

## Canada Domestic Packaging Guidelines for Regional Distribution Center and Store Direct Shipments Effective date: 08/30/2012

## SUMMARY OF UPDATES INCLUDED IN THIS VERSION:

We have made changes to the format of this document to improve ease of use. Additionally, we have added the following new and revised information.

| Section Name | Page <br> Number | Summary of Changes |
| :--- | :--- | :--- |
| Special Handling Icons | 6 | - "Team Lift" Icon rules revised and "Request Assistance" Icon added <br> for cartons over 140 lbs. |
| Category-Specific Packaging <br> Requirements | 8 | ( Provided list of all Product Category-Specific Requirements and links <br> to those documents. |

## OVERVIEW:

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 a key role in achieving these goals.
Packaging should be designed to:

- Minimize damages and promote customer satisfaction
- Promote 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 mutually reduce costs and deliver greater value to Lowe's customers.

## LOWE'S EXPECTATIONS:

Lowe's asks for your collaboration by taking the following actions during the annual Product Line Review process, or as requested by the Lowe's Vendor Supply Chain Specialist (VSCS)/Supply Chain Analyst (SCA).

Any packaging changes (including changes to carton quantities, dimensions, weights, or packaging materials), exceptions to standards in this document, and unique packaging requirements must be approved by a Lowe's Vendor Supply Chain Specialist.

| Requirement | Reason |
| :---: | :---: |
| Compliance to the structural packaging specifications and labeling requirements in these guidelines. | - Proper packaging design and labeling reduces losses due to damage at distribution centers/retail stores. <br> - Compliance helps us to keep prices low and improve customer satisfaction. |
| Optimization of packaging quantity and Ship Unit for new and existing items | o The Vendor Supply Chain Specialist can analyze various case quantity and/or pallet quantity alternatives. <br> - The packaging quantity should be designed to support efficient distribution and optimize inventory turn based on rate of sale |
| Elimination of unnecessary packaging materials | o Lowe's is committed to environmental responsibility and seeks to reduce waste and avoid unnecessary costs. |
| Compliance with Lowe's Pallet Requirements as outlined in Appendix B of this document | o The use of non-standard pallets results in higher costs to Lowe's for receiving, storage, handling, and pallet disposal. <br> o If your product cannot be shipped on a standard pallet due to dimensional constraints, work with the VSCS to determine the optimal pallet size. |
| Implementation of proper pallet Heights | - Optimizing pallet heights provides freight, handling, and storage efficiencies. <br> - Lowe's optimal pallet height for rack storage is 60 " (including height of pallet) <br> - If shipping pallets greater than 60 " in height, slip sheets should be used at the $60^{\prime \prime}$ mark. |
| Ensuring that items which meet the dimensional requirements for conveyability can be safely handled on our automated conveyor systems. | - Lowe's handling costs are significantly higher for non-conveyable items versus conveyable items. <br> o Conveyability provides greater throughput which is critical during peak volume periods |

## 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

12of5: 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)

## DISTRIBUTION FLOW METHODS:

| Type | Characteristics |
| :---: | :---: |
| Stock | - Product is shipped to a Lowe's RDC and stored in a location in the facility <br> - When demand exists for the product, it is picked from the storage location and shipped from the RDC to a Lowe's store |
| 100\% Cross-Dock (1XD) | - Product is not stored in a location in the facility. <br> - It is ordered based on demand at the store level. <br> - Upon arrival at the RDC, it is received and then immediately moved via conveyor, forklift, or squeeze clamp truck to the outbound trailer dock door. It is then shipped from the RDC to a Lowe's store. |
| Vendor Prepared Cross-Dock (VPXD) - | Individual Store Purchase Orders grouped together for shipment in Truckload volume to the Lowe's RDC that supports those stores. <br> - VPXD orders are not received at the RDC <br> - Upon arrival at the RDC, orders are immediately processed for shipment to the Lowe's store |
| Store Direct Flow: | - Some programs that do not flow through a Lowe's Distribution Center; instead they ship directly from the vendor to a Lowe's store. This is known as Store Direct flow. <br> - Store Direct requirements are addressed in the "General Packaging Requirements" section of this document |

Your Lowe's Vendor Supply Chain Specialist (VSCS) can help you to determine which distribution flow type
(Stock, 1XD, VPXD, Store Direct) is used for your program.

