent tampering
- All tags must undergo quality and data integrity checks prior to entering the Walmart MX supply chain
- The EPC Encoder/Decoder Tool may be found here: <https://www.gs1.org/services/epc-encoderdecoder>

All Brands

- All brands MUST use one of our current nominated packaging suppliers from our packaging toolkits for all serialization.
 - RPAC (local and International)
 - Avery Dennison (local and International)
 - Natco (local and International)
 - Etiflex (only local Mx)
- **Each private brand packaging supplier has been assigned their own unique 3-digit code issued from Walmart. This code is the first 3 digits of the serial number in decimal form. For example, if an agency had a leading RFID identifier of “099”, then the serial number in the range of 99 billion (99,000,000,000 to 99,999,999,999) would be allowed.**

ALEC - Approval of Production RFID Packaging Samples

Auburn University RFID Lab’s ALEC program is to help Suppliers ensure that their RFID tagged item meets all the industry requirements.

Refer to the ALEC submission guide at <https://rfidlab.org/wp-content/uploads/General-Form-Submission-Guide.pdf> for detailed instruction before starting this process.

If you have already received an approval, please use this [link](#) to apply the approval to Walmart Mexico.

Before any shipment of goods can begin, you must receive RFID lab Approval.

Send Five (5) EPC tag samples of the same item only (no product or packaging) to the RFID Lab for ALEC validation prior to bulk production. These may be branded hangtags, generic hangtags, or stickers.

- Submit one UPC per Submission Form
- You will need approval on a representative UPC (SKU) for
 - Every brand
 - Every packaging type used
 - Every packaging provider used

- Every RFID inlay model
- Every Tagging location
- You do not need to submit every individual SKU separately. Only submit where differences occur from the list above.
- Send five inlay samples of the one representative UPC.
- The RFID Tags MUST be production quality
- Within the submission form, you will be asked to add a list of all items that follow the same criteria as the representative SKU
- Please complete and submit the online submission form at <https://rfidlab.org/alecsubmissionform/>. Print the PDF confirmation and include it along with the samples
- Testing will not begin until the printed confirmation form has arrived at the lab
- Actual product or packaging will only need to be sent when specifically requested by the RFID Lab.
 - Note: Any product sent to the RFID Lab will **NOT** be returned to the product supplier
- **Watches, Fine Jewelry, Costume Jewelry and Shoe & Jewelry Care suppliers MUST send actual product packaging along with RFID tags attached to item**
- Product Suppliers are responsible for submitting their own samples to the RFID Lab. Packaging resources CANNOT submit samples on behalf of the Product Suppliers to the RFID Lab
- **Product Suppliers who decide to switch RFID inlay models and/or inlay providers and/or Service Bureau and/or packaging providers and/or tagging location AFTER receiving the initial validation from the RFID Lab, will need to re-submit tag samples again for validation using the following form: <https://rfidlab.org/alec-submissionform/> This applies to all suppliers, packaging providers, and National/Private brands. No Exceptions.**
- Product Suppliers who decide to change/add new packaging with materials that may interfere with readability, will need to re-submit tag samples again for validation using the following form: <https://rfidlab.org/alec-submissionform/>
- Once you receive an email approval from the RFID Lab, you are approved to move into bulk ordering and production

Supplier Accountability

- **The RFID solution (RFID Inlay Model, RFID packaging provider, tagging location) for all products shipped to Walmart must have a valid ALEC approval ID.**
- Product suppliers are required to have a process in place to ensure all items that are delivered to Walmart MX have an ARC approved RFID tag
- Quality checking includes ensuring there are no duplicate serial numbers 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 Use Cases for Suppliers

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

https://rfid.auburn.edu/wp-content/uploads/2021/02/Empirical_Study_of_RFID_in_Supply_Chain.pdf

<https://rfid.auburn.edu/wp-content/uploads/2021/02/CHIP-Proof-of-Concept-Results-Auburn-RFID-Lab.pdf>

RFID is being used by suppliers to automate inbound audit processes, improve Inventory accuracy, and outbound validation.

RFID Shipper Case Markings

For the stores to easily identify cases with items that have packaging with RFID labels. The Shipper Case Markings must include the word RFID.



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.

Contacts

Walmart MX Corporate

General questions: Walmart_MX_RFID@wal-mart.com

Walmart MX All Brands Packaging

RFID_MX_etiquetado@wal-mart.com

Packaging templates will be shared directly to suppliers via email.

If any SKU-level artwork changes are needed, please email RFID_MX_etiquetado@wal-mart.com

Auburn University RFID Lab

General Questions rfidlab.org/aleccontactform/

ALEC RFID tag samples validation submission form rfidlab.org/alecsubmissionform/

ARC Website <https://rfidlab.org/arc/>

GS1 U.S.

Website: www.gs1us.org

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

Serialization Guide <https://www.gs1us.org/DesktopModules/Bring2mind/DMX/Download.aspx?EntryId=1946>

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