



URBAN OUTFITTERS INC.

Furniture Packaging Supplement

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Packaging guideline

All packaging for Urban Outfitters, Inc. should:

-) Enhance the customer's shopping experience.
-) Provide protection for product integrity
-) Serve the customer from pre-purchase through product use and package disposal.
-) Comply with all requirements in this guideline.

Vendors are responsible for conducting appropriate primary packaging performance testing to ensure that packaging does not fail in the supply chain, store, or during e-commerce shipping.

Purpose

The purpose of this packaging specification is to provide the basic packaging requirements for all large and small case-goods (assembled) which includes, but is not limited to, armoires, dressers, media cabinets, wardrobes, bookcases, desks, bedside, coffee and occasional tables. Your packaging must ultimately pass ISTA testing. If you can design a solution not found in this general guideline while still passing ISTA 3A or 3B, please use it

APPLICATION

This procedure applies to all case-good products that do not have specific packaging instructions.

Packaging System

Packaging submitted to Urban Outfitters, Inc. should work as a complete packaging system. Packaging should minimize the use of packaging materials and maximizing product protection for handling, distribution and consumer use.

Classification of packaging:

Primary Package: This is the package that usually goes home with the customer. Typically this package has basic product protection and product information. Examples: clamshells, hangtags, blister packs, etc.

Secondary Package: Consolidates a larger quantity of products during transportation and is not normally sold to customers. Multiple primary packages are usually consolidated and transported in a secondary package.

Tertiary Package: Usually involves palletizing secondary packages for simplified handling. Typically, tertiary package will be a unitized load of boxes on a pallet, slip sheet, or in a crate. Tertiary packaging can also include stretch film, corner boards or banding to contain the load.

Primary Package Requirements

All primary packages should fit the requirements below. Primary packages must be free of dirt, dents, scratches, scuffs, oil, burn marks, punctures, deformations, or physical blemishes.

Secondary Package Requirements

All secondary packaging should have the following information:

-) Department
-) SKU No.

-) Product description
-) Country of origin
-) Quantity
-) Case weight
-) Purchase Order Number
-) Up Arrow Marks

Case-Goods

Case-Goods Definition Matrix.

Product Type	Product Weight
Small Case-Goods	75 lb. (34 kg) And Under
Large Case-Goods	76 lb. (34 kg) But Less Than or equal to 150 lb. (68 kg)
Palletized Large Case-Goods	151lbs. (68kg) and greater

Packaging requirements:

SMALL CASE-GOODS

1. Hardware and Loose Components. Loose components in separate carton. (See Figure 1)
2. Drawer Securement and Wrapping. Polyethylene foam sheeting or bag. (See Figure 2)
3. Edge/Corner Protection 2.0 in. (5.0 cm) min. thickness foam corner and edge protectors. (See Figure 3)
4. Suspension Structure. For all items with delicate legs or installed casters, suspend the feet off the carton bottom. (See Figure 3,4)
5. Additional Top Protection If RSC, use corrugated pad top and bottom to prevent knife damage upon opening. Additional foam cushioning may be required. (See Figure 8)
6. Corrugated Container RSC or FOL, Minimum Burst Strength 275lb/in² (1896kPa) Step 7 Container Closure (See Figure 9)

LARGE CASE GOODS

1. Hardware and Loose Components. Loose components in separate carton. (See Figure 1)
2. Drawer Securement and Wrapping. Polyethylene foam sheeting or bag. (See Figure 2)
3. Edge/Corner Protection 2.0 in. (5.0 cm) min. thickness foam corner and edge protectors. (See Figure 3)
4. Additional Protection 1.0 in. (2.5 cm) minimum thickness foam pads to protect large exposed surface areas of product. Secure loose shelves carton to top of product. (See Figure 7)
5. Corrugated Container HSC Top with DST bottom Tray, Minimum Burst Strength 275lb/in² (1896kPa).
6. Container Closure (See Figure 9)

PALLETIZED LARGE CASE- GOODS

1. Hardware and Loose Components. Loose components in separate carton. (See Figure 1)
2. Drawer Securement and Wrapping Polyethylene foam sheeting or bag. (See Figure 2)
3. Edge/Corner Protection 1.5 in. (3.8 cm) minimum thickness foam corner and edge protectors. (See Figure 3)

4. Additional Protection 1.5 in. (3.8 cm) minimum thickness foam pads to protect large exposed surface areas of product. (See Figure 7)
5. Top Load Bearing Frame internal plywood load-bearing frame. Secure loose shelves carton to top of product underneath load bearing frame. (See Figure 11)
6. Corrugated Container Double Cover Box (top and bottom DST trays with wrap-around body), min. burst strength 275lb/in² (1896kPa).
7. Container Closure Secure Double Cover with Plastic Strapping. Use rigid plastic edge protectors. (See Figure 12)

COSMETIC SURFACE PROTECTION

1. To protect all surfaces fully cover the product with a non-abrasive material such as polyethylene foam sheeting, polypropylene bags, polyethylene bags. Secure foam sheet minimum thickness 1/16" (1.5 mm), bags, or paper material to restrict movement during handling. It is critical that expanded polystyrene (EPS), corrugated, and void fillers do not shift or rub against the product. Do not adhere tape directly to the product.
2. Large surfaces with void span (between edges/corners) of more than 12" must be supported with EPS foam pads to prevent carton collapsing.

DRAWER CONTAINMENT

1. All drawers, removable shelves, and parts must be restricted from movement during shipping. Brace all moveable parts with a non-abrasive material such as foam blocks, foam sheeting or stretch-wrap.

LOOSE SHELVES AND OTHER COMPONENTS

1. All loose shelves must be individually protected with foam sheeting and enclosed in corrugated sleeves or cartons. Position packaged loose shelves and secure to the top of the cabinet. (Fig 7)
2. Clothing hanger rods (for armoires and wardrobes), must be blocked and braced tightly using EPS foam blocks to prevent movement.
3. Other unassembled components such as casters or leveling pads may be packed in small-corrugated cartons and placed inside a drawer, blocked and braced.
4. All hardware must be packaged and placed in drawer or secure to abrasion barrier.

LEG PROTECTION

1. Legs should be protected using foam sheeting and/or polyethylene foam socks to avoid direct contact with other components and abrasive packaging material such as corrugated and expanded (EPS) foam.
2. To prevent legs from puncturing through the carton, corrugated sheet(s), high-density foam, wood load distributors, etc. should be used as needed to increase surface contact area between the legs and the carton.
3. Legs of armoire, dresser or buffet table console, if installed, must be protected with corrugated built up or foam pads to protect against shock damage.
4. Small case good products with fragile legs or casters attached must be suspended with a corrugated structure or similar device to elevate the legs off the bottom of the carton by a minimum of 0.75 in. (2 cm). The corrugated structure must be designed to sufficiently support the weight of products without sagging. Material should be made from a minimum of 275lb/in² (1896kPa)
5. Burst strength double-wall. See Figure 3/4 for details of suspension methods.

EDGE AND CORNER PROTECTION

All edges and corners of the product must be protected from impact using foam corner pads and edge protectors.

1. Edge protectors must cover a minimum of 75% of any given edge length. For products weighing over 150 lb. (68 kg), the minimum thickness of corrugated, expanded polystyrene, or polyethylene foam edge protectors must be 1.5 in. (3.8 cm). For products weighing below 150 lb. (68 kg) the min. thickness must be 2.0 in. (5.0 cm). No more than 12 in. (30.5 cm) of gap between edge protectors is allowed.
2. Corner pad thickness shall be the same as edge protectors. Heavy items (larger than 150 lb.) should use higher density polyethylene (PE) or EPS foam to prevent bottoming out or crushing of the foam.
3. Foam Requirements Expanded Polystyrene (EPS) Foam Material Requirements:
Molded EPS material minimum density: 1.25 lb./ft³ (20 kg/m³) Preferred Plank and fabricated (Hot wire) minimum density: 1.5 lb./ft³ (24 kg/m³) Polyethylene (PE) Foam Material Requirements: Material minimum density: 1.2 lb./ft³ (20 kg/m³)
4. Stretch wrap around the packaging material and the product to contain doors, drawers, corner pads and edge protectors or tape packaging components to abrasion barrier (surface protection) to avoid material shifting during handling.

MASTER CARTON REQUIREMENTS

Carton style selection is based on the size and weight of the product.

1. RSC (Regular Slotted Container) is to be used for items weighing 75 lb. (34 kg) or less. Be sure to provide a corrugated pad positioned directly under the center seam of the carton to prevent accidental cutting of the product by customers.
2. FOL (Full Overlap) or HSC (Half Slotted Container) with DST (Design Style Tray) bottom is to be used for items weighing more than 75 lb. (34 kg).
3. Double Cover Boxes (top and bottom trays with wrap around body and door) or a bottom tray with a
4. HSC top is to be used for armoires and tall (over 4 ft.) dressers, See Figures 11. These products must be secured to a custom wood pallet and must utilize a plywood load-bearing frame.
5. Material and Construction: Double-wall (5 Ply) Corrugated; Burst strength: Minimum of 275 lb/in² (1896 kPa). Using staples for the carton manufacturers joint is permitted provided that the distance between staples is no more than 1.5 in. (3.8 cm).

PALLETIZATION

1. All natural wood material used must be pre-treated with fungicide and certified. Material shall be dried properly and maintain moisture content between 8% to 14%.
2. Forklift (entry) opening must have a minimum 3.50 in. (9 cm) height. Must use a four-way entry design style.
3. Only solid wood and or plywood materials are acceptable. The minimum thickness of each wood member shall be 0.5 in. (1.25 cm).
4. Solid deck boards are recommended. Pallet deck boards shall be free from damage or warp.
5. Products greater than 36 in. (91 cm) depth or width must have a solid or deck-board pallet design so that conventional forkblades cannot penetrate the bottom of the product when the product is handled.
6. All pallet components shall be assembled with nails, screws or staples. There must be a minimum of

7. 2 (nails) per cross point. Nails must be staggered to prevent wood components from splitting. Exposed nails are not permitted. Products requiring individual external pallets or skids (armoires and dressers weighing more than 151 lb.,68 kg), must comply with the following minimum requirements.

Chairs/Barstools

1. All protruding edges and corners must be protected from impact/abrasion using corner blocks (corrugate built up or foam pads) and/or angle pads. See diagrams for details.
 -) Product weight over 150 lb. (68 kg): Recommended minimum thickness of corrugated, EPS or EPE foam angle pads or channel pads must be 1.5" (3.8 cm). Product weight below 150 lb. (68 kg): Must use a minimum thickness of 1.0" (2.5 cm).
2. Chair / Barstool Legs
 -) Products with fragile legs or casters attached must be suspended with corrugated structures to elevate the unit off the bottom of legs by a minimum of 1.5" (3.8 cm). Corrugated structures must be made from minimum of 275lb/in² (1896kPa) test double wall
 -) Wooden frame must be placed under the wrapped chair legs. The frame must be constructed of minimum 0.25" (0.635 cm) plywood or particleboard. See below pictures for details. Wooden frame can be constructed with staples and must have a width no less than 3".