## 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.

## Carton Size Optimization

To reduce overall supply chain freight costs vendors should review packaging to ensure it is the optimal size for contents.


## Carton Sealing Requirements:

- All Inner Packs and Master Cartons must be sealed to eliminate potential of accidental opening.
- Cartons should be sealed with glue (recommended) or tape. See Appendix C for instructions on Recommended Guidelines for Application of Adhesives.
- Banding
- Not permitted on conveyable items.
- For non-conveyable items, 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.


## Carton Access Point Requirements

- Required on all large-sized corrugated Master Cartons meeting the following criteria:
- Outside carton dimensions are greater than $24^{\prime \prime} \times 18^{\prime \prime} \times 18^{\prime \prime}$ and
- Carton weight greater than or equal to 30 lbs .
- All access holes should be located on opposing carton panels.
- Refer to LowesLink Access Point Guidelines document.


## Use of Dessicants:

- 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 a rail container or trailer


## Labeling:

- Lowe's prefers soy or water based inks.
- Ink quality must 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
- Item number digits and master carton quantity should be printed as large as possible to enable easy identification by RDC and Store Employees
- Information should be printed directly on the master carton on all visible carton panels (four sides and top)


## Bar Codes:

- 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 ( $M C=1$ ), there must be a UPC bar code and vendor model number


## Special Handling Icons:

Use only icons shown here. If specific icon is not needed for your product, do not use.

| Icon | Icon Description | When To Use |
| :---: | :---: | :---: |
|  | Hand Truck | - If item is intended to be handled with hand truck in stores or for customer delivery |
|  | No Hand Truck This Side | - If item is intended to be handled with hand truck in stores or for customer delivery, but a certain side is not safe to use hand truck, use this icon |
|  | Forklift | - If single unit is palletized and is intended to be handled with forklift in RDCs or stores |
|  | No Forklift This Side | - If single unit is palletized and is not safe to handle with a forklift and must be handled with other equipment |
|  | This Way Up Arrow Icon | Indicates the direction needed for storage and shipping Only use arrows if necessary to avoid product damage. Arrows should point in only one (1) direction *** All liquid or fragile items must have arrows in the direction needed for storage and shipping |
|  | Team Lift Icon | Required if Master Carton weight is between 60 lbs and 140 lbs. <br> Product > 140 lbs Must be able to be handled by Machine (Fork lift or Squeeze Clamp) and should not contain Team Lift Icon Include the weight of the item within the icon if between 60 lbs and 140 lbs (use integers only, no decimals) |
| REQUUEST <br> AsSISTANE <br> Hem weight <br> XX Ibs${ }^{2}$ | Request Assistance | Required if Master Carton weight is over 140 lbs. Include the weight of the item within the icon (use integers only, no decimals) |
|  | Liquid Icon | Use for items containing liquid contents Liquid items will be conveyed upright When possible, place in boxes with flaps facing up |


|  | Clamp Icon | - Indicates item is safe to handle with squeeze clamp equipment <br> - Should be used on all four sides of the carton, if item can be squeezed on all four sides <br> - If item can only be clamped on two sides, then place Clamp icon on sides the equipment operator should engage product to clamp |
| :---: | :---: | :---: |
|  | No Clamp Icon | - Indicates item is not safe to handle with squeeze clamp equipment <br> - Use on sides that equipment operator should NOT engage the carton from, as they approach the item |
|  | Maximum Stack Height Icon | - Icon indicates number of cartons that can be stacked on top of one another without incurring damage <br> - Express as a number of cartons, not number of feet |

## 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 to 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.
- Order Quantities
- For Distribution Center Purchase Orders, Lowe's will order items in multiples of the Master Carton,

Tier (layer of pallet) or Pallet quantities.

