### SUMMARY OF UPDATES INCLUDED IN THIS VERSION:

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<th>Page Number</th>
<th>Summary of Changes</th>
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<td>Included dates for compliance to requirements in these guidelines</td>
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<td>Clarified maximum dimensions for Breakpack – changed to say:</td>
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<td></td>
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<td>• Longest dimension of Master Carton must be &lt; 26”</td>
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<td></td>
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<td>• Second longest dimension of Master Carton must be &lt; 15” W</td>
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<td>• Shortest dimension of Master Carton must be &lt; 10.5” H</td>
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<td>Use of Desiccants</td>
<td>9</td>
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<td>12</td>
<td>Clarified maximum dimensions for Breakpack – changed to say:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Master Carton Maximum Dimensions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 26” along Longest Dimension</td>
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<tr>
<td></td>
<td></td>
<td>• 15” along 2nd Longest Dimension</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 10.5” along Shortest Dimension (must fit inside racking)</td>
</tr>
<tr>
<td>Bulk Storage</td>
<td>18-19</td>
<td>• NEW – Section on Bulk Testing Requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All items &gt; 140 lbs. and/or &gt; 7 cubic ft in volume must pass vertical and horizontal compression testing</td>
</tr>
<tr>
<td>Appendix A: RDC Conveyability Guidelines</td>
<td>21</td>
<td>• NEW Minimum Master Carton Height for conveyability reduced to 1”</td>
</tr>
<tr>
<td>Appendix C: Special Handling Icons</td>
<td>24</td>
<td>• NEW Team Lift icon added –</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Replaces old “Takes 2 To Lift Icon”.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use for any Master Carton weighing &gt; 70 lbs. (regardless of cubic volume)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Implement as a rolling change for future – there is no need to repack existing inventory</td>
</tr>
<tr>
<td>Appendix D: Recommended Guidelines for Application of Adhesives</td>
<td>25</td>
<td>• Added requirement that tape must be minimum width of 2.25”</td>
</tr>
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<td>Appendix E - Lowe’s Recommended Corrugated Carton Specifications</td>
<td>27</td>
<td>• Added specification on flute direction – must be vertical flute</td>
</tr>
</tbody>
</table>
OVERVIEW:

The LowesLink Import Packaging Guidelines outlines the packaging, labeling, palletization, and unitization requirements for all Import Products flowing through Lowe’s Regional Distribution Center and Transload Distribution Center facilities. For the purposes of this document, Import products are defined as those in which Lowe’s is the importer of record.

Items manufactured overseas but shipped to Lowe’s from a domestic warehouse location are considered Domestic Products. For Domestic Packaging requirements, please consult the LowesLink Domestic Packaging Guidelines document.

Lowe’s is committed to providing customer-valued solutions with the best prices, products, and services to make Lowe’s the first choice for home improvement. Proper packaging plays an important role in achieving these goals. Packaging should be designed to:

- Minimize damages and improve customer satisfaction
- Allow operationally efficient merchandising in the retail environment
- Minimize distribution handling, storage and transportation costs
- Reduce waste and unnecessary materials costs

Lowe’s needs the support of the vendor community to achieve these goals. Through improvements to packaging, labeling, and unitization we will reduce costs and deliver greater value to Lowe’s customers.

Vendors must achieve compliance to the requirements outlined in this document by the dates below:

- For New Vendors (without any Lowe’s finished goods inventory produced) – Compliance was expected by April 1, 2009
- For Existing Vendors (with Lowe’s finished goods inventory produced) – Compliant by July 1, 2009

If compliance is not possible by dates above, please contact your Lowe’s Global Sourcing Program Manager.

IMPROVING DISTRIBUTION EFFICIENCY:

Vendors can help us reduce distribution handling costs and improve operational efficiency by taking the following actions during the annual Product Line Review process:

- Comply with the packaging specifications and labeling requirements in these guidelines.
- Work with the LGS Program Managers and Vendor Supply Chain Specialist (VSCS) to determine the optimal packaging quantity and Ship Unit for new and existing items
  - The packaging quantity should be designed for efficient distribution and should optimize inventory turn at stores.
  - The Vendor Supply Chain Specialist can analyze various case quantity and/or pallet quantity alternatives.
- Eliminate unnecessary packaging materials
- Identify items that do not meet the Lowe’s conveyability guidelines and evaluate packaging changes to allow these items to be conveyed on our automated conveyor systems.
- Properly unitize container shipments so that items can be easily received and put into storage.

