


ENERPAC 	Title: LABELING, PACKAGING, AND SHIPPING GUIDELINES FOR SUPPLIERS.		Global
	Doc number: P-PUR-30590	Revision: 2.0	Date: Jan 2021



LABELING, PACKAGING, AND SHIPPING GUIDELINES FOR SUPPLIERS.

Procedure

Intellectual Property Category:				
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2.0	Jan 2021	Mark Boardman	Mark Boardman	Quality Steering Committee
1.0	Aug 2020	Mark Boardman	Mark Boardman	Quality Steering Committee
Rev No	Rev Date Month/Year (MM/YYYY)	Prepared (Initial, surname and department)	Approved (Doc Owner(s)) (Initials, surnames and departments)	Approved HSSEQ (Initial, surname, dept)

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1 Introduction.

1.1 SUBJECT.

Specification for packaging and labeling of product sent to Enerpac from all suppliers.

1.2 SCOPE.

This specification provides guidelines for product, content, and company identification of parts and materials sent to Enerpac. This document supplements the purchase order (PO) and establishes the packaging, marking, handling, preservation, and shipping guidelines for all shipments by Seller to Enerpac.


1.3 IMPORTANT INSTRUCTIONS.

- Our purchase order number, part number, and quantity SHALL appear on all packages, invoices, shipping papers, and correspondence.
- Packing lists SHALL accompany each shipment.
- Invoices SHALL reference Enerpac part numbers to be paid.
- All packages SHALL include the Enerpac Standard Bar Code Label.
- All new or modified packaging will require completion and submission of Level 2 PPAP with limited data to include only the Form 232-P Packaging Form. (Attachment 2)
- Supplier SHALL verify their part number matches part number and revision number specified on Enerpac supplied drawing, if not, you SHALL contact the Buyer for corrective action prior to shipping.
- Individual packages greater than 35 Lbs. (15.9kg) but less than 50 lbs. (22.7kg) shall be labeled with Heavy Load stickers.
- Individual packages exceeding 50 lbs. (22.7kg) SHALL be shipped on a pallet, or a pallet is built into the box/container.
- Metal banding is prohibited.
- Staples are prohibited.

IN THIS DOCUMENT THE WORDS "SHALL" OR "MUST" INDICATE A REQUIREMENT AND THE WORDS "SHOULD" OR "MAY" INDICATE A RECOMMENDATION.


1.4 CORRECTIVE ACTIONS.

Any supplier not conforming to any guideline stated in this document is at risk of being assigned a corrective action. Enerpac has the right to refuse any shipment for reasons of safety, nonconformity or being shipped to the wrong location and impose a fee for labor and administrative costs.

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2 Definitions

Acronyms	Definition
AIAG	Automotive Industry Action Group.
ANSI	American National Standards Institute.
BURST STRENGTH	The strength of the material, such as corrugated fiberboard, expressed in pounds per square inch.
COMMON ITEM PACK	A pack which contains all like items, i.e. same part/item numbers.
DUNNAGE	Materials used to support and protect the item(s) during shipment. ITEM - A single part or material purchased, manufactured and/or distributed. ISPM - International Standards for Phytosanitary Measures.
LABEL	A card, strip of paper, etc. marked and attached to an object to indicate its nature, contents, ownerships, destination, etc.
MASTER LABEL	A label used to identify and summarize the total contents of a multiple pack.
MIXED LOAD LABEL	A label used to designate mixed items, shipping packs.
MULTIPLE PACK	A pack containing smaller packages (sub packs) of items.
NON-STANDARD QUANTITY PACK	A pack which contains variable quantities of like items.
OVERHANG	The portion of a container or unit load that exceeds the length or width of a pallet.
PACK, PACKAGE or LOAD	A unit which provides protection and containment of items, plus ease of handling by manual or mechanical means. Examples of containers or packs which normally are disposable include bags, cartons, cartons on pallets, and pallet boxes. Examples of containers or packs which are returnable include bins (wire mesh or solid sides and ends), racks (plain or with special dunnage), racks with wire mesh sides and ends, tubs, and drums.
PHYTOSANITARY	Concerning the health of plants; especially the freedom from pests requiring quarantine.
PRIMARY PACKAGING	The designated container for shipping.
SHIPPING PACK	A pack used for shipping items from one plant to another and can be of any of the packs described above.
SHIPPING/PARTS IDENTIFICATION LABEL	A label used to identify the contents of a shipping pack.
STANDARD QUANTITY PACK	A pack which always contains the same quantity of items.
STRINGER	The longitudinal portion of the pallet that supports the top and bottom decks.
SUBPACK	One of the smaller packs (which may be a standard quantity or non-standard quantity pack) that make up a larger multiple pack.
TAG	A label that is hung from an object, usually with a wire placed through a reinforced eyelet in the label/tag.

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3 **PACKAGING.**

3.1 **GENERAL INFORMATION.**

This document details the minimum acceptable packaging requirements for purchased components used at Enerpac facilities. The principal objective of these requirements is to guarantee part quality, maximize production efficiency, ensure safety, and minimize overall packaging and transportation costs. Special circumstances that require specific labeling and packaging requirements outside of this Specification may be designated on drawings, or other specifications, but SHALL be in writing (emails notwithstanding).

Adherence to the requirements of this specification is necessary to minimize shipping damage, streamline Enerpac’s receiving process and reduce costs.

Packaging development requires partnership. It can only function as intended when both supplier and customer work together from proposal through implementation. It is absolutely crucial that both parties adhere to authorized packaging. The key to a successful packaging solution is open two-way communication.

Enerpac requires that each supplier utilize a standard package. This SHALL be a single size container, package and/or pallet containing a specific quantity for each part number supplied.

All packaging “modifications” or “new” proposals require a Level 1 PPAP with limited data (PSW and the Form 232-P Packaging Form). Contact your Enerpac Quality Representative for further guidance.

The first delivery of a new or modified packaging must be approved by an Enerpac Supplier Quality Engineer. Suppliers SHALL work with Enerpac Sourcing Manager to establish appropriate packaging. Once approved, any changes to packaging will require a PPAP as noted above.