3. Chair / Barstool Arms
 - Chairs with armrests may need additional corrugated structures to prevent damage during side impact.
4. Chairs / Barstools packaged in pairs require separation; surface protection. The materials used must either be corrugated or foam sheets to protect and separate the two chairs.
 -) No direct contact between exposed area of chair / barstool and corrugate shipping carton.
5. Single packed chairs / barstools require void filler
6. Refer to figure. 13-15

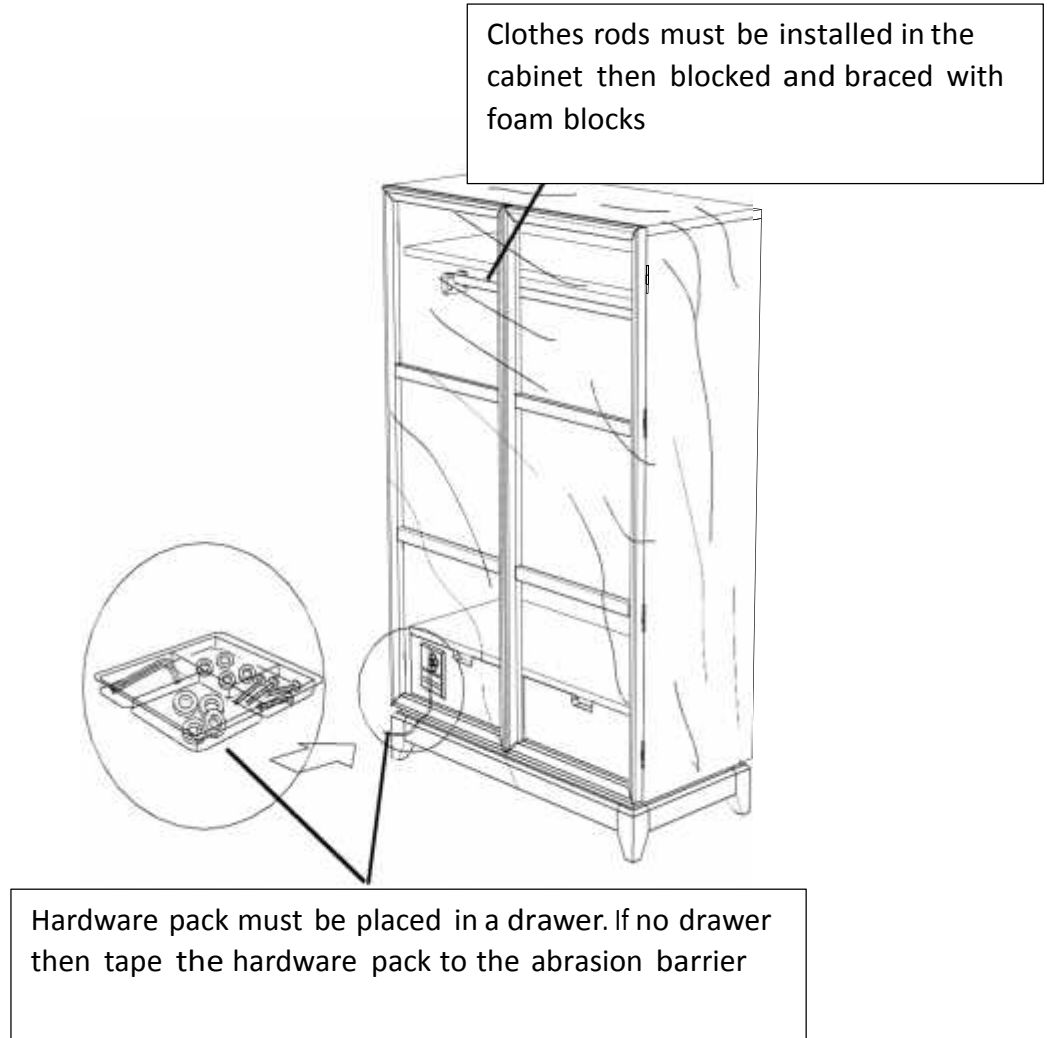
Tables

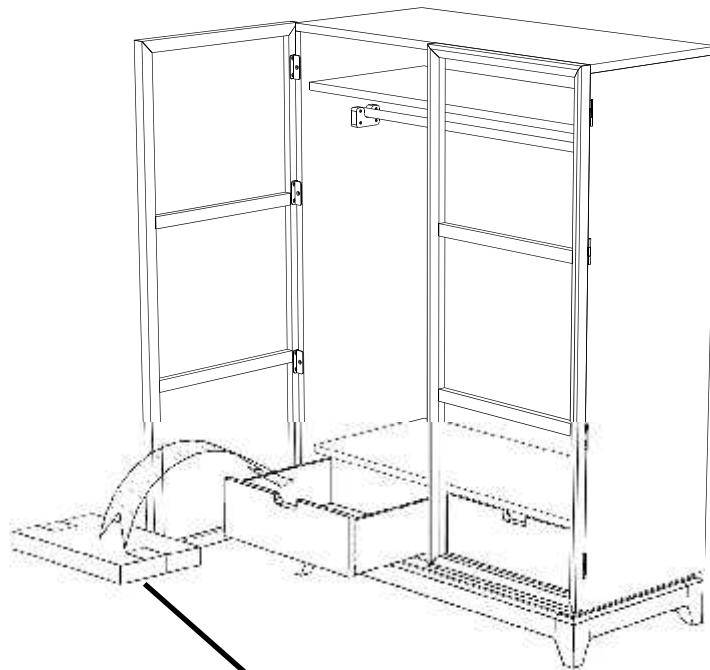
1. Protect the tabletop from cosmetic surface damage by full coverage protection with nonabrasive materials such as layers of polyethylene foam sheeting, non-woven polypropylene bag(s) / sheeting, poly-bag or non-abrasive Kraft paper.
2. Corners should be protected with (high density) EPS or polyethylene (PE) foam pads.
3. The tabletop surface should be separated from the corrugated master carton using a minimum of 1.0 in.(2.5 cm) thick expanded polystyrene (EPS) foam pads (See illustration). Protect the table from impact (drop) damage with a minimum of 0.5 in. (1.25 cm) thick EPS foam at all corners and flat surface areas.
4. Legs should be protected with foam sheeting to prevent cosmetic surfaces from direct contact with other components and abrasive packaging material such as corrugated.
5. Legs should be protected using foam sheeting and/or polyethylene foam socks to avoid direct contact with other components of the product and abrasive packaging material such as corrugated and expanded polystyrene (EPS) foam.
6. To prevent legs and leg hangar bolt hardware from puncturing cartons or causing cosmetic damage, table legs must be packed in a separate carton.
7. The component (table legs, table leaf extensions) cartons must be strapped onto the tabletop surface to prevent movement. Thick corrugated edge pads must be placed at tabletop edges to prevent strap damage.
8. For products weighing over 150 lbs. (68 kg), the minimum thickness of corrugated, expanded polystyrene, or polyethylene foam edge protectors must be 1.5 in. (3.8 cm). For products weighing below 150 lbs. (68 kg) the minimum thickness must be 1.0 in. (2.5 cm). No more than 12 in. (30.5 cm) of gap between edge protectors is allowed.
9. Corner pad thickness shall be the same as edge protectors. Heavy items (larger than 150 lbs. (68 kg)) should use higher density PE or EPS foam to prevent bottoming out or crushing of the foam.
10. Refer to figure 16 and 17

Reference Images in the next page are packaging recommendations.

Reference Images

Fig.1

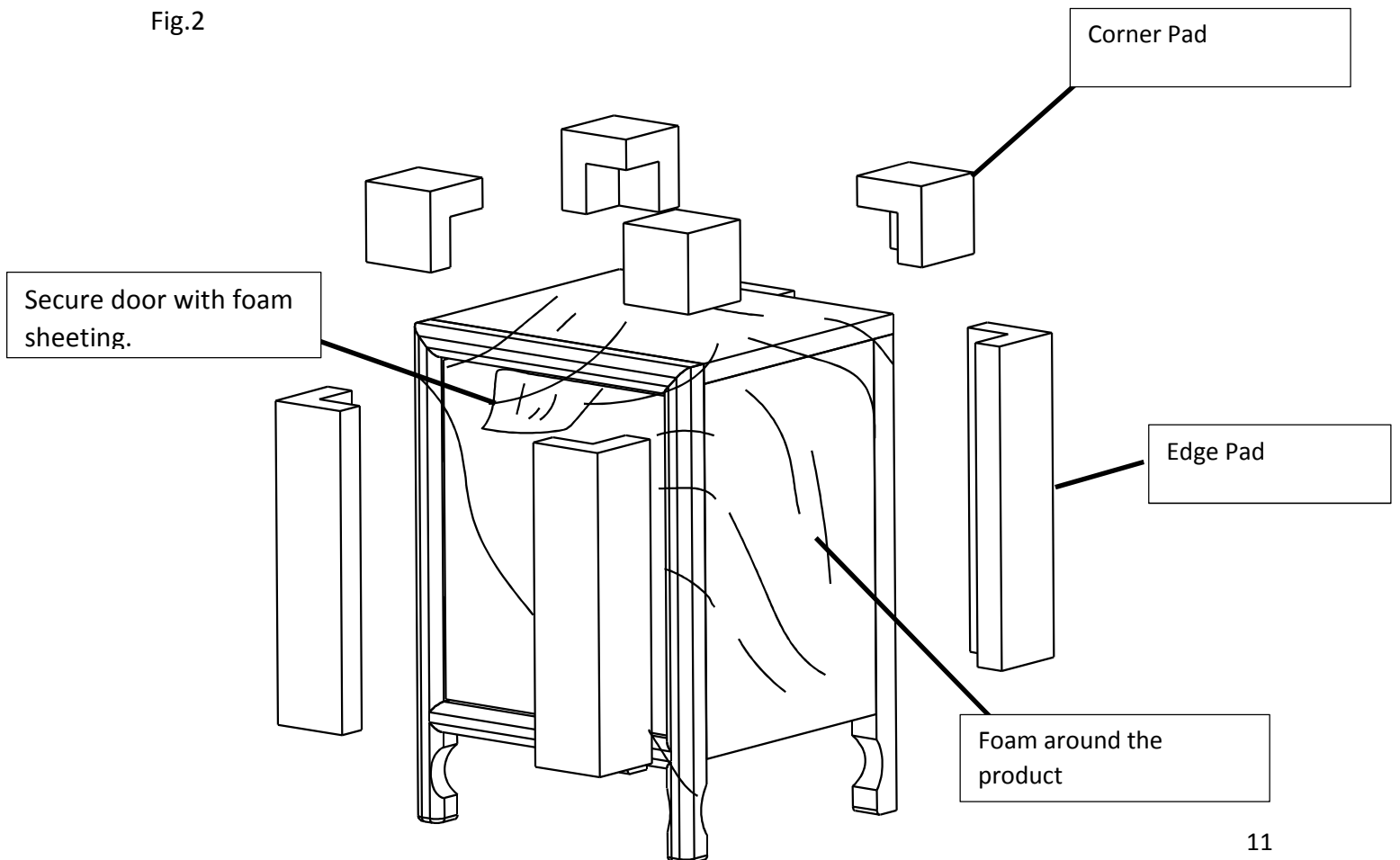




Then tape to abrasion barrier

Small Case-Good Edge Protection

Fig.2



Corner Pad

Secure door with foam sheeting.