- For Store Direct Purchase Orders, Lowe's may order in multiples of the Inner Pack, Master Carton, or Pallet Quantities.


## Palletization

- Vendors must use pallets that conform to Lowe's Pallet Specifications - See Appendix B of this document.
- Refer to the LowesLink Canada Palletization and Shipping Guidelines for detailed pallet design and quality requirements.
- 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.
- Any exemptions to use non-standard pallets must be approved by the Lowe's Vendor Supply Chain Specialist
- 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 on the same Purchase Order across multiple mixed pallets.
- Locate pallets of the same item (same SKU) together in the trailer. This will improve receiving efficiency at the Lowe's RDCs.
- Slip sheets or cardboard separators should be used at the 60 " height mark if total pallet height is $>60$ "


## Stretch Wrap Requirements

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
- Items stored on pallets outside a Lowe's Store (Outdoor Lawn \& Garden area) or outside a Lowe's Distribution facility require UV resistant stretch wrap material to enhance/preserve the performance capabilities and prevent damage from the exposure of extreme weather conditions.

| Film Type | Blown |
| :--- | :---: |
| Film Color | Clear |
| Minimum Gauge | $\mathbf{8 0} \mathbf{g}$. |
| Minimum UVI Concentration | $5 \%$ |

## Loss Prevention Requirements

- Source Tagging - Please refer to LowesLink EAS Source Tagging Requirements document
- Liability for Concealed Damages:
- Any concealed damage to product or packaging which is to be displayed will be returned to the vendor at vendor's cost (Freight Collect).
- Please review Lowe's Liability Statement policy available on LowesLink


## CATEGORY-SPECIFIC PACKAGING REQUIREMENTS:

The following categories are subject to more stringent packaging requirements. Vendors in these categories should refer to the links below for additional category-specific packaging specifications.

| Division | Category | Link to Category-Specific Requirements |
| :---: | :---: | :---: |
| Building Products | Cabinet Hardware | Cabinet Hardware Labeling Specs |
| Home Décor | Ceramic Tile (Opening Price Point Items) | - Ceramic Tile (Opening Price Point) Packaging Specs |
| Kitchen and Bath | Medicine Cabinets, Vanity Mirrors, and Storage Cabinets | Cabinet Pack Medicine Cabinet, Mirror, Storage Cabinet Packaging Specs |
| Kitchen and Bath | Neos, Walls, and Bases | Neos, Walls, and Bases Packaging Specs |
| Kitchen and Bath | Shower Doors | Shower Door Packaging Specs |
| Kitchen and Bath | Toilets | Toilet Packaging Specs <br> Toilet Carton Template |
| Kitchen and Bath | Tubs, Showers, and Whirlpools | Tubs, Shower \& Whirl pools Packaging Specs |
| Kitchen and Bath | Vanities | Bath Vanity Packaging Specs |
| Kitchen and Bath | Vanity Tops | Bathroom Vanity To p Packaging Specs |
| Outdoor Products | Bird Seed | Bird Seed Packaging Specs |
| Outdoor Products | Grills | Grill Packaging Specs |
| Outdoor Products | Patio | Patio Furniture Packaging Specs |

## ADDITIONAL REQUIREMENTS FOR RDC SHIPMENTS

Additional packaging requirements may apply based on the RDC Flow and handling type for your product (e.g. Breakpack, Conveyable, Bulk, etc)