3.2 **SUPPLIER RESPONSIBILITIES.**

It is the supplier's responsibility to:

- Ensure their packaging methods and materials comply with all applicable global or regional laws and regulations. This is especially important for materials classified as hazardous or dangerous.
- Ensure shipments are packaged in a manner such that the containers and their contents arrive at the final destination free from damage.
- Ensure shipments are economically packaged in a manner that minimizes adverse effects on the environment and solid waste.
- Ensure export shipments are packaged, labeled and marked in compliance with Enerpac guidelines.
- Ensure packaged products meet or surpass the minimum Enerpac requirements as defined by this document.

3.3 **PALLETS.**

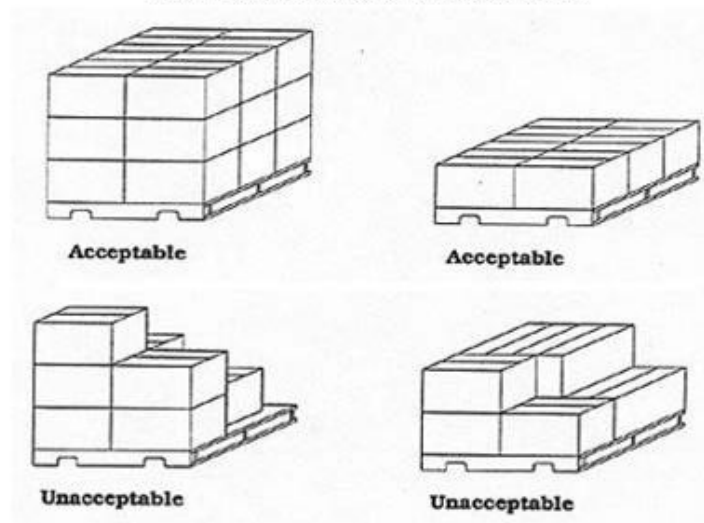
This specification provides requirements for type, construction, and materials of the standard Enerpac 40" X 48" pallet for US-based operations and the Euro 1.2 m x 1.02 m pallet format for its European (EU-based) operations. Pallets SHALL be constructed according to Enerpac drawing DS1410925 (Attachment 1 for Reference).

FIGURE 1: PALLET TYPES.



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FIGURE 2: STACKING CONFIGURATIONS



Acceptable pallet utilization requires evenly distributed weight and stacking height of product(s) across the area of the pallet.

3.4 PALLET SPECIFICATIONS.

All pallets shipments need to withstand being double stacked, if like items, during transportation. Shipments can be double stacked in trailers to maximize cube space and efficiency of truck.

- 90% of the pallet surface should be used and no overhang of boxes or parts.
- All pallets SHALL be assembled with long screws or shanked nails.
- All edges SHALL be flush.
- Deck boards and stringers SHALL be free of large cracks, splinters and loose nails or fasteners.
- Maximum pallet size SHALL be 48" x 40" (1.2m x 1.02m).
- Maximum spacing between top deck boards SHALL be 2.0" (50.8 mm).
- Minimum space of 2" (50.8 mm) is required for forklift placement.
- Stringers and deck boards SHALL be made of dense hardwood or pine.
- For a large item, part relationships of one single part per one single pallet, Heat treated pallets are required.
- All pallets must be four-way entry notched stringer pallets. They must be flush (no winged) reversible or nonreversible stringer pallets. **For safety considerations block style pallets are only acceptable if approved by the Enerpac Safety Director.**

Pallet construction must meet the standards defined by: National Wooden Pallet/Container Association. www.nwpca.com – General Website.

Maximizing pallet space (area efficiency) is solely determinant upon the container arrangement (box erection/layout). Selecting the correct number of cases per pallet and choosing proper pallet layout determines the unit load efficiency.


Load and Size characteristics:

- Height from top of stacked material to floor (to include pallet) is not to exceed 42" (1066 MM).
- The maximum size of pallets SHALL be 48" x 40" (1.2 m x 1.02 m) Individual cartons or parts SHALL not protrude or overhang beyond the physical dimensions of the pallet. Regardless of pallet size.

Stretch Wrap requirements.

Stretch wrap should be securely attached to the pallet. It should be not tied to the pallet. It should be scrunched into a rope shape and wrap around one corner of the pallet. Then pull tightly in order for the plastic to stick to each other.

Stretch wrapping is a packaging technique used to secure items to a pallet for transportation. This technique is especially useful when there are multiple boxes or products to be transported via a pallet. The following requirements are intended to prevent damage to transported products due to unsuccessful stretch wrapping.

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The pallet should not be larger than the products placed on top. It should completely cover the base area of the products you want wrapped.

The products should be compacted together onto the pallet as closely as possible to prevent movement after wrapping. Wrap around the pallet from the base repeating a couple of time to ensure that it has a strong hold. Then work your way up from the base; making sure that each layer is tightly joined to the previous one.

3.5 ISPM 15 SOLID-WOOD PACKING REQUIREMENTS (SWPM).

All shipments from international origins SHALL comply with the International Standards for Phytosanitary Measures (ISPM 15) if they contain any solid-wood packaging. This requires that all wood packaging material must be heat-treated at a core temperature of 56 degrees Celsius for a minimum of 30 minutes. This regulation eliminates the presence of pests found in wood. ISPM 15 standards should be followed for all international shipments.

3.6 WOODEN CRATES.

Safety Note: Protruding nails and screws are not permitted to avoid personal injury during handling.

Material – All solid wood packaging material for international shipments used SHALL adhere to the ISPM 15 standard requirements.

The following material is acceptable to use during the construction of the packaging:

- Hardwood species - (e.g. Oak, Aspen, Maple, Poplar, Ash, Cottonwood, Locust).
- Softwood species – (Spruce, pine, fir).
- Plywood is acceptable to use for the wall components only (sides, ends, tops). If plywood is chosen for wall components it SHALL be a solid sheet.
- Helical, smooth shank and ring shank nails are acceptable fasteners for construction of crates. Screws are also allowed as long as they meet the engagement requirement.
- Fastener engagement of two members must be at least 75% into the adjoining member.
- Tops SHALL be fastened for ease of unpacking and customs inspection. The top SHALL be flush with the sides. Parts that can roll, such as Cylinders SHALL be adequately packaged to prevent the part(s) from shifting internally whether in wood crates or corrugated boxes.
- Banding material SHALL be polyester strapping. No metal banding is acceptable. Banding SHALL align with cleats.
- Large parts over 150 lbs. (68kg). having special configurations SHALL be placed individually on a pallet so that they can be mechanically handled. The weight of the parts SHALL be considered in the construction of the crate.
- Parts over 80 lbs. (36.3 kg) must be in FOL (full overlap) cartons top and bottom.
- Parts must be protected from corrosion, abrasions, nicks, scratches, dents, etc. All fragile items SHALL be protected properly from shock and vibration. Dunnage SHALL be required when part shifting or rubbing will cause damage and /or entanglement. Additionally, packaging SHALL be used to allow part removal in a safe and efficient manner.
- Ferrous metal parts shipped in wooden crates or on pallets SHALL have a VCI barrier between the part and the wood to protect the part from moisture absorbed by the wood.