LOWE’S DISTRIBUTION FLOW:

It is important to understand how your product flows to Lowe’s stores. Import Products flow through Lowe’s Regional Distribution Centers (RDCs) in one of three ways:

- RDC Stock –
  - Items may be ordered as Full Container (FCL) or consolidated with other vendor’s orders to make a full container (CONS Volume)
  - Product is shipped directly to a Lowe’s RDC and stored in a location in the facility.
  - Items are picked from the storage location and shipped from the RDC to a Lowe’s store
- **Transload**
  - Product is shipped to one of Lowe’s 3 Transload Distribution Centers
  - Product is not stored in a location at the Transload Distribution Center.
  - It is cross-docked upon arrival and shipped outbound to the Lowe’s RDCs.
  - Upon arrival at Lowe’s RDCs, product is stored in a location in the facility.
  - Vendors with Transload items should follow guidelines for RDC Stock product – refer to Handling/Storage Matrix

- **Trap**
  - Lowe’s consolidates volume for all RDCs to ship to a single location- the Lowe’s Import Consolidation Center (RDC 964 – Trap)
  - Product is stored in a location in the Trap facility until there is demand for item
  - Product ships from Trap to individual RDCs and then from RDC to Lowe’s stores.
  - Vendors with Trap items should follow guidelines for RDC Stock product – refer to Handling/Storage Matrix

---

Trap and Transload items go through additional handling and shipping before they reach their final destination. Therefore, vendors must take extra care to ensure packaging is strong enough to withstand the additional handling and shipping steps.
GLOSSARY OF PACKAGING TERMS:

The following terms are used in reference to packaging specifications:

**Master Carton (MC):** A master carton is a shippable carton or bundle that contains one or more identical selling units.

**Inner Pack (IP):** A smaller, multi-piece container that is shipped inside of the Master Carton. It may be a fully enclosed shipper carton, or a bundle of items. To qualify as an Inner Pack, it must be capable of being separated from the Master Carton for shipment to an individual store.

**Breakpack:** The process by which Inner Pack bundles/boxes are separated from the Master Carton for shipment to a Lowe’s store.

**I2of5:** The bar code used for Master Cartons and Inner Packs (representing a quantity greater than 1 unit).

**UPC (Universal Product Code):** The bar code used for the individual selling unit.

**Ship Unit:** The quantity of the item that is shipped from a Lowe’s Distribution Center to an individual Lowe’s store. The Ship Unit may be equal to the Pallet Quantity, the Master Carton quantity, the Inner Pack quantity, or a single unit (each).
HOW TO USE THIS DOCUMENT:

1. Read the Storage/Handling Type Matrix on next page
2. Determine which Storage/Handling Type(s) apply to your product
3. Are you able to determine which types apply?
   - Yes: Read the section titled “GENERAL PACKAGING REQUIREMENTS FOR LOWE’S DISTRIBUTION CENTERS AND STORES”
   - No: Contact your LGS Program Development Manager or Vendor Supply Chain Specialist (VSCS)
4. Read the specific section(s) that apply to your product and read any applicable links/appendices
**DISTRIBUTION CENTER PACKAGING, LABELING, AND UNITIZATION REQUIREMENTS**

- Review the chart below to determine which of the storage/handling type(s) apply to your products.
- Then, read the section(s) which outline the requirements for the storage/handling type(s) that apply to your products.
- *If you are unable to determine which storage/handling type(s) applies, please contact your LGS Program Development team or your VSCS*

<table>
<thead>
<tr>
<th>Storage/Handling Type</th>
<th>Flow Type</th>
<th>DC to Store Ship Unit</th>
<th>Dimensional Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakpack</strong></td>
<td>Stock or 1XD</td>
<td>Inner Pack Quantity</td>
<td>• Longest dimension of Master Carton must be &lt; 26”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Second longest dimension of Master Carton must be &lt; 15” W</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Shortest dimension of Master Carton must be &lt; 10.5” H</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Inner Pack must be &lt;= 22” L X 14” W X 9” H</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Master Carton Weight must be &lt;= 40 lbs per linear foot.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Maximum Master Carton Weight is &lt;= 70 lbs.</td>
</tr>
<tr>
<td><strong>Store Department</strong></td>
<td>Stock</td>
<td>Master Carton Quantity</td>
<td>• Master carton is &lt; 8” x 5” x 1”</td>
</tr>
<tr>
<td><strong>Conveyable Case Ship</strong></td>
<td>Stock or 1XD</td>
<td>Master Carton Quantity</td>
<td>• Must meet Conveyability Guidelines (<a href="#">Appendix A</a>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Master Carton Weight is &lt;= 70 lbs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• <strong>Following categories are treated as non-conveyable due to packaging/safety issues</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Ceramic Bath (Toilets, Pedestals)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Ceramic Tile</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Fasteners (Bucket items)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Paint (Liquid paints and stains)</td>
</tr>
<tr>
<td><strong>Non-Conveyable Case Ship</strong></td>
<td>Stock or 1XD</td>
<td>Master Carton Quantity</td>
<td>• Does not meet Conveyability Guidelines (<a href="#">Appendix A</a>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Master Carton weight is &gt; 70 lbs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Maximum case weight for team lift = 140 lbs.</td>
</tr>
<tr>
<td><strong>Pallet Ship</strong></td>
<td>Stock or 1XD</td>
<td>Pallet Quantity</td>
<td>• <strong>Stock Pallet Ship</strong> – Product height on pallet must be &lt;= 55” (not including height of actual pallet)</td>
</tr>
<tr>
<td><strong>Mini-Pallet Ship</strong></td>
<td>Stock or 1XD</td>
<td>Mini-Pallet Quantity</td>
<td>• <strong>Stock Mini-Pallet</strong> - Quarter-pallet meets Lowe’s Mini-Pallet Specifications (<a href="#">Appendix B</a>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 1XD Mini-Pallet – Refer to <a href="#">Lowe’s Promotional Display Guidelines</a></td>
</tr>
<tr>
<td><strong>Bulk Storage</strong></td>
<td>Stock</td>
<td>Master Carton Quantity</td>
<td>• Must be at least 24” L X 24” W X 24” H</td>
</tr>
<tr>
<td><strong>Stack Rack Storage and Long Length Storage</strong></td>
<td>Stock</td>
<td>Master Carton Quantity or Pallet Quantity</td>
<td>• <strong>Stack Rack</strong> –</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Item is &lt; 42” on shortest side.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Item is &gt; 48” on longest side</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• <strong>Long Length</strong> – item is &gt; 54” along longest dimension and &lt;=12” along shortest dimension.</td>
</tr>
<tr>
<td><strong>Vendor Prepared Cross-Dock</strong></td>
<td>VPXD</td>
<td>Pallet Quantity</td>
<td>• Vendors should refer to <a href="#">LowesLink Cross Dock Guidelines</a> for additional information</td>
</tr>
</tbody>
</table>
GENERAL PACKAGING REQUIREMENTS FOR LOWE’S DISTRIBUTION CENTERS AND STORES