Edge Pad

Foam around the product

Fig. 3

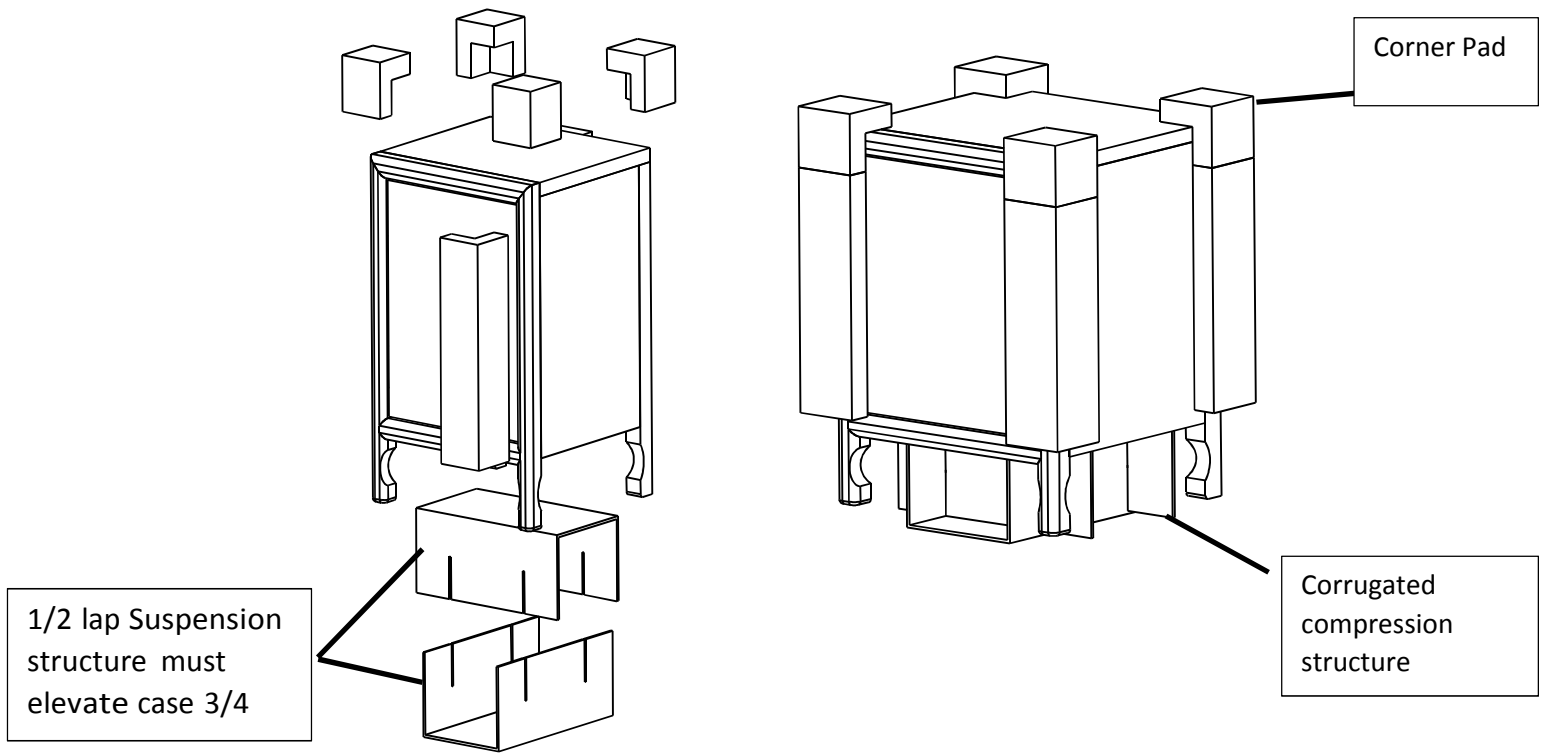
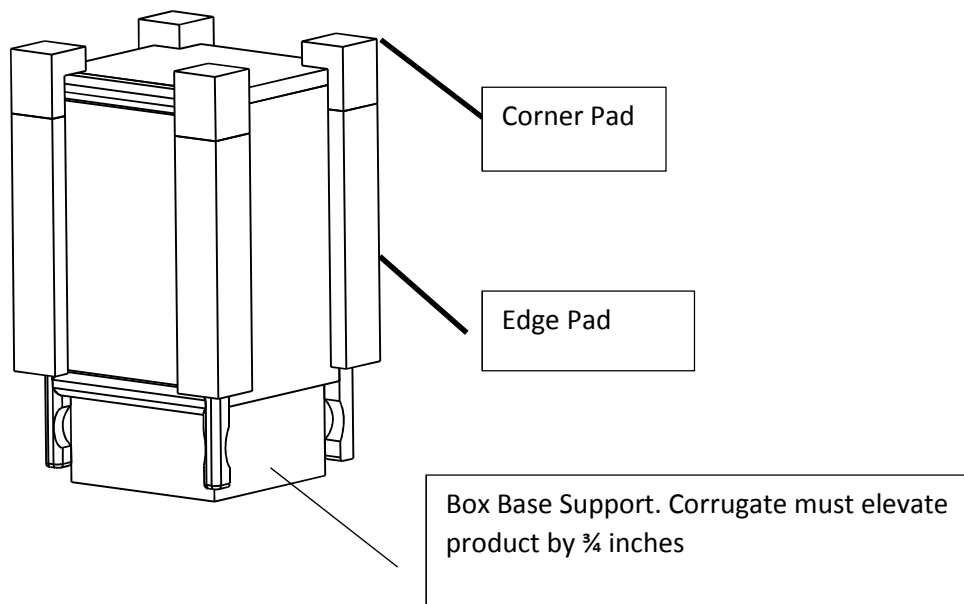
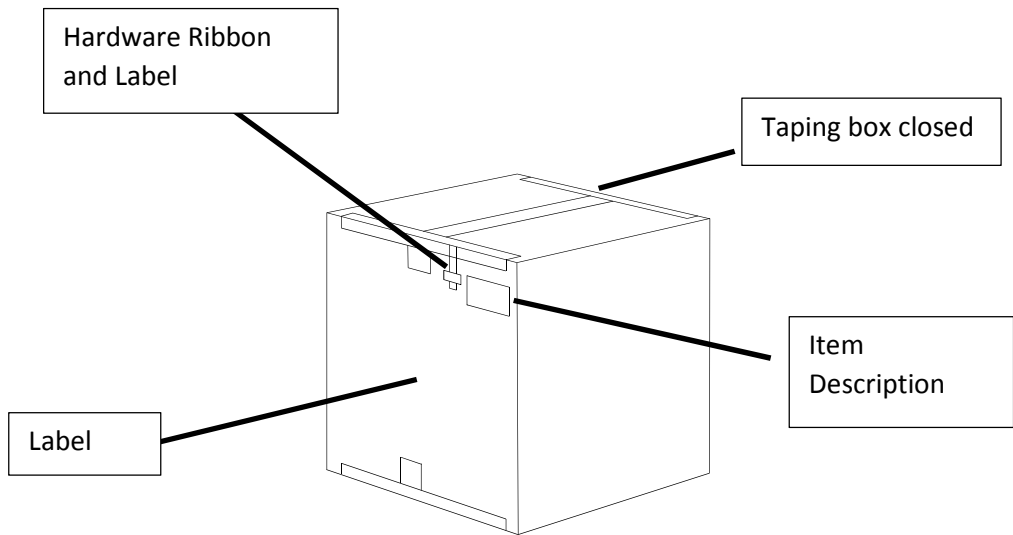
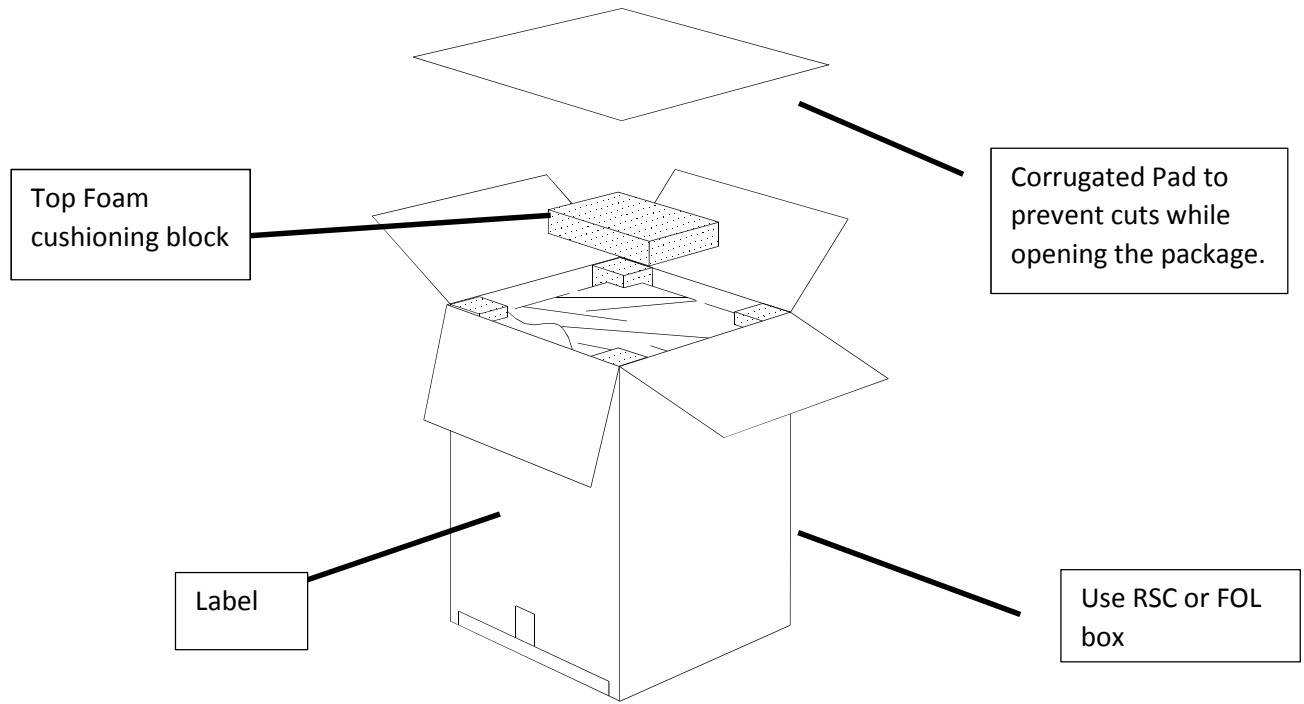