3.7 BOX SELECTION.

Corrugated (paper fiber board) packaging material must have strength to adequately withstand transportation and handling rigors from the supplier's shipping dock to Enerpac's receiving dock. Corrugated packaging SHALL be of adequate strength to support multiple stacking of unit pallet loads. Corrugated material must have adequate Edge Crush Test (ECT) or Mullen burst test strength to protect the product.

Factors in Selecting Box Size:

- Part Dimensions: best fit box to part.
- Part Weight: ergonomic limit for hand held boxes is 35 lbs. (15.9 kg).
- Part Quality: partition cells, wrap, and/or cushion material as required.

Note: Boxes in excess of 35 lbs. (15.9 kg) must exhibit a Heavy Load Label (Reference Figure 6) and should be labeled with the box weight.

3.8 BOX STRENGTH.

All cartons should be made from at least single-wall corrugated; double-wall corrugated will be required for large, heavy parts over 80 lbs. All corrugated boxes shipped to Enerpac SHALL be tested by either the Mullen Burst or

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Edge Crush Test methods. Handheld boxes SHALL have a minimum ECT performance of 32 ECT or Mullen Burst of 200 lbs. (90.72 kg). Non handheld corrugated boxes used SHALL have an ECT or Mullen performance # that corresponds to the carton content's weight. The flute direction of the outer carton should always run vertically.

FIGURE 4 WEIGHT AND SIZE GUIDE FOR CARDBOARD BOX STRENGTH.

Maximum weight of Box and Contents in lbs. (kg)	Maximum box dimensions length + width + depth in inches (cm)	Maximum Bursting Test (Mullen) lbs/ in ² (Kg/cm ²)	Maximum Edge Crush Test (ECT) lbs./ in ² (Kg/cm ²)
Single wall			
20 (9)	40 (102)	125 (8.79)	23 (1.61)
35-(15.9) Greater than shall be labeled Heavy Load	50 (127)	150 (10.55)	26 (1.83)
50 (22.7)UPS limit	60(153)	175 (12.30)	29 (2.04)
65 (29.5)	75 (190)	200 (14.06)	32 (2.25)
80 (36.3)	85 (216)	250 (17.58)	40 (2.81)
95 (43)	95 (241)	275 (19.33)	44 (3.09)
100 (45)	105 (267)	350 (24.61)	55 (3.87)
Doublewall			
80 (36.3)	85 (216)	200 (12.30)	42 (2.95)
100 (45)	95(241)	275 (19.33)	48 (3.37)
120 (54)	105 (267)	350 (24.61)	51 (3.59)
140 (66)	110 (280)	400 (28.12)	61 (4.29)
180 (82)	120 (305)	600 (42.18)	82 (5.77)

3.9 BAG SELECTION.

Polyethylene (poly) bags may be used for interior packaging to individually package parts which are to be placed inside a corrugated carton. Poly bags are the preferred method to small parts with very basic structures that are durable (e.g. nuts, bolts, washers, small brackets, etc.). Corrugated cartons must be used for small parts when a higher degree of protection for more complex structures is required.

Bags must be strong enough to avoid splitting open during shipment and provide the proper protection for the parts shipped (e.g. UV, ESD, or VCI).

ESD sensitive items SHALL be packaged so as to protect those items during shipment and storage. Supplier SHALL individually package each item. Additional information on ESD can be found in the Electrostatic Discharge Association website (<http://www.esda.org>). This website includes information on static control procedures and materials, how to eliminate and reduce generation, dissipate and neutralize charges, and protect sensitive products from ESD.

3.10 SEALING AND LABELING A BAG SHIPPED IN A CORRUGATED BOX.

Heat sealing and tape are acceptable sealing methods for plastic bags. **Staples and Ziplock bags are prohibited.**


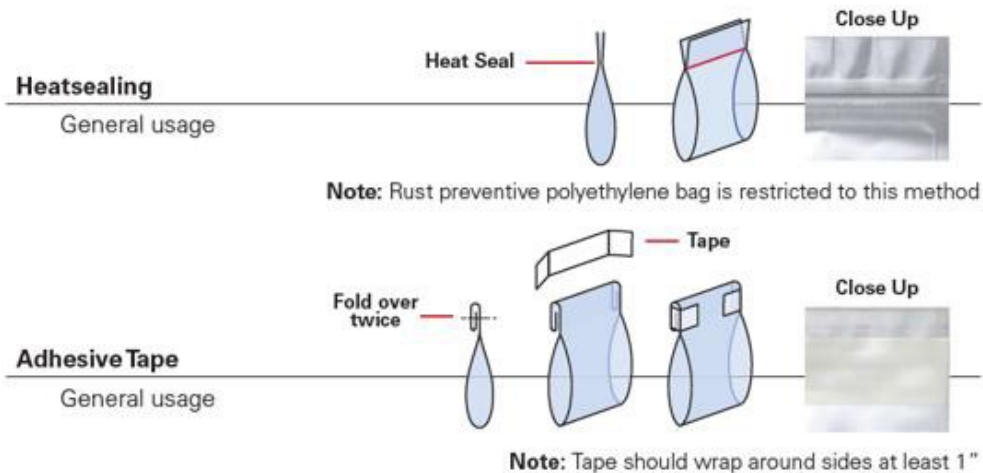
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FIGURE 5 PROPER SEALING METHODS.

EXAMPLES: TWO METHODS OF PROPERLY SEALING CLEAR POLYETHYLENE BAG



Multiple part numbers shipped in single carton and sealed in bags SHALL be barcode labeled with the part number, quantity, and purchase order number. If a carton only contains one part number then the internal bag should be barcode labeled with the part number, quantity, and purchase order number.