The following general requirements apply to all products shipped to a Lowe’s Distribution Facility or to a Lowe’s store:

Packaging:

- Any packaging changes must be approved by a Lowe’s Vendor Supply Chain Specialist. This includes:
  - changes to carton quantities
  - changes to carton dimensions
  - changes to carton weight
  - use of alternative packaging materials
  - exceptions to standards in this document

- All Inner Packs and Master Cartons must be sealed to eliminate potential of accidental opening.
- Cartons should be sealed with tape or glue. See Appendix D for instructions on Recommended Guidelines for Application of Adhesives
- Master Carton must meet a minimum single wall corrugated carton specification (see Appendix E Corrugate Specs)

Carton Access Hole Requirements

- Required on all large-sized corrugated Master Cartons meeting the following criteria:
  - Outside carton dimensions are greater than 24” x 18” x 18”
  - Carton weight greater than or equal to 30 lbs (13.6 kg)
- All access holes should be located on opposing carton panels.
- See Appendix F of this document for Access Hole Specifications

Unitization

- Lowe’s requires one item number per master carton. Mixed items in master cartons are not allowed.
- Any changes to the Inbound Ship Unit (i.e. carton/pallet quantity shipped into a Lowe’s Distribution Center) or Outbound Ship Unit (i.e. quantity shipped from a Lowe’s Distribution Center to a store) must be approved by the Lowe’s Vendor Supply Chain Specialist.
- For Distribution Center Purchase Orders, Lowe’s will order items in multiples of the Master Carton, Tier (layer of pallet) or Pallet quantities.
- Do not ship loose Inner Packs to the Lowe’s Distribution Centers.
- If you receive an order quantity that is not divisible by the Master Carton quantity, please contact the Lowe’s Replenishment Specialist to correct.

Container-Loading and Palletization:

- If shipping floor-loaded, place cartons of the same item together inside the container. This will make it easier to unload and receive.
- If shipping on pallets, place cartons of the same item (i.e. same SKU) together on the pallet by the quantity amount ordered.
  - If possible, group each item together in a tier (layer)
  - Do not mix the same item across multiple mixed pallets.
  - Locate pallets of the same item (same SKU) together in the container. This will improve receiving efficiency at the Lowe’s RDCs.
  - Cardboard separators should be used at the 60” (1.52 M) height mark if total pallet height is > 60”
  - Vendors must use pallets that conform to Lowe’s Pallet Specifications – See Appendix B of this document.
IMPORT CARTON LABELING REQUIREMENTS

General Requirements:
- Import Vendors must follow the general policies outlined in the LowesLink Item Number Labeling Standards document.
- Information should be printed directly on the master carton on all visible carton panels (four sides and top).
- Font size should be as large as possible but must maintain good visual presentation in stores.
  - Bulk Items ( > 7 cubic ft. in volume and/or greater than 140 lbs.) should have handling icons printed at least 5" in size.
  - For other smaller items, handling icons should be printed as large as possible given the size of the carton.

Bar Code Labeling:
- If Master Carton Quantity is greater than 1, Master Carton must be labeled with valid I2of5 bar code that represents the total number of sellable units in the Master Carton.
- If the Master Carton quantity is equal to one (MC = 1), there must be a UPC bar code and vendor model number.

The Receiving Process for Floor-Loaded Imports:
- Import Container arrives at RDC
- RDC Employees sort items onto pallets to put away
- Pallets should be stacked to 60" (1.52 meters) height to maximize rack storage utilization

Special Handling Icons:
- Use only icons shown in Appendix C. If specific icon is not needed for your product, do not use.

- This Way Up Arrow Icon (see example in Appendix C)
  - Only use arrows if necessary to avoid product damage.
  - Arrows should point in only one (1) direction – the correct direction needed for storage and shipping.
  - All liquid or fragile items must have arrows in the direction needed for storage and shipping.

