# RFID Tagging Guideline By Packaging Type

## For Sams Club MX

# Contents

# Introduction

The purpose of this document is to serve as a general guideline for RFID tag placement. Please use this guideline as a starting point, but the final tagging location should be determined based on considering all the factors that affect the readability of RFID tags. The tagging location should be validated for each product type through the Auburn University RFID Lab ALEC program before mass production.

# General Guidelines

1. Ensure there is only ONE RFID tag per product.
2. The performance of the RFID inlays is significantly affected by metals, foils, liquids, and glass. Special consideration must be taken when choosing tagging format and location for such products.
    a. **RFID inlays cannot be placed directly on foil packaging, metal, or liquid. For liquid items the RFID inlay must rest above the liquid level.**
3. When choosing the tagging location, RFID readability should be considered while product is in salesfloor, backroom, and case pack. For example, the RFID tag cannot be placed on bottom of product since the tag will most likely be in direct contact with metal.
4. No metal foils, holograms, or metallic inks should be used on any packaging containing the RFID inlay.
5. RFID cannot be applied to an EAS tag.
6. No staples, perforations, swift tach, or die cuts through the inlay as it will make the inlay unreadable.
7. Close proximity of RFID tags should be considered in stacking when determining tag formats and placement. RFID tags cannot be in very close proximity of each other when displayed/stored.
8. A consistent tagging location should be used across similar products.
9. The RFID tag should not fall off from product easily.
10. The RFID tag should be placed such that it is easily removable by the customer after purchase.
11. The RFID tag should not be folded.
12. The RFID tag should only be sewn in or integrated into the physical item if the tag can be removed.
13. The RFID tag cannot cover any text or images.
14. 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.
15. RFID tags can be placed inside the packaging (not the product) as long as the EPC symbol is placed outside.
16. If the product could be merchandised without the packaging, the RFID tag should be attached to the product. For example, Bikes, Grills, Furniture.
17. If the product comes in multiple cases (an example would be furniture sets where the table is boxed separately from the chairs), ensure that there is only one tag on one of the boxes. Please contact Auburn RFID Lab to determine which box should be tagged.

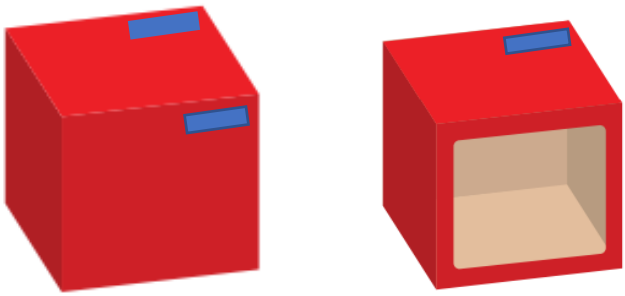
# EPC Symbol

1. The EPC logo example represents the bare minimum of information that should be shown on your packaging to identify RFID tagging.
2. The preferred location for the EPC symbol is on the back or bottom of the box near domicile information.
3. Any packaging that has an RFID tag must have the Electronic Product Code (EPC) symbol displayed on the packaging for the customer and store associates to recognize.
4. If the Generic RFID tag with the EPC logo is hidden or the RFID inlay is integrated into existing packaging, there must be a visible EPC logo on the outside of the packaging.
5. The EPC symbol should not be shown on any packaging that does not contain an RFID inlay. The EPC logo is an industry standard to inform the customer and store employee that the tag contains RFID. Having tags with an EPC logo and/or inlay but not properly encoded can cause major confusion within the process.
6. EPC Symbol image file and related documentation: https://www.gs1.org/standards/epc-rfid/guidelines

# General Merchandising

The blue labels on the photos are used to illustrate a potential tagging location. The final tagging format (embedded or integrated or secondary) and tagging location should be determined based on all packaging requirements and factors that affect the readability of RFID tags

## Cardboard Box / Acetate Box / Window Box



### *Preferred Tagging location*

- RFID Adhesive label on the side or top of the box in a corner. For the side choose the narrow or thin side that has the least likelihood of touching metal shelves.
- If the product is made of metal, foils, liquids, or glass, place the RFID tag on the box such that the tag is away from those materials.

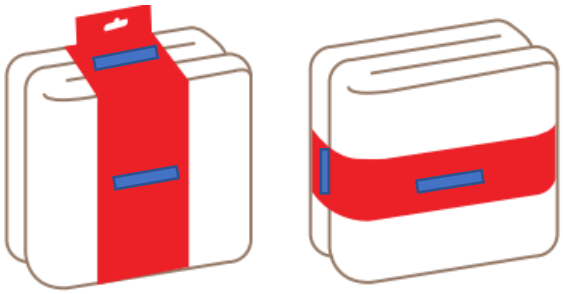
### *Alternative Tagging location*

- N/A

### *Notes*

- Ensure the tag is not on the bottom of the box since the tag will most likely be in direct contact with metal shelves.

# Belly Band



## *Preferred Tagging location*

- Apply an RFID adhesive label to the side/top of belly band. Choose the narrow or thin side that has the least likelihood of touching metal shelves.

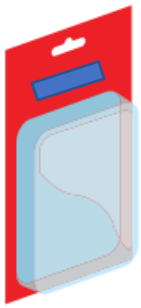
## *Alternative Tagging location*

- If placing the RFID adhesive label on the side/top of the belly band is not feasible due to the thickness of the product, it can be placed on the front of the belly band.