3.11 EXPENDABLE PACKAGING MATERIALS.

When expendable packaging is used these are the materials that are preferred and non-preferred. This list is not all-inclusive and is not limited to only those materials listed.

Preferred packaging materials:


- Air cushioning bags.
- Biodegradable bubble wrap.
- Cellulosic paper.
- Expandable plastic sleeves.
- Molded fiberboard/paperboard.
- Polyethylene.
- VCI Materials (e.g. bags and/or chips included in the packages).
- ESD (Electro Static Discharge) sensitive items must be packaged in accordance with the latest revision of ANSI/ESD S20.20.
- UV protective bags for items sensitive to UV degradation.
- Plastic pellets.

Preferred exterior packaging materials for shipping containers:

- Banding: Plastic or non-metallic (polyester) is preferred when it meets project needs and is economically sound. **Metal banding has caused reoccurring injury and is not the preferred method, but may be used on certain overweight or large products only with Enerpac Safety Director approval.**
- Corrugated cartons.
- Pallet (in standard sizes) not to exceed 48" x 40" (1.2m x 1.02m).
- Wooden crates/boxes not to exceed 48"Length x 40"Width x 42" Height (1.2m Length x 1.02m Width x 1.07m Height).

Packaging materials that are NOT allowed:

- Loose-fill (packing peanuts).
- Rice paper (yellow corrugated).
- Metal Banding.
- Staples.
- Newspaper.

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- Ziplock Bags.

3.12 STANDARD PACK QUANTITIES.

Release and usage quantities will be reviewed by the supplier and Enerpac. The packaging should be developed to contain increments of the release quantities or increments of the daily usage or pack quantities requested by Enerpac. If a non-standard pack quantity purchase order is received either insert appropriate dunnage to take up the open space or contact your Enerpac Buyer to adjust the quantity. The Level 2 PPAP with PSW and Packaging Form 232P is to be submitted for standard pack quantities only.

3.13 PART PROTECTION AND INTERIOR DUNNAGE.

Parts being packaged with painted, machined, or cosmetic surfaces will require special consideration when packaging is developed. Special attention SHALL be given to the protection of critical machined surfaces, seals, flanges, bearings, gears, specially formed thin sections, and contoured surfaces. These materials can easily be damaged in transit by nicks, scratches and/or dents which impair their function.

Dunnage may be required to prevent movement within a container. Interior corrugate, polyethylene and/or polystyrene inserts may be used to support the part and minimize part movement. Corrugated partitions or dividers may be required to provide cells for fragile items, but should not come in direct contact with critical and cosmetic surfaces to prevent rub marks. Plastic sheeting is preferred between cardboard and cosmetic surfaces to prevent rub marks in the finish.

3.14 PART FINAL CONDITION, PRESERVATION & CLEANLINESS.

Requirements contained in this section apply to all parts unless otherwise specified on the specific part print.

- Parts and their packaging are to be free of rust, dirt, chips, burrs, and sharp edges.
- Parts should be presented in a manner ready for production consumption.
- The supplier SHALL apply a rust inhibitor to all ferrous metal parts that are not painted or plated providing surface protection. Black oxide treated parts require rust inhibitor.
- Rust inhibitor SHALL provide a minimum exposure of 6 months in the original packaging, measured 6 months from date of receipt on Enerpac's dock. Affiliate shipments will take into account transit time but will still be measured based on receipt of product.
 - Asia based suppliers to US/Europe/UK – 6 week transit time reduction.
 - European Distribution Center (EDC) – 4 week transit time reduction
 - Rust inhibitor should meet all non-hazardous material requirements and have the ability to be removed through a standard wash process commonly used in automated paint application. The supplier should contact the Enerpac SQE team for approval of rust inhibitor.

3.15 SUPPLIER REQUIREMENTS FOR PERMANENTLY MARKING COMPONENTS.

When EES 115-26 (Supplier Requirements for Permanently Marking Components) is referenced on the design drawing contact the Enerpac Procurement Manager for assignment of a supplier identification code per ES111 (Enerpac Supplier Code Suffixes).

3.16 SAFETY 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. All items that are packaged with the intention to be manually lifted shall not exceed 35 pounds (15.9kg). This limit will also apply for any product being shipped on the same pallet as part of a mixed load.

3.17 HAZARDOUS MATERIALS.

All suppliers and/or shippers are responsible to comply with all applicable international, national, federal, provincial, state or local laws and regulations for packaging hazardous materials (packing, marking, labeling, describing and certifying).

U.S. Federal regulations including Hazardous Materials Regulations (Title 49 CFR Parts 100-185) can be obtained at:

https://www.ecfr.gov/cgi-bin/text-idx?SID=fb19227fb3e990987756439960a8640c&mc=true&tpl=/ecfrbrowse/Title49/49tab_02.tpl and <https://www.calrecycle.ca.gov/plastics/rppc>

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3.18 HEAVY PARTS PACKAGING GUIDELINES.

All parts/containers in excess of 35 lbs. are considered heavy from a manual handling safety perspective. Special markings and design requirements apply to heavy packages depending on weight range.

All containers and packaging must be designed with consideration given to ease of handling and part removal. Appropriate consideration must be given to height restriction, weight restrictions, carton disassembly and any other issues which may affect worker safety. The supplier is responsible, in conjunction with Enerpac to ensure all parts are packaged in such a way to ensure safety is maintained throughout the supply chain.

A heavy parts label is required for packages in excess of 35 lbs. (15.9 kg) that do not have a pallet built into the overall package. The supplier should label the actual container weight directly on any package that is greater than 35 lbs. (15.9 kg). A reasonable facsimile of the 3" (7.6cm) x 5" (12.7cm) label shown below is acceptable.

FIGURE 6 HEAVY LOAD LABEL.



The supplier SHALL package the parts to ensure the primary carton/container will carry the part(s) from the shipping origin to the receiving facility without damage or deterioration.

The primary container SHALL be chosen to support the mode of transportation, government and carrier regulations, part protection, transfer points and distance of travel. The table below shows general requirements for the box or crate.