- Team Lift Icon (see example in Appendix C)
  - This is a NEW icon.
  - It replaces the old “Takes 2 To Lift Icon”.
  - Required if Master Carton weight is > 70 lbs (31.75 kg).
  - Please discontinue use of the old Takes 2 To Lift. It is no longer an approved icon.
  - This should be implemented as a rolling change – No need to re-package existing inventory.
LOSS PREVENTION REQUIREMENTS:

Please refer to LowesLink EAS Source Tagging Requirements document

Liability for Concealed Damages:

• Please review Lowe’s Liability Statement policy available on LowesLink

STRETCH WRAP REQUIREMENTS:

These requirements apply to all flow types (RDC Stock/Trap/Transload)

For product stored inside a Store or Distribution facility:

Stretch wrap all individual pallet / slip sheet loads to the base of the pallet / slip sheet with sufficient stretch wrap to prevent the product from shifting in transit.

For product stored outside a Store or Distribution facility (i.e. landscaping block, patio pavers and other concrete block items) – special requirements below apply

• UV resistant stretch wrap material is required to enhance/preserve the performance capabilities and prevent damage from the exposure of extreme weather conditions.

<table>
<thead>
<tr>
<th>Film Type</th>
<th>Blown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Minimum Gauge</td>
<td>80 g.</td>
</tr>
<tr>
<td>Minimum UVI Concentration</td>
<td>5%</td>
</tr>
</tbody>
</table>

USE OF DESICCANTS

• **Objective: To reduce moisture damage**
• The following product categories require a small desiccant bag (silica gel or clay only) be placed inside each individual product carton
  • Electrical/Electronic Products such as (but not exclusive to) light fixtures, ceiling fans, Trim-a-Tree, etc.
  • Fabric Materials such as (but not exclusive to) leather materials, gloves, umbrellas, etc.
  • Metal Products such as (but not exclusive to) nails, fasteners, garden tools, etc.
  • Wood products such as (but not exclusive to) lumber, decking, patio furniture, etc.
• For other exposed moisture sensitive products such as wheel barrels, etc. a large (80-unit) desiccant bag should be contained with the product in a plastic bag or barrier inside the shipping container.
• **Do not** scatter desiccant bags loosely inside the shipping container.

PRINTED GRAPHIC REQUIREMENTS

• Lowe’s prefers soy or water based inks. Ink quality must be sufficient to pass Sutherland Rub test as defined in next section
ABRASION RESISTANCE OF PRINTED PACKAGING MATERIALS (SUTHERLAND RUB TEST)

- Objective: To ensure resistance to abrasion or scuffing during shipping.
- Applies to all packaging materials having applied graphics on a flat surface, including corrugated boxes, folding cartons, labels, and inserts.
- The printed materials identified above must be able to withstand 100 strokes (a stroke is one back-and-forth cycle) using a 4-lb weight without scuffing, fading, or abrasion to printed graphics on box.
PACKAGING FOR FREIGHT OPTIMIZATION

The first step in reducing overall supply chain freight costs for both vendors (inbound to warehouse) and Lowe’s (Outbound to Lowe’s destination) is to review product packaging.

**Problem: Vendor ships item fully assembled. Almost 33% of carton is wasted space.**

*Example:*

![Image of partially assembled item in carton]

*Suggested Improvement:*

- Consult with Vendor Supply Chain Specialist to see if item can be packaged partially assembled.
- In example above, Lowe’s and the vendor agreed to ship the item partially assembled.
- Freight costs were significantly reduced for vendor and for Lowe’s.

---

**Problem: Vendor ships multiple items to Lowe’s, but uses one standard box size. Box is too big for contents and wastes spaces**

*Example:*

![Image of box with items that don’t fit]

*Suggested Improvement:*

- Review items to see if they can be grouped into a few different packaging sizes configurations appropriate for the group of items.
- Determine alternate packaging quantities based on proposed carton sizes.
- Contact your Vendor Supply Chain Specialist to determine the optimal shipping quantity to maximize inventory turn and minimize wasted freight.

---

**Problem: Packaging is too large for item**

*Example:*

![Image of too-large packaging for items]

- Determine if package size can be reduced.
- **Reducing package size will help to reduce materials and freight costs.**
BREAKPACK REQUIREMENTS:

Definition:

- A Master Carton containing multiple Inner Packs of a single item is shipped into the RDC
- The Ship Unit from RDC to Store equals a multiple of the Inner Pack Quantity
- RDC picks individuals Inner Packs from the Master Carton and places in the over pack Store Department Container box
- Over pack box is placed on conveyor for shipment from RDC to store

Breakpack Dimensions:

- Maximum Master Carton Weight is <= 70 lbs (31.75 kg)
- Master Carton Maximum Dimensions:
  - 26” along Longest Dimension
  - 15” along 2nd Longest Dimension
  - 10.5” along Shortest Dimension (must fit inside racking)
- Inner Pack Maximum Dimensions:
  - 22” Length
  - 14” Width
  - 9” Height (must fit inside racking)

Packaging:

- Inner Packs must be capable of being separated from the Master Carton for shipment to an individual store.
- Banding is not allowed.
- Staples should not be used on Master Cartons or Inner Packs; they can injure employees during the picking process.
Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements – see Master Carton template and Breakpack/Inner Pack Carton Templates
- Inner Packs must be labeled with a valid I2of5 bar code that represents the total number of sellable units contained in each Inner Pack

STORE DEPARTMENT CONTAINER (CASE PICK) REQUIREMENTS

Definition:

- Master Carton is too small to be conveyed on its own.
- RDC picks item in Master Carton quantity and places in over pack box
- Over pack box is placed on conveyor for shipment from RDC to store
- See image of Store Department Container box in previous section

Packaging:

- Banding is not allowed for Store Department Container items.