If you are unable to determine which storage/handling type(s) apply, please contact the Vendor Supply Chain Specialist
(VSCS) for your program

| Storage/Handling Type | Flow Type | DC to Store Ship Unit | Dimensional Requirements |
| :---: | :---: | :---: | :---: |
| Breakpack | Stock or 1XD | Inner Pack Quantity | Longest dimension of Master Carton < 26" <br> Second longest dimension of Master Carton < 15" W <br> Shortest dimension of Master Carton < 10.5" H |
|  |  |  | Inner Pack must be <= 22" L X 14" W X 9" H Master Carton Weight must be <= 40 lbs per linear foot. Maximum Master Carton Weight is $<=70 \mathrm{lbs}$ |
| Store Department Container (Case Ship) | Stock | Master Carton Quantity | - Master carton is $<\mathbf{8 \prime \prime}^{\prime \prime} \times 5^{\prime \prime} \times 1$ " |
| Conveyable Case Ship | Stock or | Master Carton Quantity | - Must meet Conveyability Guidelines (Appendix A) <br> Master Carton Weight is $<=60 \mathrm{lbs}$. <br> Following categories are treated as non-conveyable to reduce damages <br> - Ceramic Bath (Toilets, Pedestals) <br> - Ceramic Tile <br> - Fasteners and Chain <br> - $\quad$ Paint (Liquid paints and stains) |
| Non-Conveyable Case Ship | Stock or 1XD | Master Carton Quantity | Does not meet Conveyability Guidelines (Appendix A) <br> Master Carton weight is > 60 lbs . <br> Maximum case weight for team lift $=140 \mathrm{lbs}$. |
| Pallet Ship | $\begin{array}{\|l} \hline \text { Stock or } \\ \text { 1XD } \\ \hline \end{array}$ | Pallet Quantity | Stock Pallet Ship - Product height on pallet must be <= 55" (not including height of actual pallet) |
| Mini-Pallet Ship | Stock or 1XD | Mini-Pallet Quantity | - Stock Mini-Pallet - Quarter-pallet meets Lowe's MiniPallet Specifications (See Appendix B) - 1XD Mini-Pallet - Refer to Lowe's Canadian Vision Standard Guide. |
| Bulk Storage Stock |  | Master Carton Quantity | Items are at least 7 cubic feet or Items > 140 lbs and unpalletized. |
| Stack Rack Storage and Long Length Storage | Stock | Master Carton Quantity or Pallet Quantity | ```Stack Rack - o Item is < 42" on shortest side. o Item is >48" on longest side Long Length - item is > 54" along longest dimension and <= 12" along shortest dimension.``` |
| Vendor Prepared CrossDock | VPXD | Pallet Quantity | - Vendors should refer to LowesLink Canada VPXD Guidelines for additional information |

## BREAKPACKISTORE DEPARTMENT CONTAINER REQUIREMENTS:

## Definition:

| Breakpack | - <br>  <br>  <br> - <br> RDSter Carton containing multiple Inner Packs of a single item is shipped into the <br> The Ship Unit from RDC to Store equals a multiple of the Inner Pack Quantity |
| :--- | :--- |
| Store <br> Department <br> Container | - |
| Master Carton is too small to be conveyed on its own. |  |

- Maximum Master Carton Weight is $<=60 \mathrm{lbs}$
- Master Carton Maximum Dimensions:
- 26 " along Longest Dimension
- 15 " along 2nd $^{\text {L }}$ 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)


## Breakpack/Store Department Container Specific Packaging Requirements:

- 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 pose a safety hazard to employees during the picking process.


## Labeling:

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


## CONVEYABLE CASE SHIP REQUIREMENTS

## Definition:

- Item dimensions meet the Lowe's Conveyability Guidelines (see Appendix A) 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.
- Conveyable items are batch-picked for all stores, and placed on the conveyor to be diverted to the corresponding store door.


## Conveyable Packaging Requirements:

- Items must be braced/packaged so that product will not shift or protrude from carton as it moves along the conveyor.
- Liquid items will be conveyed upright and should be labeled with the "Liquid" icon. When possible, place in boxes with flaps facing up.


## Labeling:

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


## NON-CONVEYABLE CASE SHIP REQUIREMENTS:

## Definition:

- 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.