Fig.4



Small Case-Goods Boxing

Fig. 5



Large Item Case-Goods Edge and Corner Protection
Fig. 6

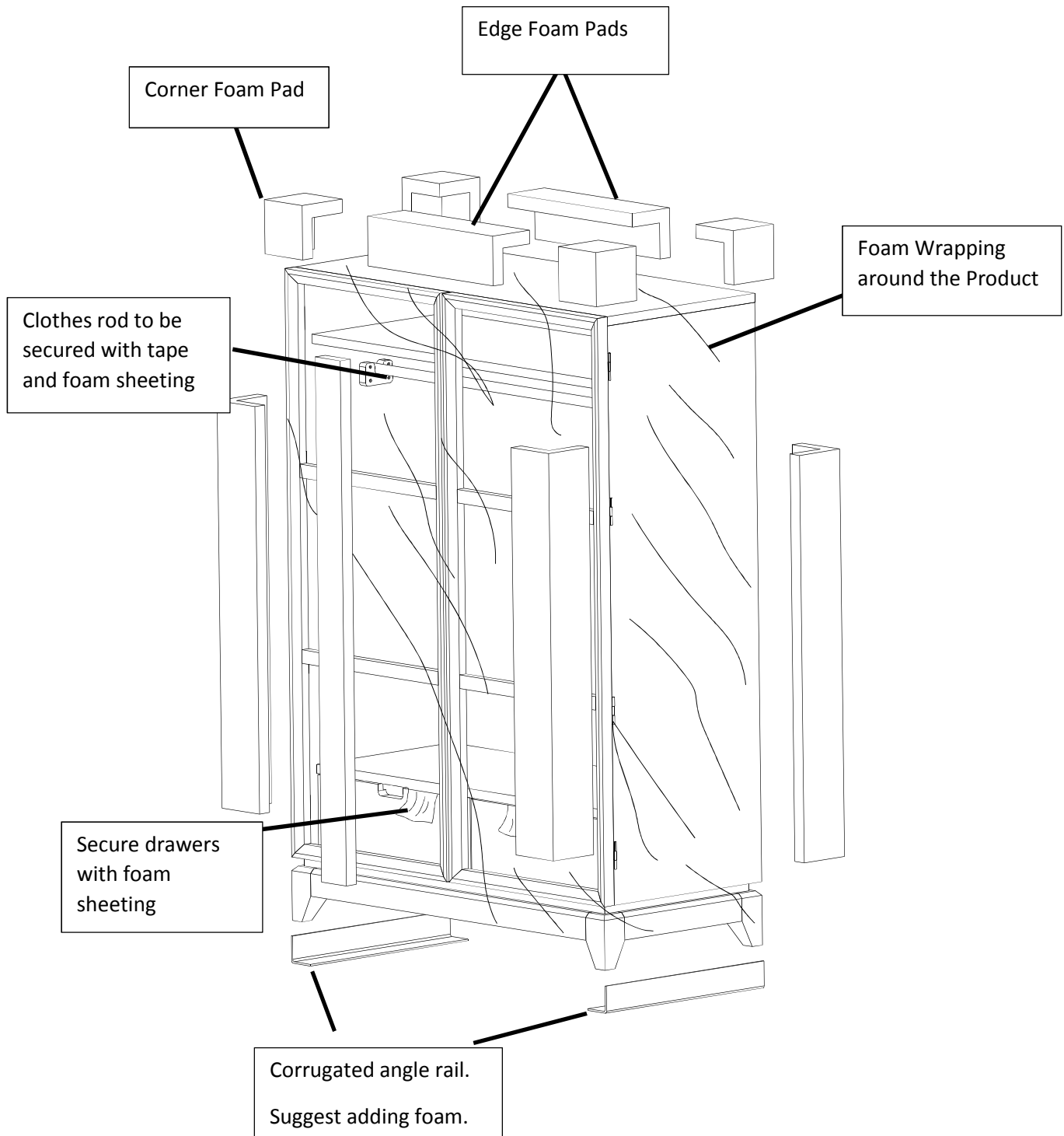
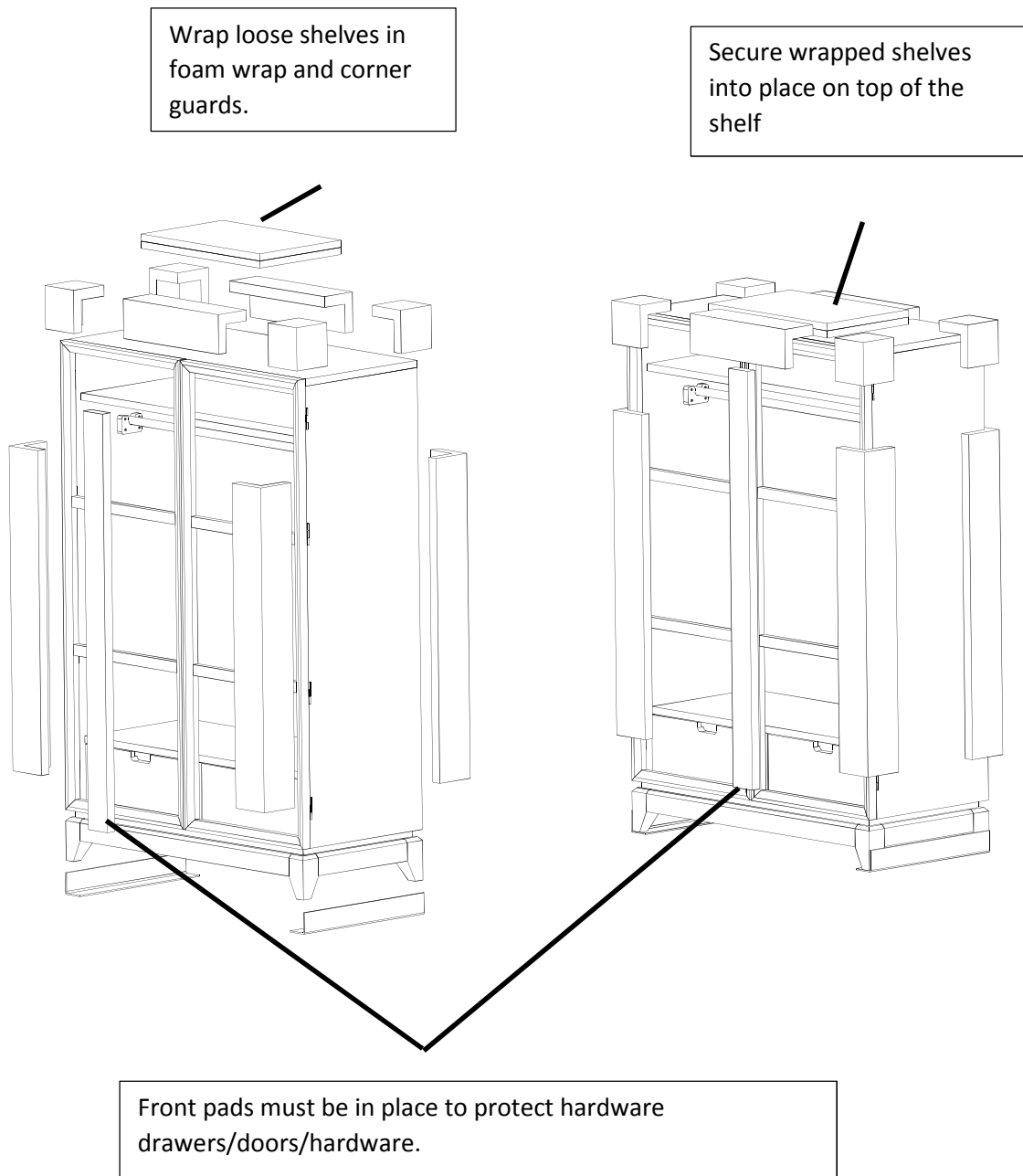