Labeling:

- Refer to LowesLink Carton Labeling Templates document → see Small Master Carton template for label requirements

CONVEYABLE CASE SHIP REQUIREMENTS

Definition:

- Item dimensions are within the Lowe’s Conveyability Guidelines (see Appendix A of this document)
- Item can be safely conveyed without incurring damage or damaging other items/equipment.
- The Ship Unit from RDC to Store equals a multiple of the Master Carton Quantity.

Packaging:

- Cartons must not damage the RDC’s conveyor system or handling equipment.
- Cartons should be sealed with tape, glue, or staples.
- Banding is not allowed for conveyable items. It can damage the conveyor system.

Figure 8 - Conveyable items travel along conveyor and are diverted to correct store dock door.
• Items must be braced/packaged so that product will not shift or protrude from carton as it moves along the conveyor.

![Figure 9 - This item is NOT conveyable because of poor packaging. It will damage other items on the conveyor.](image)

• Liquid items will be conveyed upright and should be labeled with the “Liquid” icon (see Appendix C of this document). When possible, place in boxes with flaps facing up.

**Labeling:**

• Refer to [LowesLink Carton Labeling Templates](#) document for labeling content requirements ➔ see Master Carton template for example

**NON-CONVEYABLE CASE SHIP REQUIREMENTS:**

**Definition:**

![Figure 10 - Non-Conveyable Items are staged and loaded on outbound trailer with forklift or squeeze clamp](image)

• Item **does not** meet dimensional criteria for conveyability (See Appendix A of this document) **and/or** cannot be safely conveyed without incurring damage or damaging other items.
• The Ship Unit from RDC to Store equals a multiple of the Master Carton Quantity.
• Non-conveyable items are picked individually for stores, delivered to the outbound store trailer with a piece of mobile equipment, hand scanned, and then loaded on outbound trailers.

**Packaging:**

• Banding is not recommended; however if necessary it should be made of plastic and tightly secured to product.
• Ensure any banding does not damage sellable units.
• The use of metal banding is **not** allowed for safety reasons.
Store Pick Process used for Non-Conveyable Items:

- Used for highly damageable items that cannot be safely conveyed (e.g. tile, fasteners, porcelain items).
- Items are picked individually and placed on a pallet along with other similar items for shipment to an individual store.
- To prevent damages in these categories, certain additional packaging requirements apply.

Additional Category –Specific Requirements:

- Ceramic Bath vendors should refer to Ceramic Bath Packaging Specs on LowesLink.com
- Toilet vendors should refer to Toilet Packaging Specs on LowesLink.com
- Bath Vanity vendors should refer to Bath Vanity Packaging Specs on LowesLink.com
- Ceramic Tile vendors should refer to Ceramic Tile Packaging Specs on LowesLink.com

Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements → see Master Carton template for example

If items are Palletized:

- Use of 4-way entry pallets is required.
- Maximum allowable overhang is 1” along shortest side of pallet (i.e. 40” side). Overhang is not allowed along the longest dimension (i.e. 48” side) of pallet.

PALLET SHIP REQUIREMENTS:

Definition:

- Item ships into the RDC in full pallet quantities (single-item pallets) and the Ship Unit from RDC to Store equals the pallet quantity
- Pallet is delivered to the outbound store door via a forklift truck.

Packaging:

- Banding is not recommended; however if necessary it should be made of plastic and tightly secured to product.
- Ensure any banding does not damage sellable units.
- The use of metal banding is not allowed for safety reasons.

Additional Category –Specific Requirements

- Bird Seed Vendors should refer to Bird Seed Packaging Specs available on LowesLink.com
Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements → see Master Carton template for labeling of individual Master Cartons
- There must be one label on pallet that includes a valid I2of5 for pallet qty if pallet qty is > 1

Unitization/Palletization

- Lowe’s will order items in full pallet quantities
- Use of 4-way entry pallets is required.
- Maximum allowable overhang is 1” along shortest side of pallet (i.e. 40” side). Overhang is not allowed along the longest dimension (i.e. 48” side) of pallet.
MINI-PALLET SHIP REQUIREMENTS:

Definition:

- Stock Mini-Pallet – used for items that ship on a quarter-pallet (20” x 24”) from vendor to RDC to store
- Promotional Mini-Pallet – primarily used for promotional sidestacks – Refer to LowesLink Promotional Display Guidelines for specific requirements for promotional mini-pallets (also known as quarter-pallet sidestacks)

Packaging:

- Individual units/cartons must be secured so that the mini-pallet can be safely moved via forklift equipment throughout the RDC facility.
- Banding is acceptable, but if used must tightly adhere the product to the mini-pallet.
- Ensure any banding does not damage sellable units.
- Metal banding is not allowed for safety reasons.

Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements → see Master Carton template for labeling of individual Master Cartons
- There must be one label on pallet that includes a valid I2of5 for pallet qty if pallet qty is > 1

Unitization/Palletization:

- Vendors must use a Lowe’s approved mini-pallet. See Appendix B for details.
- The Vendor Supply Chain Specialist (VSCS) must approve any request for an exception to the approved mini-pallet.
BULK STORAGE REQUIREMENTS

Definition:

- Bulk Storage is used for items greater than 7 cubic feet (12096 cu. in) in volume or > 140 lbs. that can be handled using squeeze clamp equipment (see picture of squeeze clamp below)

![Figure 14 - Items Stacked 16 ft. (4.8 meters) high in Bulk Area](image)

![Figure 15 - Bulk Items are moved using Squeeze Clamp Trucks](image)

Testing Requirements for Bulk Items:

- All items meeting the criteria below must pass both squeeze clamp test and vertical compression (stack) test:
  
  - Master Cartons > 7 cubic feet in volume with smallest dimension > 11 in.
  - Unpalletized Master Cartons > 140 lbs regardless of cubic volume.

Squeeze Clamp Testing Requirements

- Single Master Carton must be tested to withstand 1000 PSI for 1 minute (fully engaged)
- Clamp testing must be performed utilizing a hydraulic fixture.
- Mechanical screw-type apparatus are not acceptable.
- Item must clamp on all 4 sides (except Appliances)
- Carton must be labeled with the approved Squeeze Clamp icon (see Appendix C for picture)
  - **Clamp Icon** - Should be printed on all four sides of box if item can be clamped on 4 sides.
  - **No Clamp Icon** - Only use if item cannot clamp on a specific side. The side(s) that should not be clamped should be labeled with the No Clamp icon.
- Icons for Bulk Items must be at least 5” (12.7 cm) in size and printed in permanent ink.
Vertical Compression Testing Requirements

- Lowe's prefers a stack height of 20 feet (6.10 meters).
- Lowe's minimum acceptable stack height is 16 feet (4.87 meters).
- Master Carton must pass Vertical Compression Testing for 16 ft Minimum Bulk Stack Height
- Carton must stack minimum of 16 ft. without use of bracing or shrink wrap to support the stack
- Carton must be labeled with approved Squeeze Clamp Icon (see Appendix C for picture)
- Carton must be labeled with approved Stack Height icon (see Appendix C for picture)
  - Icon should indicate number of cartons that can be stacked on top of one another without incurring damage.
  - Stack Height must be listed in number of cartons, NOT number of feet
- Failure to include squeeze clamp or stack height icon on box will result in a “failure” on test.
- Vendor will be required to include the correct icons before the item receives a passing test result.

In the event that item cannot comply with the Horizontal and Vertical Compression test requirements, Lowe’s Packaging group will monitor and make final approval decision.

Bulk Exception Items

Exception Items are defined as those items which are approved for Bulk but cannot meet the testing requirements outlined above

- If items cannot stack 16 feet high, they will be classified as an exception item.
- For known exception items, Packaging will monitor and make final approval decision to waive stack height and squeeze clamp testing requirements.
- Palletized exception items must be capable of stacking 3 pallets high, at least 60 inches (1.52 meters) per pallet.

Packaging:

- Banding is not recommended; however if necessary it should be made of plastic and tightly secured to product.
- Ensure any banding does not damage sellable units.
- The use of metal banding is not allowed for safety reasons.

Additional Category –Specific Requirements:

- Grill Vendors should refer to Grill Packaging Specs available on LowesLink.com
- Patio Furniture Vendors should refer to Patio Furniture Packaging Specs available on LowesLink.com

Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements → see Bulk Carton Template for example
STACK RACK/LONG-LENGTH STORAGE REQUIREMENTS:

Definition:

- Stack Racks are used for long-length items, high volume items stored on oversized (91.5 “L X 41.5”W) metal racks.
- Stack Rack items must be capable of stacking 60 inches (1.52 meters) high in the racks without damage to cartons and/or sellable product.
- Stack racks will be stacked a maximum of 4 racks high.
- Long-length Storage is used for items that are not wide enough for bulk storage but are > 54” L along longest side.
- Two types of long-length storage exist:
  - Vertical Long-Length Storage (product that must be stored vertically ↑↑)
  - Horizontal Long-Length Storage (Product that can be placed with longest side horizontal to ground → )

Packaging:

- Banding is not recommended; however if necessary it should be made of plastic and tightly secured to product.
- Ensure any banding does not damage sellable units.
- Metal banding is not allowed for safety reasons.

Additional Category – Specific requirements:

- Patio Furniture Vendors should refer to [Patio Furniture Packaging Specs](#) available on LowesLink.com

Labeling:

- Refer to [LowesLink Carton Labeling Templates](#) document for labeling content requirements → see Stack Rack Template for example

Unitization/Palletization:

- If palletized for shipment into RDC or Transload, Stack Rack items must be shipped on pallet that is less than 42” along shortest dimension
**Appendix A: RDC Conveyability Guidelines**

**NOTE:** Lowe’s RDC Operations Management will review packaging to determine if item can safely be conveyed without incurring damage or damaging other items.