## Labeling:

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


## 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.


## Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements $\rightarrow$ 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 $>1$


## MINI-PALLET SHIP REQUIREMENTS:

## Definition:

- Stock Mini-Pallet - used for items that ship on a quarter-pallet ( 20 " $\times 24$ ") from vendor to RDC to store
- 1XD 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)


## Mini Pallet Packaging Requirements:

- Individual units/cartons must be secured so that the mini-pallet can be safely moved via forklift equipment throughout the RDC facility.


## Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements $\rightarrow$ 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/Pal letization:

- 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 and can be handled using squeeze clamp equipment:

- Lowe's prefers a stack height of 20 ft for optimal storage capacity utilization. The recommended stack height is to be identified by the vendor, but must be a minimum of 16 feet without incurring damage to product or selling carton.
- Items must be able to maintain stack integrity without use of shrink-wrap or other bracing mechanisms.
- If items cannot stack 16 feet high, they will be classified as an exception item.
- Palletized exception items must be capable of stacking 3 pallets high ( at least 60" per pallet)
- Exception items must be approved by your Vendor Supply Chain Specialist.
- Item must be capable of handling via squeeze-clamp equipment without incurring damage.
- Lowe's preference is that item be able to clamp on all 4 sides (*** Does not apply to Appliances)


## Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements $\rightarrow$ see Bulk Carton Template for example


## Handling Icons for Bulk Items (See page 6-Special Handling Icons for examples)

- Icons must be at least 5" high and printed in permanent ink.
- Package must contain the Stack Height icon, and either the Clamp/No Clamp icons as appropriate for the product


## STACK RACKILONG-LENGTH STORAGE REQUIREMENTS

## Definition:

- Stack Racks are used for large-sized, high volume items stored on oversized ( 91.5 " $\mathrm{L} \times 41.5$ " W ) metal racks
- Stack Rack items must be capable of stacking 60 " high in the racks without damage to cartons and/or sellable product.
- 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 $\uparrow \uparrow$ )
- Horizontal Long-Length Storage (Product that can be placed with longest side horizontal to ground $\rightarrow$ )


## Labeling:

- Refer to LowesLink Carton Labeling Templates document for labeling content requirements $\rightarrow$ see Stack Rack Template for example


## Appendix A: RDC Conveyability Guidelines

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

## Minimum Conveyable Box Height now 4"

|  | MAXIMUMS |  |  | MINIMUMS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Master Carton Length (in inches) | Master Carton Width (in.) | Master Carton Height (in.) | Master Carton Weight (lbs.) | Master Carton Width (in.) | Master Carton Height (in.) | Master Carton Weight (lbs.) |
| 1 | TOO SMALL TO CONVEY |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |
| 9 | 24 | 12 | 60 | 6 | 4 | 3 |
| 10 | 24 | 12 | 60 | 6 | 4 | 3 |
| 11 | 24 | 12 | 60 | 6 | 4 | 3 |
| 12 | 24 | 12 | 60 | 6 | 4 | 3 |
| 13 | 24 | 12 | 60 | 6 | 4 | 3 |
| 14 | 24 | 12 | 60 | 6 | 4 | 3 |
| 15 | 24 | 12 | 60 | 6 | 4 | 3 |
| 16 | 24 | 12 | 60 | 6 | 4 | 3 |
| 17 | 24 | 12 | 60 | 6 | 4 | 3 |
| 18 | 24 | 12 | 60 | 6 | 4 | 3 |
| 19 | 24 | 12 | 60 | 6 | 4 | 3 |
| 20 | 24 | 12 | 60 | 6 | 4 | 3 |
| 21 | 24 | 12 | 60 | 6 | 4 | 3 |
| 22 | 24 | 12 | 60 | 6 | 4 | 3 |
| 23 | 24 | 12 | 60 | 6 | 4 | 3 |
| 24 | 24 | 12 | 60 | 6 | 4 | 3 |
| 25 | 24 | 12 | 60 | 6 | 4 | 3 |
| 26 | 24 | 12 | 60 | 6 | 4 | 3 |
| 27 | 24 | 12 | 60 | 6 | 4 | 3 |
| 28 | 24 | 12 | 60 | 6 | 4 | 3 |
| 29 | 24 | 12 | 60 | 6 | 4 | 3 |
| 30 | 24 | 12 | 60 | 6 | 4 | 3 |