Fig. 7



Large Case-Good Boxing

Fig. 8

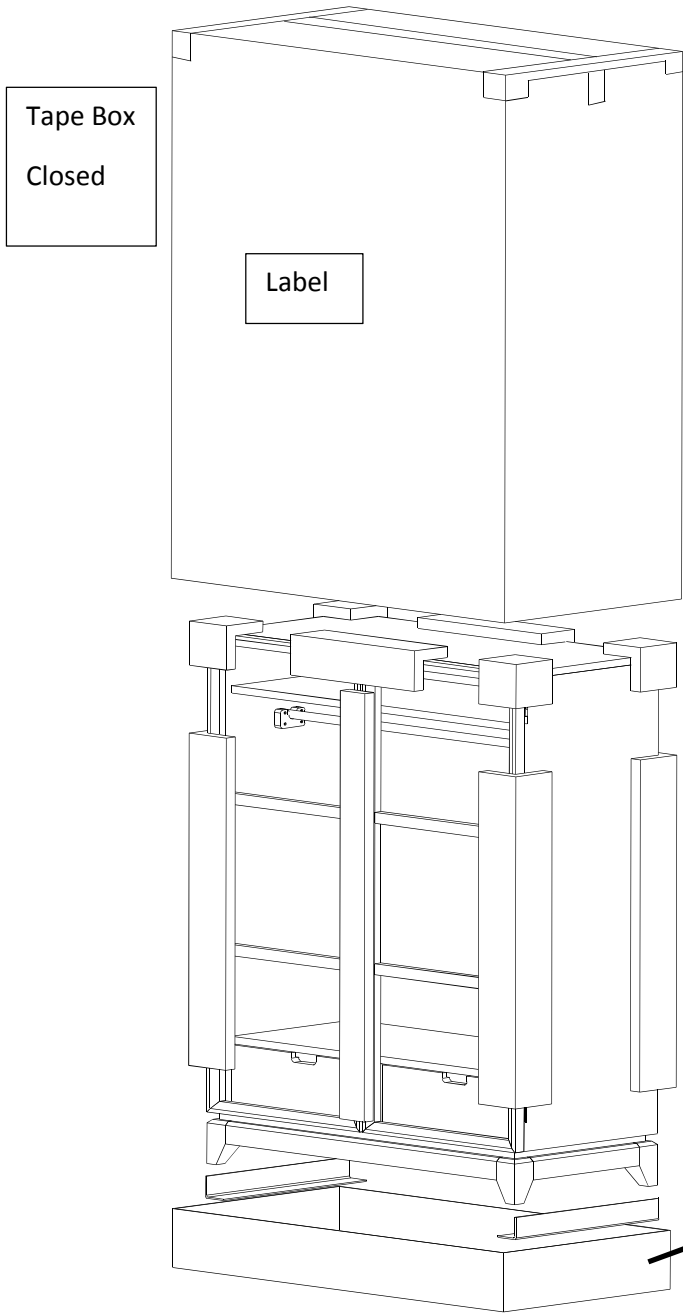


Fig. 9

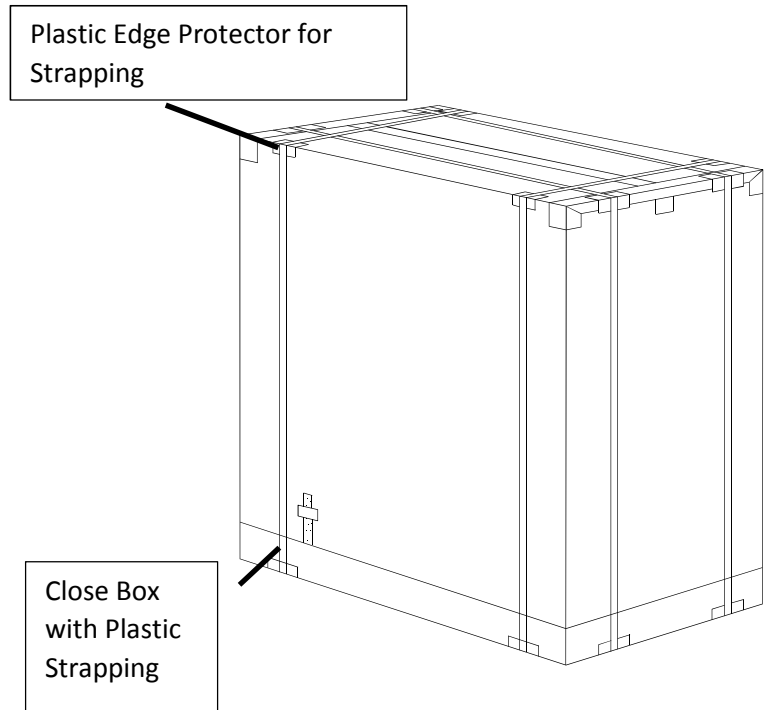
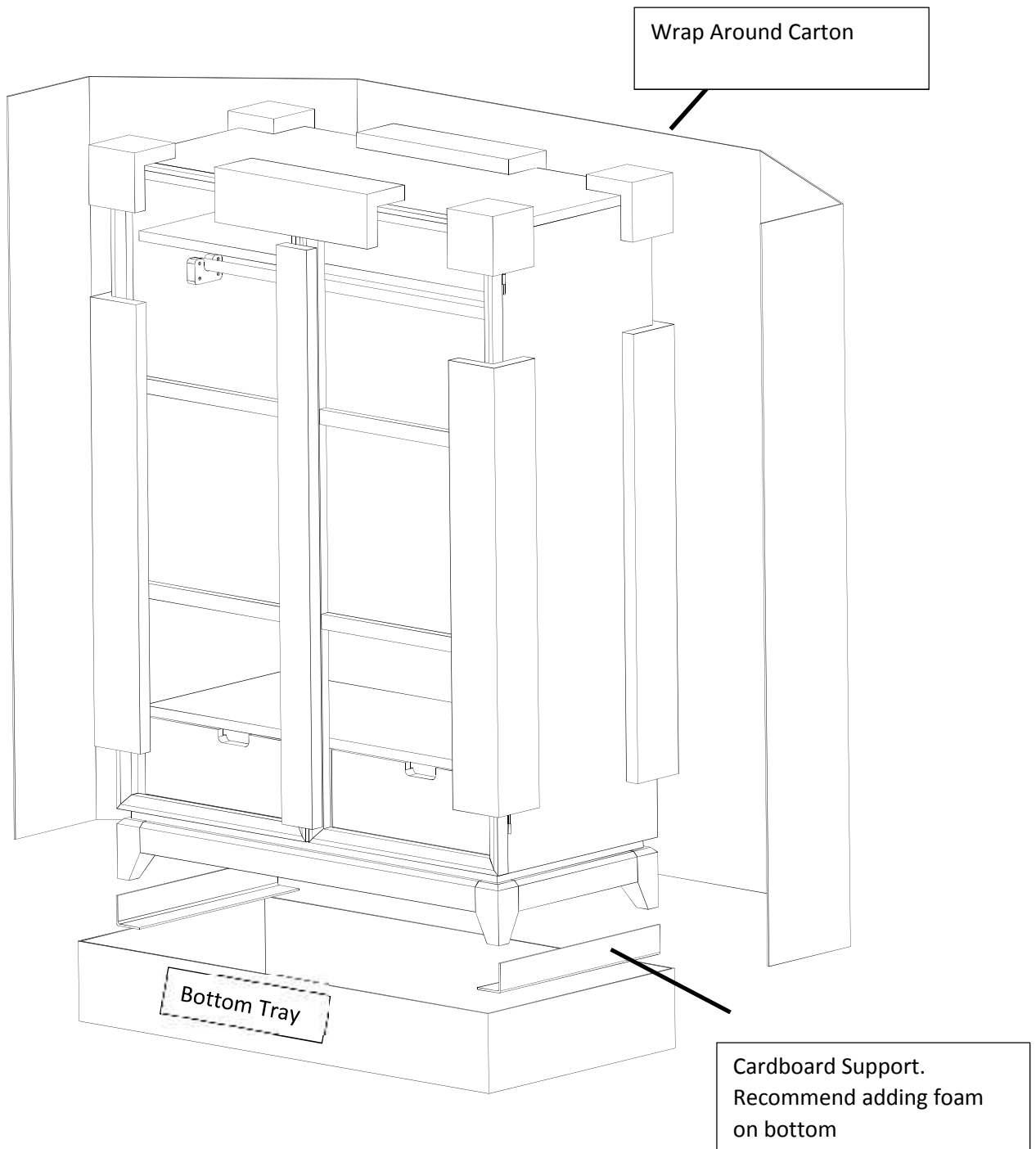


Fig. 10



Large Item Case-good Palletized with Double Cover Box

Fig. 11

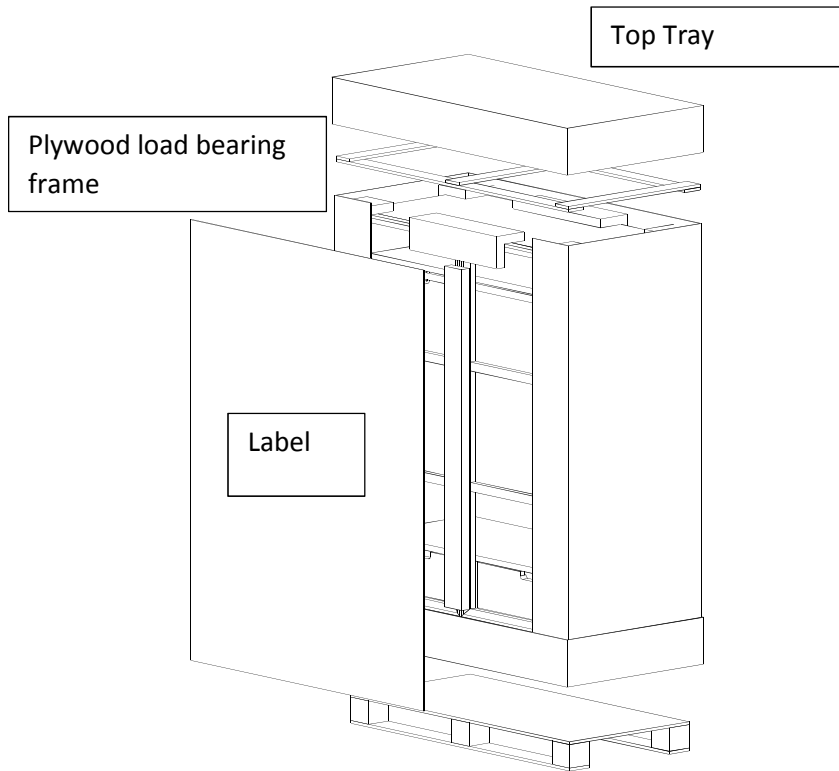
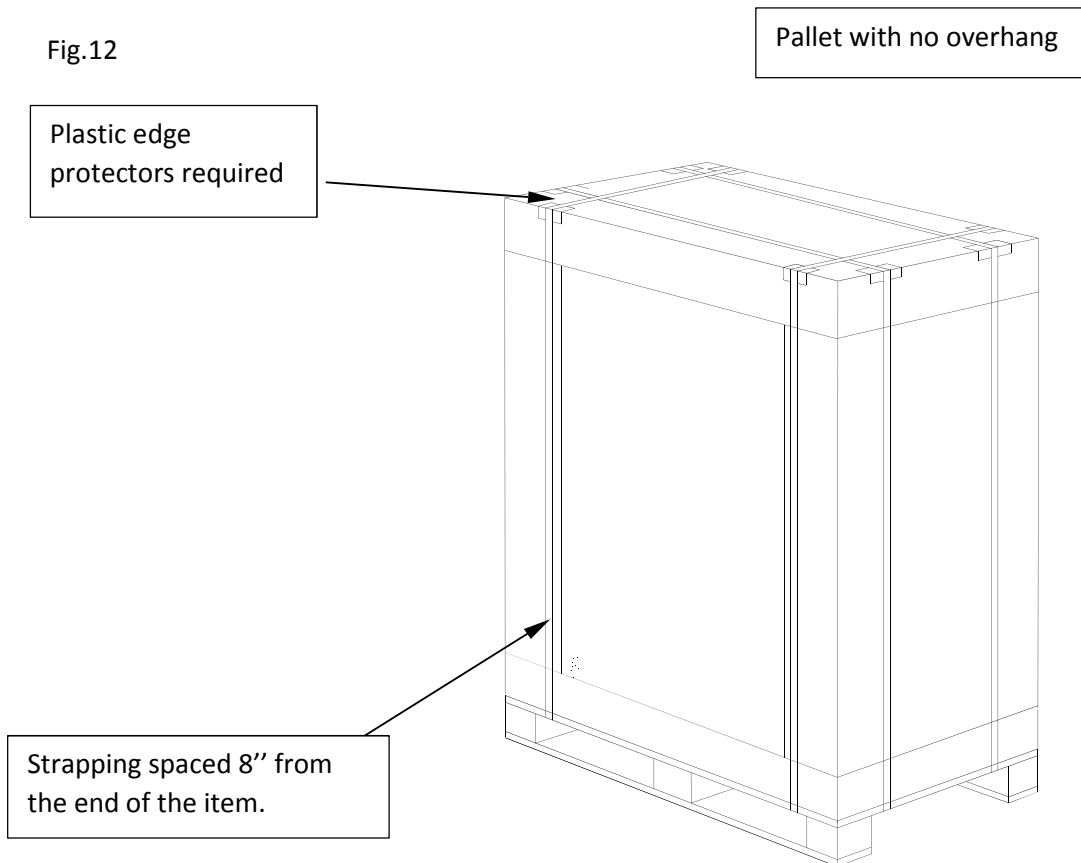
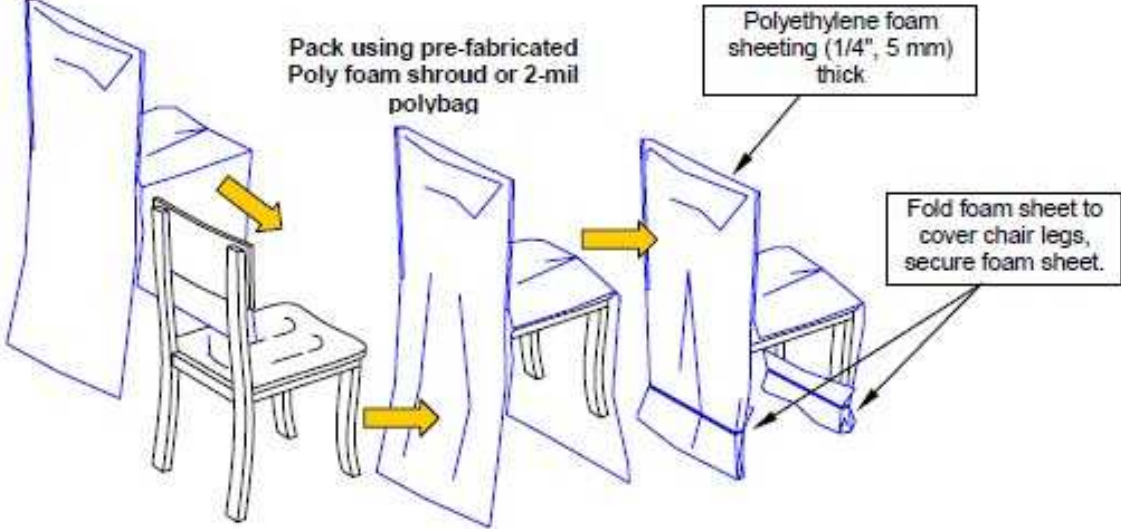