<table>
<thead>
<tr>
<th>Master Carton Length (in inches)</th>
<th>Master Carton Width (in.)</th>
<th>Master Carton Height (in.)</th>
<th>Master Carton Weight (lbs.)</th>
<th>Master Carton Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>31</td>
<td>25</td>
<td>24</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>32</td>
<td>25</td>
<td>24</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>33</td>
<td>25</td>
<td>24</td>
<td>70</td>
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<tr>
<td>4</td>
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<td>46</td>
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<td>70</td>
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<td>29</td>
<td>59</td>
<td>15</td>
<td>24</td>
<td>70</td>
</tr>
<tr>
<td>30</td>
<td>60</td>
<td>15</td>
<td>24</td>
<td>70</td>
</tr>
</tbody>
</table>
Appendix B: Lowe’s Standard Pallet Specifications – Applies to Palletized Items Only

Standard Pallet is GMA wooden pallet, 40” x 48”, with 4-way entry required

The construction of the pallet must be accessible for all forklift equipment to facilitate handling throughout the entire distribution process.

![Diagram of pallet dimensions](image)

<table>
<thead>
<tr>
<th><strong>Pallet Dimensions (L x W)</strong></th>
<th><strong>Length = 48.00 inches.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Width = 40.00 inches.</strong></td>
</tr>
<tr>
<td><strong>Pallet Style</strong></td>
<td><strong>Double Faced Non-Reversible</strong></td>
</tr>
<tr>
<td><strong>Entry</strong></td>
<td><strong>4-way entry only</strong></td>
</tr>
<tr>
<td><strong>Lumber Specifications</strong></td>
<td><strong>Grade III and/or IV hardwood, clean sawn.</strong></td>
</tr>
<tr>
<td><strong>Fastener Requirements</strong></td>
<td><strong>2.00 inch screw shank nails.</strong></td>
</tr>
<tr>
<td><strong>Top Deck Boards (7/pallet):</strong></td>
<td><strong>Outer Boards (2) = 0.625 x 5.75 x 40.00 inches.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Inner Boards (5) = 0.625 x 3.75 x 40.00 inches.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Space between boards: 3 inches (max.)</strong></td>
</tr>
<tr>
<td><strong>Bottom Deck Boards (5/pallet):</strong></td>
<td><strong>Outer Boards (2, chamfered) = 0.625 x 5.75 x 40.00 inches.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Inner Boards (3) = 0.625 x 3.75 x 40.00 inches</strong></td>
</tr>
<tr>
<td><strong>Runners (3/pallet):</strong></td>
<td><strong>1.50 x 3.50 x 48.00 inches.</strong></td>
</tr>
</tbody>
</table>
Standard Mini-Pallet is made of wood, 20” x 24”, with 2-way entry required

Standard Mini-Pallet Version (use for mini-pallets weighing less than 100 lbs)

![Standard Mini-Pallet Diagram]

Heavyweight Mini-Pallet Version (use for mini-pallets weighing more than 100 lbs) → provides better stability

![Heavyweight Mini-Pallet Diagram]

### Pallet Dimensions (L X W)

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>20.00 – 24.00 inches.</td>
<td>20.00 – 24.00 inches.</td>
</tr>
<tr>
<td>Width</td>
<td>20.00 – 24.00 inches.</td>
<td>20.00 – 24.00 inches.</td>
</tr>
</tbody>
</table>

### Pallet Style

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>2-way entry</td>
<td>2-way entry</td>
</tr>
</tbody>
</table>

### Lumber Specifications

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fastener Requirements</td>
<td>Grade III hardwood, clean sawn.</td>
<td>Grade III hardwood, clean sawn.</td>
</tr>
<tr>
<td>1.625 inch screw shank nails.</td>
<td>1.625 inch screw shank nails.</td>
<td></td>
</tr>
</tbody>
</table>

### Pallet Top (Top Deck Boards - 4 per pallet)

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50 (min.) x 3.75 x 20.00 – 24.00 inches.</td>
<td>0.50 (min.) x 3.75 x 20.00 – 24.00 inches.</td>
<td></td>
</tr>
</tbody>
</table>

### Pallet Base (Runners - 2 per pallet)

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.25 x 3.50 x 20.00 – 24.00 inches.</td>
<td>1.25 x 3.50 x 20.00 – 24.00 inches.</td>
<td></td>
</tr>
</tbody>
</table>

### Pallet Base (Bottom Deck Boards - 2 per pallet)

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50 (min.) x 3.75 x 20.00 – 24.00 inches.</td>
<td>0.50 (min.) x 3.75 x 20.00 – 24.00 inches.</td>
<td></td>
</tr>
</tbody>
</table>

### Runner Spacing

<table>
<thead>
<tr>
<th></th>
<th>Standard Mini-Pallet</th>
<th>Heavyweight Mini-Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.5” apart, centered</td>
<td>Outside edge of mini-pallet</td>
<td></td>
</tr>
</tbody>
</table>

### Important:

- The construction of pallet and placement of the runners must allow entry with all Lowe’s handling equipment.
- Any deviation to this specification must be approved by the Lowe’s Vendor Supply Chain Specialist (VSCS) for Regular Replenishment items, or by the Promotional Display Manager for Promotions/Sidestacks.
- No more than 1 inch of the pallet deck can be exposed on any side of the product (max 1” underhang)
- No more than 1 inch of overhang is permitted on any side of pallet deck
Appendix C: Special Handling Icons

Import vendors – please choose only from icons below. If icon is not applicable for your product, do not use.