Weight Range	Box/Crate required
Over 100 lbs. (68 kg)	Wooden crate or one part number per pallet (Avoid mixed pallets)
Over 80 lbs. (36.3 kg)	Corrugated Fold Overlap (FOL) style top and bottom
Over 35 lbs. (15.9 kg)	Corrugated fold Overlap (FOL style at bottom, Regular Slotted Container (RSC) is allowed at the top. Shall exhibit Heavy Load label.

Part weight, size, part configuration, and presentation to the operator (e.g. Enerpac receiving personnel or customer for direct shipments) must be considered to select the correct container for the part(s). For example, wooden crates or pallets for large Cylinders or Plungers (typically below 100 lbs.) would be appropriate.

Standard sizes should be used for each shipment to avoid having different sizes for same parts.

4 LABELING SPECIFICATIONS.

The label design is based on the Automotive Industry Action Group (AIAG) standard for shipping/parts identification (AIAG-B-10).

Figure 8 contains an example of the preferred barcode label and shows where to find the data needed to properly fill it out. The preferred label consists of the following seven fields: part number, revision, quantity, supplier number, supplier name, purchase order number, country of origin. As a minimum the label SHALL have the Part Number Purchase Order Number, and Quantity.

4.1 LABEL SIZE.

The minimum label size should be 4.0" (101.60 mm) high by 5.0" (127.00 mm) wide. The width may be as large as 6.5" (165.1 mm) to accommodate data requirements.

4.2 LABEL COLOR.

The label should be white in color with black printing.

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4.3 LABEL PROTECTION.

Label protection against moisture, weather, abrasion, etc., SHALL be required where needed. Examples include laminates, sprays, window envelopes, and clear plastic holders. Label protection should not impair the ability to read or access labels. Adhesive types can be pressure sensitive or dry gummed as long as adherence to the package is assured and application is wrinkle-free. If the label cannot be attached to the package/container because of container size or design, special arrangements will be required.

4.4 QUIET ZONES.

In order to function properly, bar code-reading equipment must have areas called quiet zones. Bar code symbols SHALL have leading and trailing quiet zones with a minimum width of 0.25" (6.35 mm) each. As a minimum, the part number, quantity, and purchase order number SHALL be included on each label in the designated data areas and SHALL be displayed in both human readable characters and bar code symbols. The Country of Origin is a text only requirement.

Building block height SHALL be 1.0 inch +/-0.2 inch as determined by the printing capability of the labeler. This label is based on AIAG-B-10 standard.

FIGURE 7 QUIET ZONES.



Part Number.

Block Title: PART NUMBER (P).
Data: Enerpac assigned part number.
Text Size: 2 LPB-Min. 0.5" high.

Revision.

Block Title: REVISION (R)
Data: Enerpac assigned Part Revision.
Max Length: 2 characters.
Text Size: 2 LPB -Min 0.5" high.
Barcode Size: Min. 0.5" (12.7mm).
SHALL be directly below human readable characters.

Quantity.

Block Title: QUANTITY (Q).
Data: The amount of parts being shipped.
Max Length: 6 characters.
Text Size: 2 LPB-Min. 0.5" high
Unit of Measure SHALL always be included
Unit of Measure placed direct to the right of quantity.
Min. 0.2" high- Unit of Measure not to be barcoded.

Purchase Order Number.

Block Title: P.O. (K).
Data: Enerpac assigned number.
Max Length: 12 characters.
Text Size: 3 LPB-Min. 0.2" high.

Supplier Name.

Data: Supplier name, city, state, and zip code
Text Size: 0.1" high
SHALL be directly below the serial number bar code

Barcodes.

All barcodes SHALL be min. 0.5" high.
Text Size: 3 LPB-Min. 0.2" high.
Barcode symbol SHALL be directly below human readable characters in each block.

MFG Date*.


Block Title: MFG DATE (MD) Data:
Month/Date/Year.
Max Length: 10 characters.
Text Size: 3 LPB-Min. 0.2" high.

Ship Date.

Block Title: SHIP DATE (SD) Data:
Month/Date/Year.
Max Length: 10 characters.
Text Size: 3 LPB-Min. 0.2" high.

Supplier Number.

Block Title: SUPPLIER (V).
Data: Designated supplier number assigned by Enerpac.
Max Length: 9 characters.
Text Size: 3 LPB-Min. 0.2" high.

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*MFG date should be replaced with an expiration date if contents are time sensitive.

For additional required labeling specifications during Production Part Approval Process (PPAP) refer to the Enerpac PPAP Manual.

FIGURE 8: LABEL SPECIFICATIONS.

PART NUMBER (P) 703HX 		REVISION (R) RE 	
QUANTITY (Q) 1 EA 		P.O. (K) 210900123456 	
SUPPLIER (V) 65600 		LOCATION (L) SP-SM-X-6 	
SERIAL (S) 881348 		MFG DATE (M) 03-03-2012 SHIP DATE (SO) 03-23-2012 COUNTRY OF ORIGIN (CO) United States	
SUPPLIER NAME (SN) XYZ SUPPLY City / ST / ZIP			

4.5 BAR CODE SPECIFICATIONS.

It is the responsibility of the supplier to provide barcoded labels that meet these requirements. Bar codes SHALL be type 3-of-9 (Code 39). These requirements excerpted from AIAG Standard B-10 "Trading Partner Labels. Implementation Guideline".

- Code Configuration: The following characters which are part of the Code 39 symbology SHALL not be used: \$ / + %.
- Check Digits: Check digits SHALL not be used.
- Code Density and Dimensions: The bar code height should be at least .5" (12.7 mm). The average width of the narrow elements SHALL be between .013 (0.33 mm) and .017 (0.43 mm) inch. The ratio of the average width of the wide elements to the average width of the narrow elements SHALL be between 2.8:1 and 3.2:1.
- The leading and trailing quiet zone SHALL be at least 0.25" (6.35 mm).
- Reflectivity and Contrast: The printed bar code symbols SHALL meet the requirements as set forth in AIAG-B-10.

4.6 TAGS.

Tags SHALL follow the same guidelines as set forth for labels with any additional material necessary for tag attachment added outside of the label. The tags should be able to withstand the elements to ensure readability upon arrival at the Enerpac facility.