Fig.12



Chairs and Barstools

Fig.13



*Continued on next page

Fig. 14

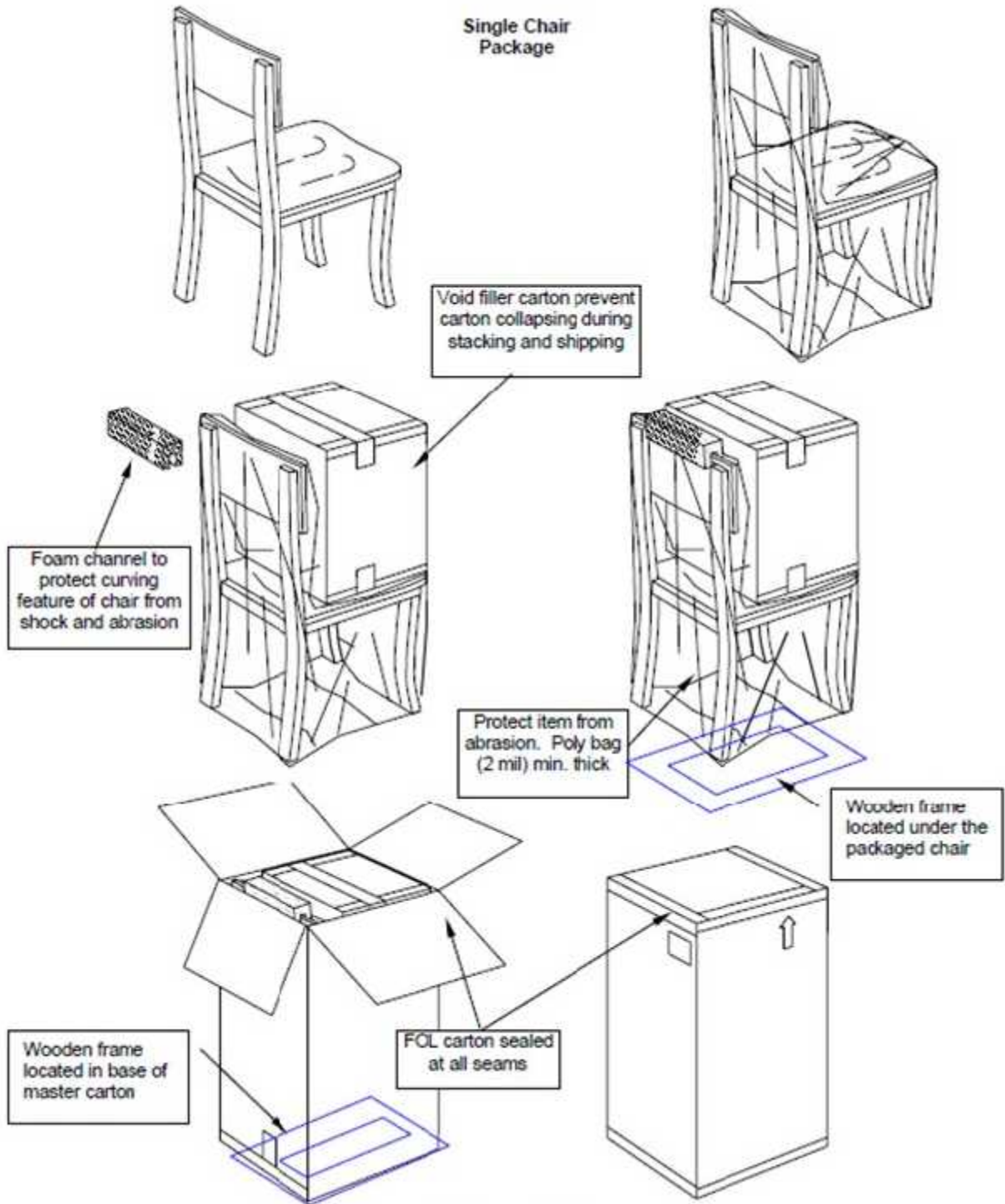
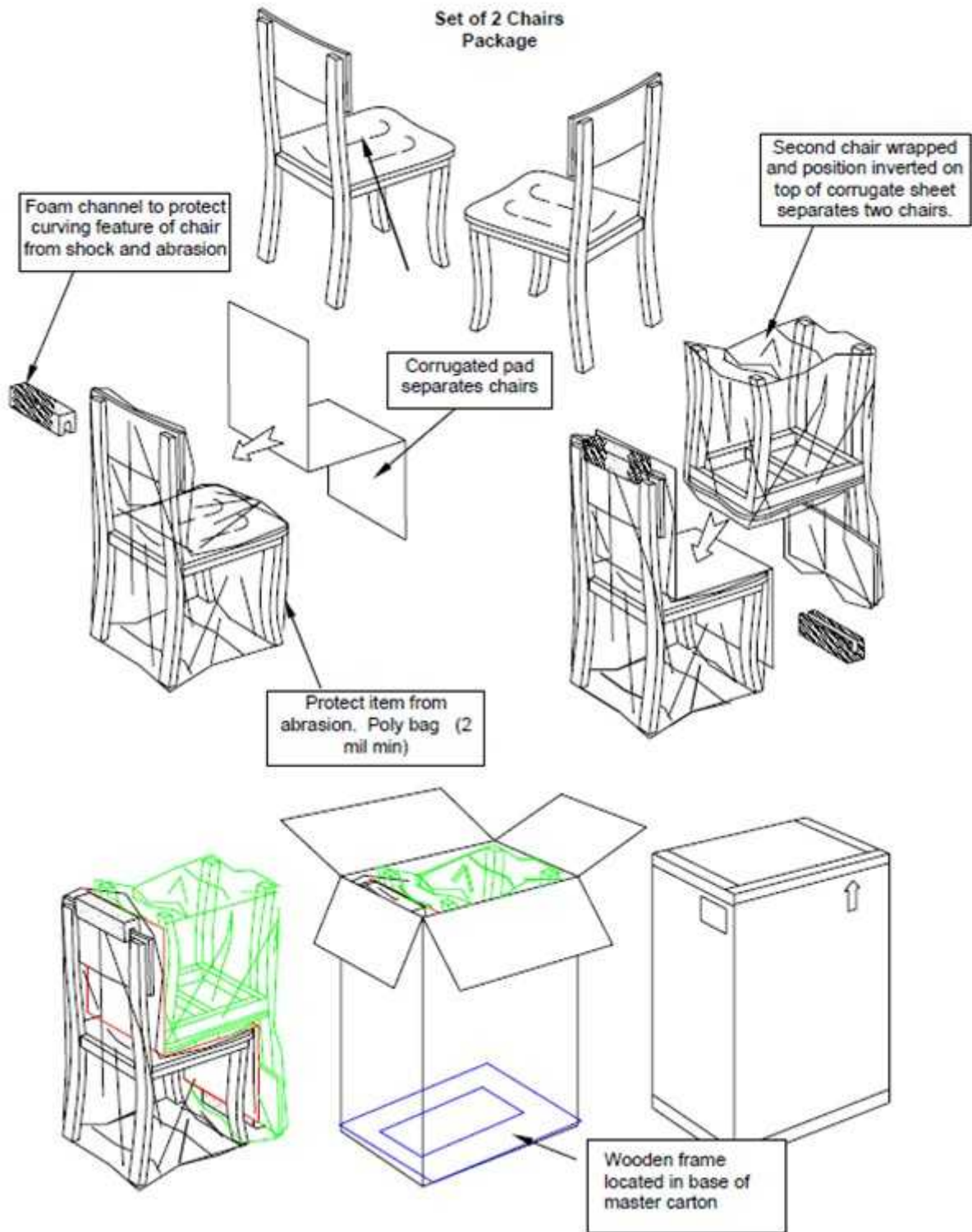


