### CHANGE CONTROL SHEET

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<tr>
<th>Date</th>
<th>Rev</th>
<th>ECN Reference and/or description of change</th>
<th>Changed By</th>
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<td>Create document.</td>
<td>Fred Simmons</td>
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<td>01</td>
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<td>7/09/13</td>
<td>02</td>
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1. Purpose

The purpose of this specification is to outline the packaging requirements of purchased products for shipment to PerkinElmer, Inc. (PKI).

2. Scope

This packaging specification is to be followed when specific packaging requirements are not provided. Packaging specifications supplied as part of drawing, purchase order or bill of material supersede this document.

3. Responsibilities

The Quality Department is responsible for assuring the specification document is current and any changes are communicated through the appropriate PKI internal channels.

The supplier is responsible for ensuring parts are adequately packaged, protected and labeled to ensure the preservation and safe arrival of the product. This includes, but not limited to following standard industry regulations in shipping such as Department of Transportation (DOT), International Air Transport Association (IATA), etc.

4. Definitions - N/A

5. Procedure

General Packaging Requirements

It is expected that the packaging perform a number of functions during transportation, storage and use, including:

- Containment of the product to ensure integrity and safety
- Protection of the product from physical damage
- Convenience of use and ease of handling by users (size and weight limits)
- Compliance to legal and regulatory requirements
- Communication of information (labeling)
- Environmental acceptability and ease of disposal and/or recycling

Suppliers will also meet all applicable State, Federal, and International regulations regarding the packaging, marking, labeling and transportation of hazardous materials.
Handling and Ergonomics

All containers and packaging must be designed with consideration given to ergonomics and ease of part removal. Appropriate consideration must be given to unit load height restrictions, weight restrictions, carton disassembly and other requirements which may affect ergonomics and worker safety.

Manual Material Handling Guidelines: The following standards have been adopted from research guidelines and principles designed to reduce the risk factors associated with causing back injuries:

1. Packages should not exceed standard dimensions of 30” length by 20” width by 18” depth, unless the individual part exceeds these dimensions. This includes packages unitized on pallets which are moved by fork truck but are manually placed onto the pallet.

2. Large boxes, bins, or waist carts which are used to hold more than one part should not be higher than 24 inches from the floor in order to allow easy accessibility to the center of the package when reaching for an item.

Acceptable Loads (Package Weight): The guidelines below are based on manual material handling techniques which allow the package to be carried close to the body and which do not require excessive bending or squatting:

1. All containers designed to allow manual handling should not exceed 35 lbs. maximum weight, even if palletized, unless the individual part exceeds this weight. The other exception to this requirement is packaging for fasteners (see below).

2. Packages which are greater than 35 lbs. in weight increase the risk of injury if they are manually handled. These packages should be designed in such a way that they will enhance mechanical movement and discourage any manual handling.

3. Items that exceed the size and weight requirements shall be packaged appropriately for transport by freight services, (e.g. castings shall be crated, large or heavy boxes palletized).

Handholds: In order to reduce the mechanical stress placed on the hand while the carton is being carried, the handhold should have the minimum dimensions of 4½” length and 1” minimum curvature or width of edge.

1. The handholds should be located so that when the item is picked up the side walls do not come in contact with the legs. More specifically, the handholds should be located slightly above the package’s center of gravity.

2. Any package which is too broad to be lifted by both hands can be lifted by one hand if the package is no greater than 5” deep and if it has cut-in handholds located no greater than
16” from the top of the package. This allows the package to be carried at the side under one arm.

**Fastener Packaging:** All fasteners (nuts, bolts, washers, screws, etc.) must be packaged with a maximum gross weight of 50 lbs. and should be unitized according to the Unit Load Containment Guidelines. Use of the standard small parts returnable container is also recommended.

**Unique Packaging Requirements:** Unique packaging requirements dictated by part characteristics such as rust prevention, size, weight, ESD sensitivity, fragility and surface appearance which are not covered by these Guidelines or the packaging standards are the responsibility of the parts suppliers.

**Level I - Individual Part Packaging**

Individual part packaging shall be sufficient to protect the parts from damage, and contamination during transport and storage. In addition, individual part packaging for each shipment shall be consistent by using the same packaging configuration (net dimensions, weight, etc.)

Bulk packaging is allowed for hardware and similar items.

Custom Parts, such as molded, machined and sheet metal parts shall be packed individually in plastic bags, foam or other industry standard materials to protect them from damage when combined in a larger container with other parts so as not to damage the other parts.

Painted or anodized surface must be individually protected. No finished surface of an item should be in contact with another surface. Packaging paper or bubble wrap should be used to individually protect these pieces.

Parts which require environmental (moisture) protection shall be sealed and packaged including corrosion protection or desiccant materials as needed.

ESD sensitive items must be packaged in appropriate anti-static ESD protective bags of a size appropriate for the part or assembly being packaged, following Electronics Industry Association standard EIA-541.

All packaging materials shall be compatible with the part materials being packaged. Materials such as, but not limited to, industrial tissue or Kraft paper, micro foam, bubble wrap, bags, filler material, etc., must not cause any damage, leave a residue, or any other negative effects on the parts.