4.7 FLOW THROUGH AFTERMARKET PARTS.

Certain flow through (aftermarket) service parts and assemblies may require barcode labels for individual items within a carton or container. Items designated as service items that are placed in poly bags or boxes must be labeled individually with a minimum of the part number and corresponding barcode (Reference Figure 9). Whenever multiple pieces make up one part (e.g. seal with back up rings) the supplier SHALL package the kit/assembly into one bag/carton and affix the appropriate label with barcode. Bag sizes may require a nonstandard label as defined in this guideline. Zip lock bags are not permitted.


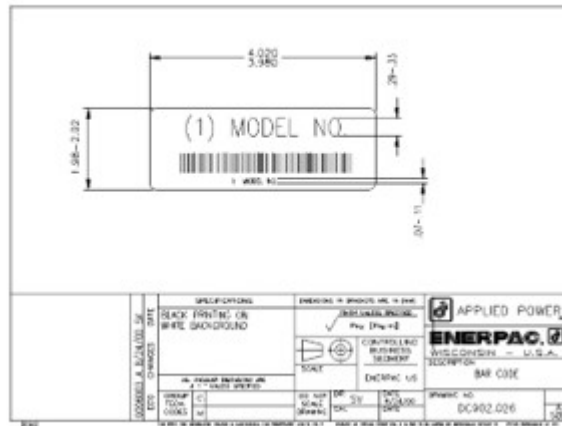
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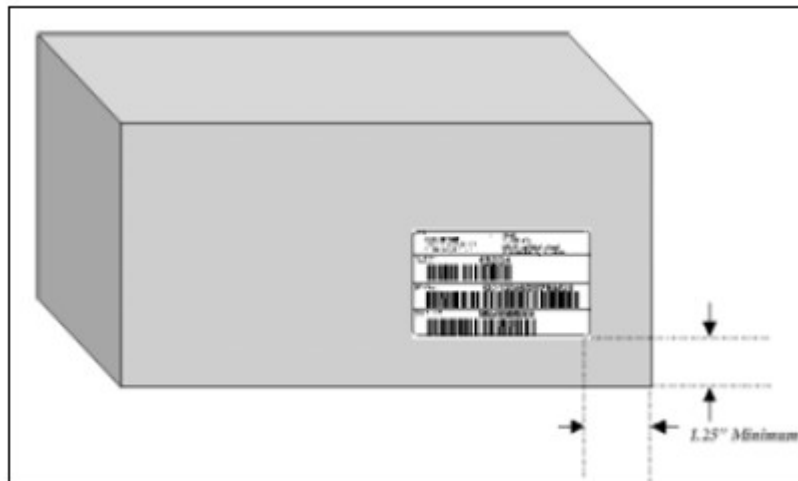
FIGURE 9 SERVICE PART OR KIT LABEL.



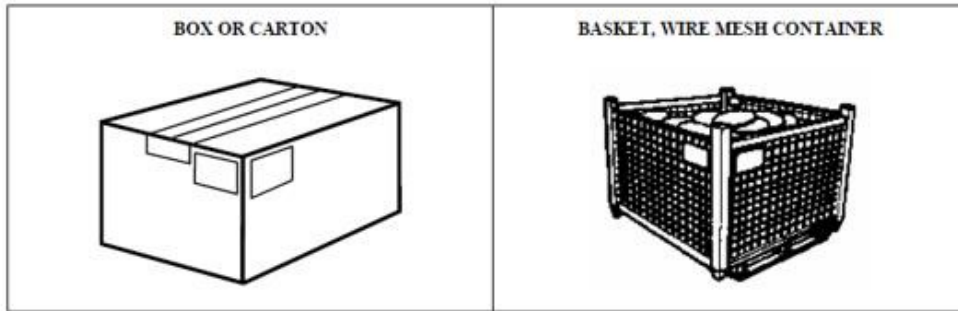
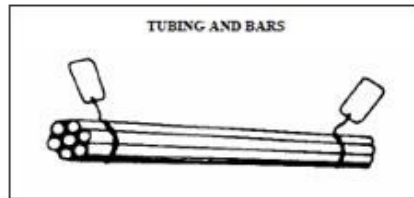
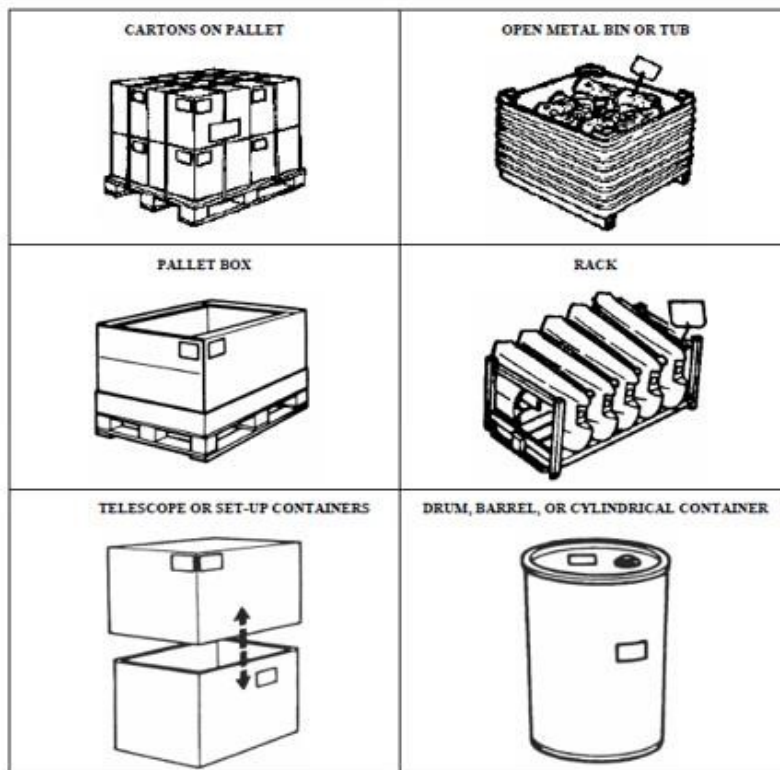
4.8 LABEL AND TAG LOCATIONS.

To make scanning of the bar codes easier the label should be near a side corner and placed no closer than 1.25” (31.75 mm) from any container edge (Reference Figure 10). Label placement toward the center of the sides of rectangular corrugated containers should be avoided. Sealing tape, shrink-wrap or bands SHALL not be placed over the label. Special arrangements are required where package/container design or size prevents conforming to the above requirements. Enerpac product labels on flow through items should be wrapped around the corners as shown below (Ref. figure 14 below).