CARTON MARKINGS / HANDLING ICONS

- Hand Truck
- Clamp
- Forklift
- No Hand Truck
- No Clamp
- No Forklift
- This Way Up
- Liquid
- Stack Height
- Team Lift

If the product weighs 70 lbs. or more, this icon needs to be used. Use the actual weight of the product with no decimals.
Appendix D: Recommended Guidelines for Application of Adhesives

Pressure Sensitive Tape:

- Tape must be a minimum of 2.25” in width
- Tape should be approximately centered down the top seam.
- Make sure that you are using tape with good adhesive quality.
- Tape tails should extend approximately 2 inches or longer beyond the top flap seam.
- Tape tails should be well adhered to the side of the box.

CORRECT APPLICATION METHOD:

☑ Tape is centered down seam and extends 2” beyond top flap seam
☑ Top Flap seams are secured closed without space between flaps

INCORRECT APPLICATION METHODS:
Example #1: INCORRECT

☒ PROBLEM – Tape does not extend beyond seam. Box will likely open and damage may occur
Example #2: INCORRECT

PROBLEM – Tape is off-center. Does not cover top flap seams adequately. Box will likely open and damage may occur.

Hot Melt Glue:

- Glue placement should be approximately 1/2 inch from the width panel and near the flap edge (see diagram below)
- Multi pattern glue beads should be used with a length of 2 inches or more depending on performance requirements
- Glue bead should be flattened and provide significant fiber tear when opened (This will vary depending on the substrate being glued)
- Strength of adhesive bond will depend on quality of adhesive (amount of resin used)
- The proper "open time" needs to be used to ensure adequate bonding
- Varnishes and other coatings should be avoided in glue areas to maximize bond strength
### Appendix E - Lowe's Recommended Corrugated Carton Specifications – Applies to all Corrugated Master Cartons and Corrugated Point-Of-Sale Cartons

<table>
<thead>
<tr>
<th>Product Weight (lbs./kg)</th>
<th>Maximum Outside Carton Dimensions (inches/cm)</th>
<th>Weight of Liners (Paper Weight) (lbs./kg per 1,000 sq. ft.)</th>
<th>Burst Test (lbs./kg per sq. ft.)</th>
<th>Edge Crush Test (ECT) (lbs./kg per in. width)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single-Wall Corrugated Boxes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20#/9kg</td>
<td>40&quot;/102cm</td>
<td>52#/24kg</td>
<td>125#/57kg</td>
<td>23#/10kg</td>
</tr>
<tr>
<td>35#/16kg</td>
<td>50&quot;/127cm</td>
<td>66#/30kg</td>
<td>150#/68kg</td>
<td>26#/12kg</td>
</tr>
<tr>
<td>50#/23kg</td>
<td>60&quot;/152cm</td>
<td>75#/34kg</td>
<td>175#/79kg</td>
<td>29#/13kg</td>
</tr>
<tr>
<td>65#/30kg</td>
<td>75&quot;/191cm</td>
<td>84#/38kg</td>
<td>200#/91kg</td>
<td>32#/15kg</td>
</tr>
<tr>
<td>80#/36kg</td>
<td>85&quot;/216cm</td>
<td>111#/50kg</td>
<td>250#/113kg</td>
<td>40#/18kg</td>
</tr>
<tr>
<td>95#/43kg</td>
<td>95&quot;/241cm</td>
<td>138#/63kg</td>
<td>275#/125kg</td>
<td>44#/20kg</td>
</tr>
<tr>
<td>120#/54kg</td>
<td>105&quot;/267cm</td>
<td>180#/82kg</td>
<td>350#/159kg</td>
<td>55#/25kg</td>
</tr>
<tr>
<td><strong>Double-Wall Corrugated Boxes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80#/36kg</td>
<td>85&quot;/216cm</td>
<td>92#/42kg</td>
<td>200#/91kg</td>
<td>42#/19kg</td>
</tr>
<tr>
<td>100#/45kg</td>
<td>95&quot;/241cm</td>
<td>110#/50cm</td>
<td>275#/125kg</td>
<td>48#/22kg</td>
</tr>
<tr>
<td>120#/54kg</td>
<td>105&quot;/267cm</td>
<td>126#/57cm</td>
<td>350#/159kg</td>
<td>51#/23kg</td>
</tr>
<tr>
<td>140#/64kg</td>
<td>110&quot;/279cm</td>
<td>160#/82cm</td>
<td>400#/181kg</td>
<td>61#/28kg</td>
</tr>
<tr>
<td>160#/73kg</td>
<td>115&quot;/292cm</td>
<td>222#/101cm</td>
<td>500#/227kg</td>
<td>71#/32kg</td>
</tr>
<tr>
<td>180#/82kg</td>
<td>120&quot;/305cm</td>
<td>270#/123cm</td>
<td>600#/272kg</td>
<td>82#/37kg</td>
</tr>
</tbody>
</table>

- Flutes should be in the vertical direction as that will provide the best structural integrity and reduce damages.
- Import vendors must make sure that packaging meets all LGS Testing Requirements. See LowesLink for additional information.
Appendix F: Access Hole Specifications