Use of tape or similar materials to help secure the wrapping of parts shall be used when appropriate.

**Level II - Outer Box Packaging**
Level II packaging for individual or multiple parts intended for transport, shall be packaged in a box that is appropriate for the size, dimensions and weight of the item(s).

Additional materials (e.g. foam in place, bubble wrap, air packs, etc.) shall be used to isolate and protect the part(s) from movement and damage during transport. Outer Materials for ESD items shall be static safe.

Boxes shall be appropriately sealed.

**Level III – Palletized and Shipping Containers**

If used for shipping multiple items, and or large quantities, palletizing boxes and/or use of a shipping container shall ensure the product is well protected. Consider the use of corner boards and shrink-wrap on pallets, appropriate making for the items, use of Do Not Double Stack, and shock sensors shall be considered.

**Additional Requirements**

**Packaging Consistency**

Once a packaging configuration has been established, the supplier should maintain the same packaging configuration for subsequent shipments (same box size, weight, quantity, etc.) of a part for storage at PKI.

**Packaging Design Reviews**

Suppliers should conduct ongoing reviews of all packaging designs to ensure they are consistent with these Guidelines and reflect currently available technology and materials. Any changes to packaging must be communicated to PKI in advance before implementation.

**Packaging Reduction**

Consideration should be given to eliminating all unnecessary packaging materials wherever possible. A priority should be placed on reducing material by weight and volume. Unnecessary materials and packaging for overprotection are unacceptable.

**Packaging Reusability**

Suppliers should identify those opportunities where packaging can be designed to promote reuse, for its originally intended function or other uses. Such packaging shall be reviewed with PKI prior to implementation to ensure return processes if applicable.

**Packaging for Recyclability**

Suppliers should determine how their packaging can be made more recyclable. To aid recycling efforts companies should design packaging to be easily separable when made of
different materials. All packaging components should carry information (e.g. symbols) to identify material type.

**Incorporation of Recycled Materials**

Suppliers are encouraged to determine where and how much recycled material can be incorporated into packaging designs while also providing adequate performance. Supplier purchasing practices should provide preference for recycled materials where economically and functionally justifiable.

**Environmental Packaging Considerations**

Implemented, proposed and/or impending Federal and State legislation prohibits wasteful and/or excessive packaging. The challenge is to meet these requirements with the amount and degree of packaging required without excess. Over packaging and wasteful “just in case” packaging is undesirable and costly.

1. Wax or plastic coated paper is prohibited because it contaminates the recycling process.
2. Non-Kraft corrugated has no recycle value and therefore is unacceptable. Recycling centers will not accept it.
3. The use of lead and cadmium in packaging and/or labeling material is strictly prohibited.
4. Every effort should be made to reduce the use of plastic in packaging materials such as preforms. If it cannot be eliminated, other changes can be made to assist with the effectiveness of the packaging:
   a. Incorporate the Society of the Plastics Industry (SPI) Resin Identification Coding System (“SPI Symbols”) into the molded part. When elimination is not possible these codes will allow for effective recycling.
   b. Clear Linear Low Density Polyethylene (LLDPE) plastics are preferred and can be effectively recycled.
5. Shipping plastics must not be contaminated with paints and lubricants.
6. When at all possible, replace plastic with a recyclable paper substitute.

**Labeling**

All packages are to be labeled with a white, self-adhesive, label with a minimum of the following information clearly printed in black (no handwritten labels). The following minimum information must be provided:

**Inner Part Packaging:**

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**Document Name:** 65256  
**Revision:** G
Line 1: PKI part number, PKI engineering revision, & 6 digit vendor code
Line 2: Quantity in package (should reflect units used in the PO)

**Outer Part Packaging:**

Line 1: PKI part number, PKI engineering revision, & 6 digit vendor code
Line 2: Quantity in package (should reflect units used in the PO)
Line 3: PO# (only if the outer part packaging is being used for shipping)
Line 4: Country of origin

**Shipping Container:**

Line 1: PKI part number, PKI engineering revision, & 6 digit vendor code
Line 2: Quantity in package (should reflect units used in the PO)
Line 3: PO#
Line 4: Country of origin

*This information should come directly from the PO the package is shipping against.*

**Label & Font Size:**

Font should be printed in a legible size for the appropriate size package and label.

**Label Location:**

1) Cardboard boxes and crates – The label should be placed in the upper right hand corner on the side of the box
2) Bags - The label should be placed in the upper right hand corner on the front of the bag

**Packing List**

If multiple lot numbers are in the same shipping container, please note this on the packing list.

Non-Conforming Packaging

If parts are delivered in packages that do not conform to this Packaging Guideline, PKI will inform the supplier of the non-conformance. Suppliers notified of a non-conformance must respond with a written corrective action plan within 48 hours from notification. The written corrective action plan must clearly outline the actions that will be taken to prevent non-conforming packaging for future shipments.
6. Records - N/A

7. Associated Documents - N/A