## *Notes*

- The RFID adhesive label can be applied to the inside of the belly band.
- Ensure the RFID adhesive label is not on the bottom of the belly band since the tag will most likely be in direct contact with metal shelves.

# Backer Card



## *Preferred Tagging location*

- Integrate the RFID inlay into the current backer card.

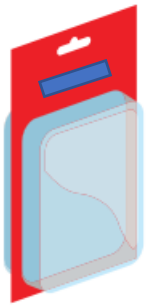
## *Alternative Tagging location*

- Apply an RFID adhesive label on the back or front side of the existing backer card.

## *Notes*

- The RFID adhesive label can be placed behind the product on the backer card as long as the product does not contain any metal, glass, foil, or liquid.
- If the backer card will be resting on the metal shelving, please contact Auburn RFID Lab.

# Trapped Blister



### *Preferred Tagging location*

- Integrate RFID inlay in between the cards.

### *Alternative Tagging location*

- Apply an RFID adhesive label on the back or front side of the existing card.

### *Notes*

- The RFID adhesive label can be applied on the blister as long as the product does not contain any metal, glass, foil, or liquid.

# Clamshell with Cardstock Insert

### *Preferred Tagging location*

- Integrate the RFID inlay into the current cardstock insert.

### *Alternative Tagging location*

- Apply an RFID adhesive label on the back or front side of the existing cardstock insert.

### *Notes*

- If the clamshell will be resting on the metal shelving, please contact Auburn RFID Lab.

# Header Card

## *Preferred Tagging location*

- Integrate the RFID inlay into the current header card.

## *Alternative Tagging location*

- Apply an RFID adhesive label to the back or front side of the existing header card.

## *Notes*

- If the header card will be resting on the metal shelving, please contact Auburn RFID Lab.

# Ribbon Card

## *Preferred Tagging location*

- Integrate the RFID inlay into the ribbon card.

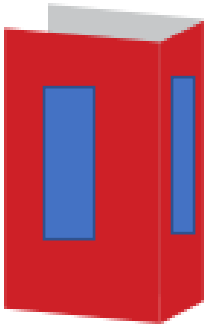
## *Alternative Tagging location*

- Apply an RFID adhesive label on the existing ribbon card (front or back).

## *Notes*

- Place the RFID inlay on the ribbon card that is least likely to come into contact with the metal shelving.

# C-Card



### *Preferred Tagging location*

- Apply an RFID adhesive label to the front or side (inside or outside) of the C-Card.

### *Alternative Tagging location*

- RFID label can be applied to the back of the C-Card if it will not come into contact with the metal shelving.

### *Notes*

- Ensure the RFID tag is positioned on the C-Card such that the tag has the maximum separation from the metal shelf when the product is stored or displayed.

# Insert

### *Preferred Tagging location*

- Integrate into current cardstock insert.

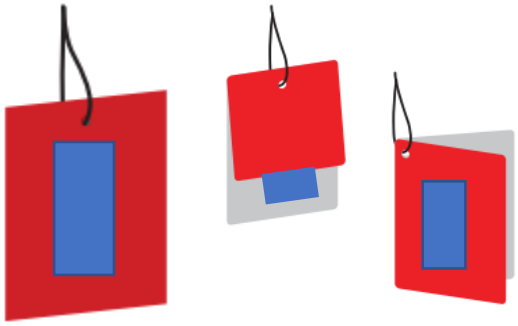
### *Alternative Tagging location*

- Apply RFID adhesive label on existing cardstock insert or on the polybag/acetate box.

### *Notes*

- N/A

# Hang Tag



## *Preferred Tagging location*

- Integrate the RFID inlay into the current hang tag.

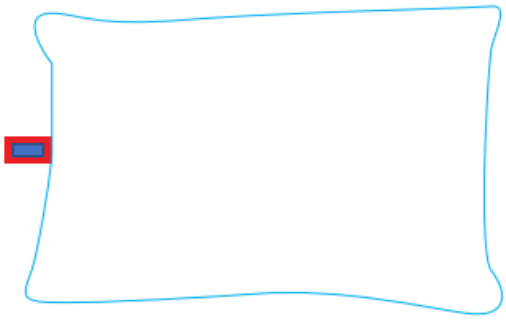
## *Alternative Tagging location*

- Apply an RFID adhesive label on the current hang tag.
- Attach a secondary RFID hang tag along with the current hang tag.

## *Notes*

- Ensure the hangtag is attached to the product in a way that it is offset from any metal, foil, liquids, or glass.
- The RFID hang tag cannot be placed towards the bottom of product to ensure that the RFID inlay will not rest on the metal shelving.

# Sewn-In Label



## *Preferred Tagging location*

- Integrated an RFID inlay into a tear-away tag.

## *Alternative Tagging location*

- If a tear-away tag cannot be used a secondary hangtag can be attached to the product.

## *Notes*

- The tag must be easily removeable by the customer.

## Others

If your packaging type is not listed, please contact Auburn RFID Lab.

# Contacts

### Auburn University RFID Lab

General Questions https://rfidlab.org/alecitemquestions/

Lab tours and business case Alec@rfidlab.org