Fig.15



Tables
Fig.16

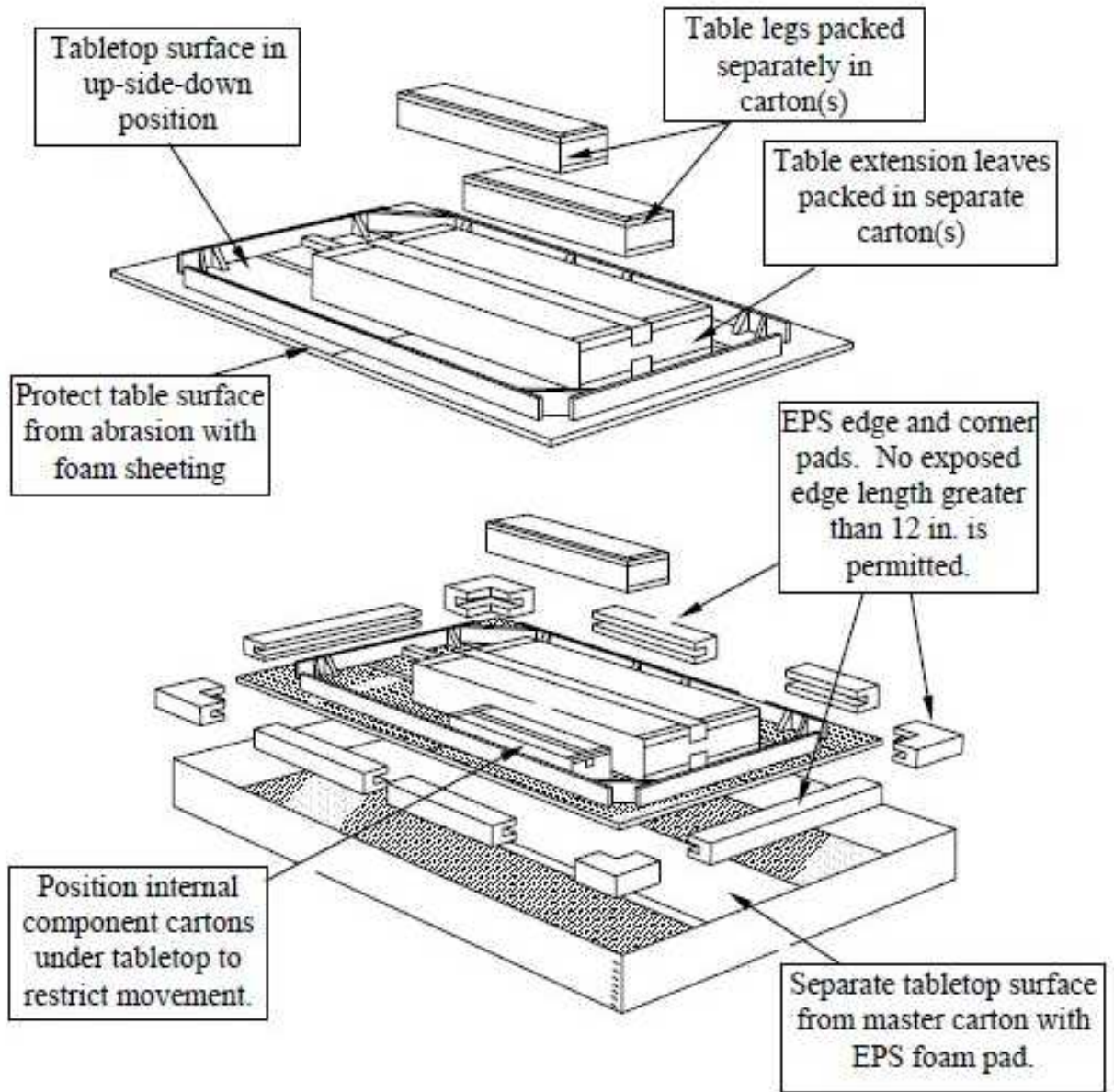
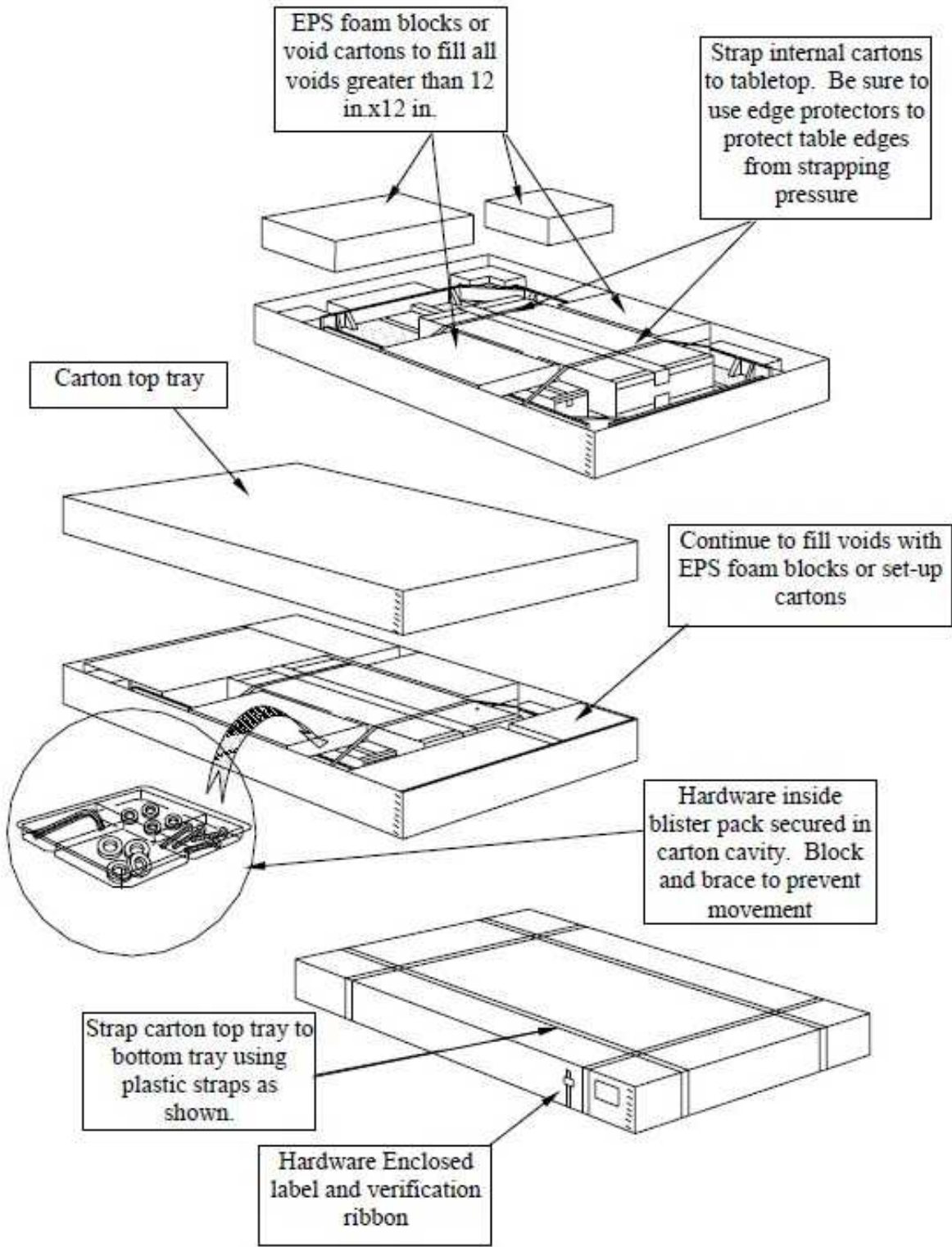


Fig.17

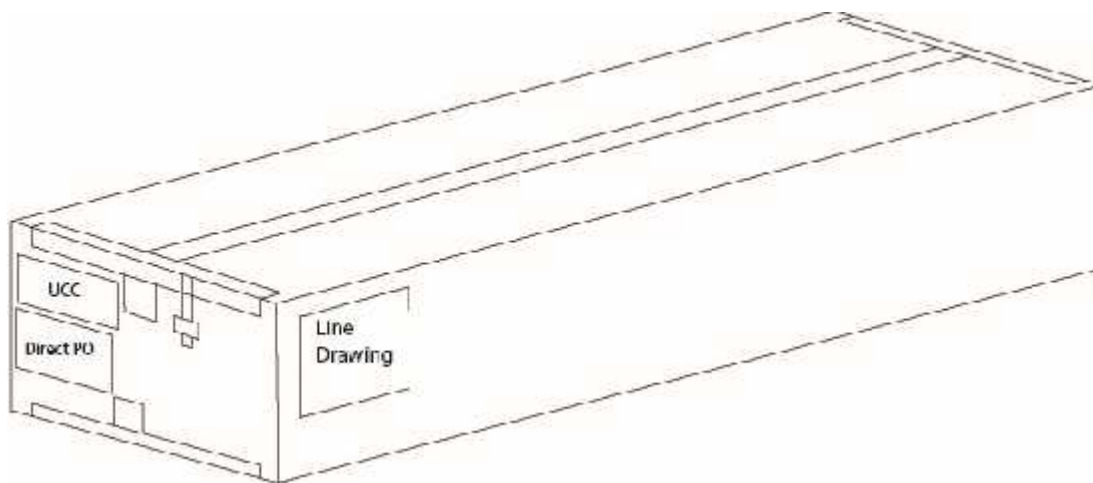


Labeling

Furniture – DIRECT ORDERS

-) The UCC label measures 4" x 6". For smaller packages please ensure the bar code is on the majority of the flat surface and is not folded over any box seam. The UCC label should be placed on the END of the box.
-) The direct PO label measures 3" x 3". For smaller packages please ensure the bar code is on the majority of the flat surface and is not folded over any box seam. The direct PO label should be placed on the END of the box.
-) The country of origin label must be placed clearly on the box with no obscurities from other labels or product information.
-) If items are 2 or more per box please include a large sticker label stating 2 PER BOX or 4 PER BOX, etc. This label should be placed on the END of the box.

An image or line drawing of the item must be placed clearly on the SIDE CORNER closest to the end of the box.



UCC Label

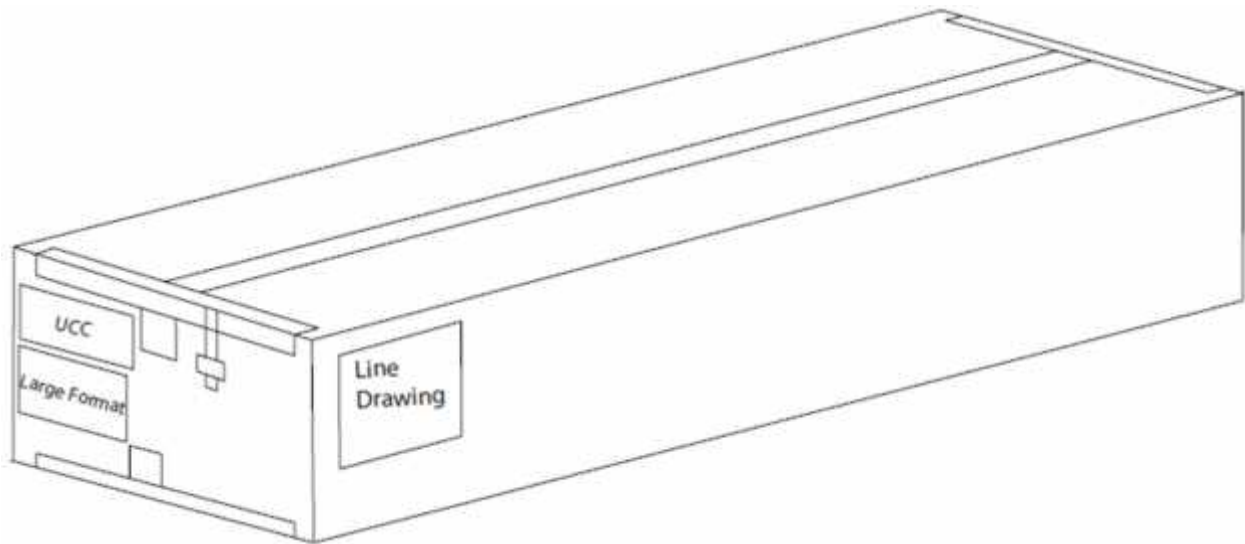


Direct PO Label



Furniture – RETAIL ORDERS

-) The UCC label measures 4”x 6”. For smaller packages please ensure the bar code is on the majority of the flat surface and is not folded over any box seam. The UCC label should be placed on the END of the box.
-) The LARGE FORMAT LABEL measures 16” x 4”. It must be placed clearly on the box with no obscurities from other labels or product information. It must be attached as a sticker to the END of the box. Please refer to the PO for Anthropologie sku number and name.
-) Please do not order any labels from FineLine.
-) The country of origin label must be placed clearly on the box with no obscurities from other labels or product information.
-) An image or line drawing of the item must be placed clearly on the SIDE CORNER closest to the end of the box.



UCC Label



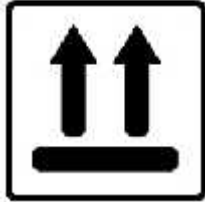






Large Formal Label

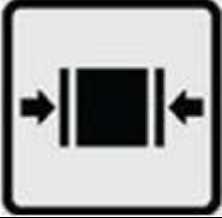



Marks/Labels:

Suggested Icons For Secondary Packaging - ASTM D5445

Icons listed below have variations in design but should convey the same message.

Label	Description	Application
	Stacking Direction	Indicates orientation of the box. Arrows should only point in one direction.
	Stacking Height	Indicates the amount of cartons that can be stacked without damaging the boxes. XX = number of boxes.
	Two person/Team lift icon	Products over 70lbs.
	Hand Truck	For items intended to be handled with hand truck.
	No Hand Truck on this side.	If a certain side is not safe for hand truck use.
	Forklift	If single unit is palletized and is meant to be handled with a forklift in distribution center or in stores.
	No forklift on this side	If unit is palletized and unsafe for forklift use and should be handled with other equipment.