FIGURE 10 LABEL ORIENTATION.



Refer to Figures 11 A-C for illustrations of most common packaging methods and the corresponding label placement. The bottom edge of the label should be parallel to the base of the package.

FIGURE 11A SUGGESTED LABEL PLACEMENT.**FIGURE 11B SUGGESTED LABEL PLACEMENT.****FIGURE 11C SUGGESTED LABEL PLACEMENT.**


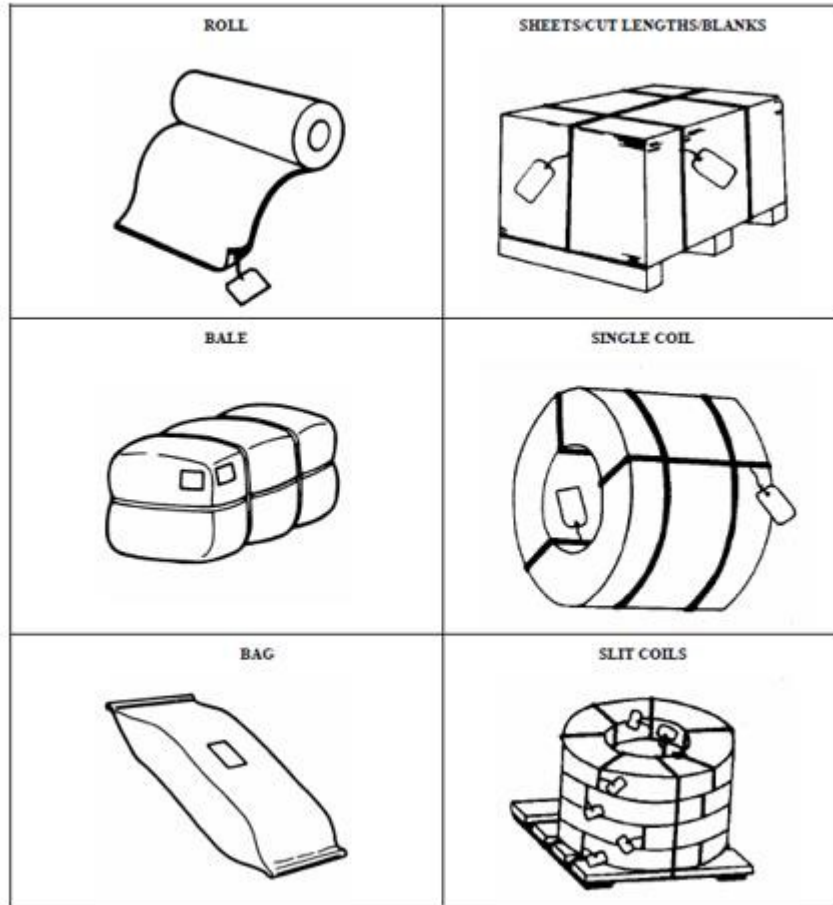
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FIGURE 11D. SUGGESTED LABEL PLACEMENT.



4.9 MASTER LABEL - MULTIPLE, COMMON ITEM PACKS.


A Master Label (Reference Figure 12) should be used to identify the total contents of a multiple single pack/box load of the same parts number. The label should be located such that when the pack is separated the label is discarded. Items within a master load SHALL be separately packaged and clearly marked with their own barcode labels. A Unique Container Identifier can be added to the master label below.

FIGURE 12: MASTER LABEL.



4.10 MIXED LOAD LABEL - MIXED ITEM LOADS.

Enerpac understands the need for mixed item loads but discourages this as a shipping method if common item packs are possible. Loads of mixed items SHALL be identified by a Mixed Load Label (Reference Figure 13).

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The label should be located such that when the pack is broken apart the label can be discarded. Items within a mixed load SHALL be, as a minimum, separately packaged and clearly marked, with their own labels identifying the Purchase order, Part number, and quantity.

Mixed loads SHALL be sent with an itemized packing list so all parts on the pallet or in the carton, can be quickly identified and received. Mixed Loads SHALL have a label listing the part numbers and quantities for the contents within the mixed load. Either the packing list or the container label should be barcoded for the Purchase Order, part number and quantity.

FIGURE 13: MIXED LOAD LABEL.



5 Country of Origin Marking Instructions.

Supplier Instructions for Country of Origin Marking for Enerpac.

5.1 INTRODUCTION.

Enerpac either purchases or receives goods for one of five reasons; production, aftermarket, sample validation, part validation, quality validation, test or prototype. These scenarios present different requirements for country of origin labeling that are explained below. If you have any questions regarding these instructions, contact your respective Buyer or the person requesting the goods prior to making the shipment.

5.2 COUNTRY OF ORIGIN MARKING.

All articles produced, procured, or repaired by or for Enerpac, including "no charge" items provided or returned to Enerpac, must be marked with the appropriate country of origin. This includes finished products, replacement units free, purchased or under warranty, sub-assemblies, parts, media recorded with software programs, manuals, accessories, materials and supply items. Each article must have the full English name of its country of origin marked on the article itself and on the packaging in which it is received.

For all articles, the country or countries of origin marking requirements are as follows:

- Conspicuous (can be easily seen with normal handling of the article or container).
- Legible (can be easily read by a person with normal eyesight).
- Indelible (resists fading).
- Permanent (survives normal distribution and handling).
- Indicating to the ultimate purchaser the full English name of the article's country of origin.
- On the immediate container (the innermost level of packaging in which the articles will be received – this is further defined below).

The country of origin must be included on the invoice and packing list (delivery notice) and must be consistent with the country of origin marked on the immediate container and the article.

5.3 WORDING OF THE COUNTRY OF ORIGIN MARKING.


The following wording should be used for country of origin marking. Any modification to this wording must be approved by Enerpac.

Articles Manufactured in the US:

Articles which are produced from contents, components, and raw materials of mixed national origin and where the US is determined to be the country of origin must be marked: "Made in US

Articles Manufactured outside the US:

Articles which are made or finally assembled outside of the US and are determined to have undergone a substantial transformation must be marked: Made in xxx (where xxx is the full English name of the country of origin)

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No abbreviations, with the exception of UK for United Kingdom and US or USA for the United States of America, are acceptable. The 2 character International Organization for Standardization (ISO) codes are not acceptable for marking articles or immediate containers.