## Appendix B: Lowe's Standard Pallet Specifications

## 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.


| Pallet Dimensions ( $\mathrm{L} \times \mathrm{W}$ ) | - Length $=48.00$ inches. <br> . Width $=40.00$ inches. |
| :---: | :---: |
| Pallet Style | - Double Faced Non-Reversible |
| Entry | -4-way entry only |
| Lumber Specifications | - Grade III and/or IV hardwood, clean sawn. |
| Fastener Requirements | -2.00 inch screw shank nails. |
| Top Deck Boards (7/pallet): | - Outer Boards (2) $=0.625 \times 5.75 \times 40.00$ inches. <br> - Inner Boards (5) $=0.625 \times 3.75 \times 40.00$ inches. <br> - Space between boards: 3 inches (max.) |
| Bottom Deck Boards (5/pallet): | - Outer Boards $(2$, chamfered $)=0.625 \times 5.75 \times 40.00$ inches. <br> - Inner Boards (3) $=0.625 \times 3.75 \times 40.00$ inches |
| Runners (3/pallet): | - $1.50 \times 3.50 \times 48.00$ inches. |

## 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)



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


|  | Standard Mini-Pallet | Heavyweight Mini-Pallet |
| :---: | :---: | :---: |
| Pallet Dimensions (L X W) | Length $=20.00-24.00$ inches. | Length $=20.00-24.00$ inches. |
|  | Width $=20.00-24.00$ inches. | Width $=20.00-24.00$ inches. |
| Pallet Style | Double-Wing, Double Faced NonReversible. | Double-Wing, Double Faced Non-Reversible. |
| Entry | 2-way entry | 2-way entry |
| Lumber Specifications | Grade III hardwood, clean sawn. | Grade III hardwood, clean sawn. |
| Fastener Requirements | 1.625 inch screw shank nails. | 1.625 inch screw shank nails. |
| Pallet Top (Top Deck Boards - 4 per pallet) | $0.50 \text { (min.) } 3.75 \times 20.00-24.00$ inches. | 0.50 (min.) $\times 3.75 \times 20.00-24.00$ inches. |
| Pallet Base (Runners - 2 per pallet) | $1.25 \times 3.50 \times 20.00-24.00$ inches. | $1.25 \times 3.50 \times 20.00-24.00$ inches. |
| Pallet Base (Bottom Deck Boards - 2 per pallet) | $\begin{aligned} & 0.50 \text { (min.) } \times 3.75 \times 20.00-24.00 \\ & \text { inches. } \end{aligned}$ | 0.50 (min.) $\times 3.75 \times 20.00-24.00$ inches. |
| Runner Spacing | 13.5" apart, centered | Outside edge of mini-pallet |

## 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 " under-hang)
- No more than 1 inch of overhang is permitted on any side of pallet deck


## Appendix C: Recommended Guidelines for Application of Adhesives

## Pressure Sensitive Tape:

- Tape must be a minimum of 2.25 " in width
- For panels less than 2.75 " in width, the tape width requirement should be modified for ease of application and appearance. In these cases, the width of the tape should be no less than 0.5 " narrower than the width of panel.
- 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 APLICATION METHOD:

$\otimes$ Tape is centered down seam and extends 2 " beyond top flap seam
$\otimes$ Top Flap seams are secured closed without space between flaps

## INCORRECT APPLICATION METHODS:

## Example \#1: INCORRECT

X


PROBLEM - Tape does not extend beyond seam. Box will likely open and damage may occur

## Example \#2: INCORRECT



X 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)
- $\quad$ 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 D: Box Manufacturer's Certificate

## Requirements:

- Name and location of box manufacturer must be printed
- Label must be at least $\mathbf{3}$ inches in diameter