	Clamp Icon	This icon should be driver facing. Indicates perpendicular sides can be clamped.
	Do Not Clamp	This mark is driver facing. Indicates perpendicular sides should not be clamped.

Tesing

The following ASTM Subcommittees are relevant to furniture:

F15.16	High Chairs, Hook-On Chairs and Expandable Gates
F15.17	Carriages, Strollers, Walkers, and Stationary Activity Centers
F15.18	Cribs, Toddler Beds, Play Yards, Bassinets, Cradles, and Changing Tables
F15.30	Bunk Beds F15.42 Furniture Safety
F15.50	Baby Changing Tables - Commercial F15.59 Children's Folding Chairs

Examples of ASTM furniture standards include:

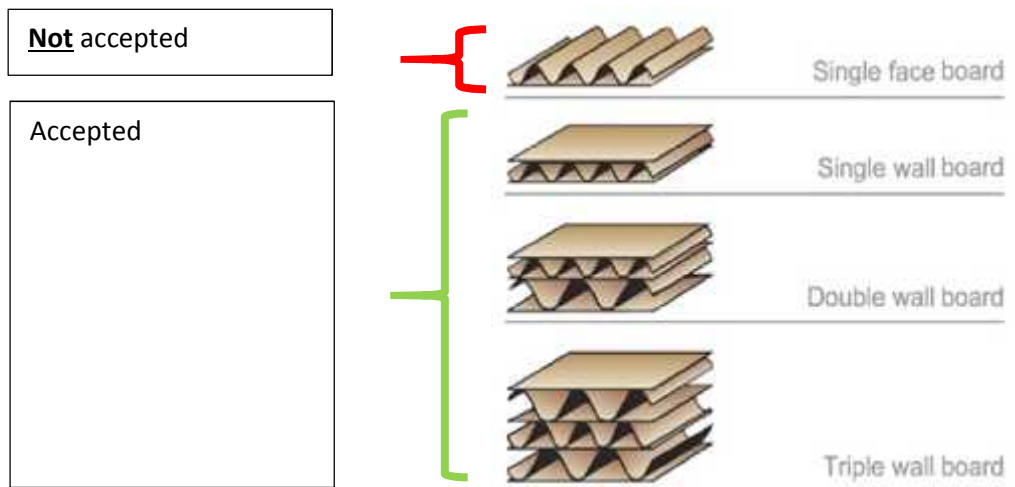
F404 - 10	Standard Consumer Safety Specification for High Chairs
F1169-11	Standard Consumer Safety Specification for Full-Size Baby Cribs
F1427-07	Standard Consumer Safety Specification for Bunk Beds
F1561- 03(2008)	Standard Performance Requirements for Plastic Chairs for Outdoor Use
ASTM F1561 - 03(2008)	Standard Performance Requirements for Plastic Chairs for Outdoor Use
F1821-11a	Standard Consumer Safety Specification for Toddler Beds
F1838- 98(2008)	Standard Performance Requirements for Child's Plastic Chairs for Outdoor Use
F1858- 98(2008)	Standard Performance Requirements for Multipositional Plastic Chairs with Adjustable Backs or Reclining Mechanisms for Outdoor Use
F1988- 99(2008)	Standard Performance Requirements for Plastic Chaise Lounges, With or Without Moving Arms, With Adjustable Backs, for Outdoor Use F2057-09b Standard Safety Specification for Chests, Door Chests, and Dressers
F2194-10	Standard Consumer Safety Specification for Bassinets and Cradles
F2388-09	Standard Consumer Safety Specification for Baby Changing Tables for Domestic Use

F2598-09	Standard Consumer Safety Specification for Clothing Storage Chests
F2613-10	Standard Consumer Safety Specification for Children's Folding Chairs
F406-11b	Standard Consumer Safety Specification for Non-Full-Size Baby Cribs/Play Yards
WK22334	New Specification for Consumer Safety for Glass Furniture

<http://www.astm.org/>

Crugate:

Packaging corrugate must NOT be 100% recycled. Preferably, corrugate should be majority composed of virgin paper, including the fluting. All corrugate, both internally and externally, should have a paper layer, fluting, and a top layer.



ECT:

This guideline will focus on the edge crush of a corrugate. ECT (edge crush test) measures the stacking strength of corrugate. Please follow the table below to determine the best box strength for your SKU.

If your product is up to 120 pounds and has a COMBINED dimensions added (length + width + height) of up to 110 inches, then choose a box with a ECT of 61.

Let's say your product weighs 160lbs and your dimensions add to 110in. Choose the ECT of 71.

When in doubt, always round your weight and dimensions up.

Max. weight of boxes and content	Maximum outside dimension (Length, Width, Depth)	Min. Edge Crush Test (ECT) (lbs. per in. width)
----------------------------------	--	---

Double Wall Corrugated Fiberboard Boxes		
80	85	42
100	95	48
120	105	51
140	110	61
160	115	71
180	120	82

Box Manufacturers Certificate (BMC):

BMC **must be displayed on secondary packaging**. This certificate indicates that the packaging meets material requirements listed in the BMC Rule 41.



Burst Test	Edge Crush
------------	------------

TRANSIT TESTING

All products **must pass** ISTA transit testing. Samples must be sent to an ISTA certified labs and results should be shared with your buyers.

Certified labs can be found here: <http://www.ista.org/members/labs.php>

ISTA (International Safe Transit Association) is an organization focused on developing standards for packaged products. These standards challenge the capability of a package and product to withstand transportation hazards. These standards simulate packaging hazards but cannot account for all the various conditions during transportation.

ISTA benefits:

-) Shortened packaged development time and confidence in product launch.
-) Protection of products and profits with reduced damage and product loss.
-) Customer satisfaction and continued business.

Before Testing:

-) Determine what constitutes a damaged product.
-) Determine the tolerance level of damage – how much damage is allowable.
-) Determine the acceptable package condition at conclusion of test.

Samples should be in an untested package. If a package or product is not available, substitutes will be accepted. Substitutes must be identical as possible to actual items.

ISTA TEST	
ISTA 3A	For packages up to 150 pounds (70kg). For packages that could be shipped direct to DC or to customer.
ISTA 3B	For packaged-products for shipment via LTL (Less-Than-Truckload). Over 150 pounds (70kg)

3A	Types of Packages
Standard) Traditional fiberboard cartons, as well as plastic, wooden or cylindrical containers.
Small) Volume is less than 800in ³ (13,000 cm ³)) Longest dimension is 350 mm (14in) or less) Weight is 10lbs (4.5 kg) or less
Flat) Shortest dimension is 200mm (8in) or less) Next longest dimension is four or more times larger than the shortest dimension) Volume is 13,000 cm ³ (800 in ³) or greater
Elongated) Longest dimension is 900mm (36 in) or greater) Both of the packages other dimension (height) are 20% or less of the longest dimension

3B	Types of Packages
Standard	200 lbs (91kg) or less – including elongated and flat packages
Standard	Over 200 lbs (91kg) – including elongated and flat packages
Palletized or Skidded	Individual container, bulk container, or unitized load on/or incorporating a pallet.

ISTA PROCEDURES:

3A Procedure Overview Standard Package			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient temperature and humidity preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	9 drops	Required
4	Vibration	Random vibration with and without top load	Required
5	Vibration	Random vibration under low pressure	Optional
6	Shock	8 drops	Required

3A Procedure Overview Small Package			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient temperature and humidity preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	9 drops	Required
4	Vibration	Random vibration with and without top load	Required
5	Vibration	Random vibration under low pressure	Optional
6	Shock	7 drops	Required

3A Procedure Overview Flat Package			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient temperature and humidity preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	9 drops	Required
4	Vibration	Random vibration with and without top load	Required
5	Vibration	Random vibration under low pressure	Optional
6	Shock	8 drops	Required
7	Shock	Rotational edge drop	Required
8	Shock	Rotational flat drop	Required
9	Shock	Concentrated impact	Required

3A Procedure Overview Elongated Package			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient temperature and humidity preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	9 drops	Required
4	Vibration	Random vibration with and without top load	Required
5	Vibration	Random vibration under low pressure	Optional
6	Shock	8 drops	Required
7	Shock	Rotational edge drop	Required
8	Shock	Rotational flat drop	Required
9	Shock	Bridge impact	Required

3B Procedure Overview Standard, 200 lb (91kg) or less			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient atmospheric preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	Tip over test	Required – depending on package dimension. Ask your ISTA technician for further details.
4	Shock	6 free-fall drops	Required
5	Vibration	Random vibration with top load	Required
6	Shock	Concentrated impact	Required only for non-rigid containers
7	Shock	Free-fall drop	Required
8	Shock	Full rotational drop	Required only for elongated packages
9	Shock	Bridged impact	Required for elongated packages
10	Shock	2 full rotational drops	Required only for flat packages
11	Shock	Concentrated edge impacts	Required only for flat packages

3B Procedure Overview Standard, Over 200 lb (91kg)			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient atmospheric preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	Tip over test	Required – depending on package

			dimension. Ask your ISTA technician for further details.
4	Shock	Rotational drop	Required
5	Shock	Incline impact	Required
6	Vibration	Random vibration with top load	Required
7	Shock	Concentrated impact	Required only for non-rigid containers
8	Shock	Rational impact	Required
9	Shock	Incline impact	Required
10	Shock	Full rotational drop	Required for elongated packages
11	Shock	Bridged impact	Required for elongated packages
12	Shock	Full rotational drop	Required only for flat packages
13	Shock	Concentrated edge impact	Required only for flat packages

3B Procedure Overview Palletized or Skidded			
Sequence Number	Test Category	Test Type	For ISTA Certification
1	Atmospheric	Ambient atmospheric preconditioning	Required
2	Atmospheric	Controlled temperature and humidity preconditioning	Optional
3	Shock	Tip over test	Required
4	Shock	Rotational drop	Required
5	Shock	Incline impact	Required
6	Vibration	Random vibration with top load	Required
7	Shock	Concentrated impact	Required only for non-rigid containers
8	Shock	Fork Lift Handling. Flat push and rotate test	Required
9	Shock	Fork Lift Handling. Elevated push and pull test	Required
10	Shock	Fork Lift Handling. Elevated rotate test	Required
11	Shock	Fork Lift Handling. Load stability test	Required
12	Shock	Rotational edge drop	Required
13	Shock	Incline impact	Required

Resources

ISTA International Safe Transit Association	https://www.ista.org/
ASTM American Society for Testing and Materials	http://www.astm.org/
Toxins In Packaging	http://toxicsinpackaging.org/
BIFMA business institutional furniture manufacturer's association	https://www.bifma.org/
AHFA American Home Furnishing Association	http://www.ahfa.us/
Association of Furniture Manufactures and Traders (India)	http://www.afmt.in/
Council of Asia Furniture Association	http://www.cafa-furniture.org/
Association for Corrugated Papers/ Case Industries	https://acca-website.org/asian-corrugated-case-associations-acca-member-list/
Packaging Industry Association of India	http://piai.org/
Asian Packaging Federation	http://asianpackaging.org/