5.4 CONTAINER MARKING.

An immediate container is defined as the innermost level of packaging in which the articles will arrive at the ultimate purchaser. The immediate container must be marked with the full English name of the country of origin of the articles contained within it, using the same wording as the marking on the articles (see above for acceptable wording). Further definition below:

Aftermarket – Container the customer will receive the goods in.

Production, Sample Validation, Test or Prototype – Container Enerpac will receive the goods in.

Some immediate containers contain merchandise of different origins. In such an instance, each article within the immediate container must be marked with its country of origin and the immediate container must include a marking statement which summarizes the countries of origin of the articles in the immediate container. The country of origin summary statement begins: "Contains merchandise from the following countries: ..." Followed by a list of the full English names of the countries of origin of the articles in the immediate container.

Containers designed for or capable of reuse must be individually marked to indicate the country of origin of the container. Use the following marking on containers suitable for reuse: "Container made in xxx", where "xxx" is the full English name of the country of origin of the reusable container. If the reusable container is not empty, and the reusable container is the immediate container, the reusable container must also be marked "Contents made in xxx" (where xxx is the full English name of the country of origin of the contents).

In all instances, the country of origin marking on an immediate container must be in close proximity to any label which designates a US address or the name of a foreign country which is not the country of origin.

Additionally, immediate containers that depict the manufacturer's or supplier's logo should never be used. Instead, immediate packaging should either be void of any logo or else contain the logo of the Enerpac entity purchasing the goods.

Examples:

FIGURE 14 LABEL FOR AFTERMARKET PARTS.




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FIGURE 15 LABEL FOR AFTERMARKET PARTS ON THE PART ITSELF.



6 PROTOTYPE PACKAGING REQUIREMENTS.

6.1 Shipping Methods:

Prototype Suppliers are to ship parts using the approved shipping method specified by the receiving Enerpac location. All suppliers shipping material to a Enerpac Tool Group.

The Supplier shall indicate the following on the shipper:

- Part number, Engineering Level, Program, Supplier Identification, and serial numbers.
- Prototype Purchase Order number.
- Shipment weight.
- Quantity of parts.
- Fixture number of any fixtures accompanying shipment.
- Date shipped.

Shippers which do not contain the proper information may result in rejection at the shipping/receiving dock. A DMR (Defect Material Report) will be issued as appropriate.

6.2 Shipping Container Labeling:


All containers must be identified with the part number, Engineering Revision Level, Supplier Identification, addressee, and serial numbers. A Prototype Parts Tag must also be affixed to the container.

6.3 Packaging:

Suppliers are responsible to package parts accordingly to prevent any damage so as to maintain part integrity.

7 Training

It is highly recommended that Supplier Quality Engineer or a member of the procurement team explains the content of this procedure to necessary departments in order to review the current arrangements of the facility regarding control of records.

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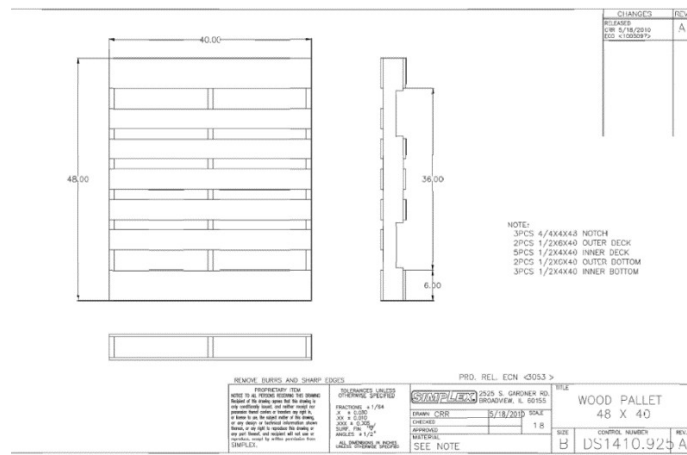
8 Cross reference documentation

- Enerpac PPAP Manual.
- www.nwpca.com.
- International Standards for Phytosanitary Measures (ISPM 15).
- <http://www.esda.org>.
- ANSI/ESD S20.20.
- Enerpac EES 115-26 ([Supplier Requirements for Permanently Marking Components](#))
- Enerpac ES111 ([Supplier Code Suffixes](#)).
- Hazardous Materials Regulations (Title 49 CFR Parts 100-185) .
- <https://www.fmcsa.dot.gov/regulations/hazardous-materials>
- Automotive Industry Action Group (AIAG) standard for shipping/parts identification (AIAG-B-10).


9 Revision History

Rev No	Reason for change
1.0	Created and released
2.0	Brand Image Changed

10 ATTACHMENT 1.



11 ATTACHMENT 2.


ENERPAC  Packaging Form						
Date	Packaging Contact	Part Number	Supplier Responsibilities Completed?			
Supplier Name	Phone Number	Print Revision Level	Packaging Design			
Supplier Code	Fax Number	Part Description	Packaging that prevents shipping and material handling defects			
Supplier Production Facility	E-Mail Address	HAZMAT?	Electronic storage of submitted Packaging Form			
		Yes: No:				

DIGITAL IMAGES	Part	In Packaging Position	Container	With Label Shown

PACKAGE DATA	Component	L (mm)	W (mm)	H (mm)	Component	Wt (kg)	Quantities
	Part Size					Part	
Container Only					Damage (Tare)		Containers per Layer on Pallet
Pallet Only					Container (Tare)		Layers per Pallet
Unit Load As Shipped					Pallet (Tare)		Containers per Pallet
In to MM	Lbs to Kg				Container Gross (inc Parts)		Stacking Rule
					Unit Load Gross (inc Parts)		

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ENERPAC  Packaging Form						
Date	Packaging Contact	Part Number	Supplier Responsibilities Completed?			
Supplier Name	Phone Number	Print Revision Level	Packaging Design			
Supplier Code	Fax Number	Part Description	Packaging that prevents shipping and material handling defects			
Supplier Production Facility	E-Mail Address	HAZMAT?	Electronic storage of submitted Packaging Form			
		Yes: No:				

DIGITAL IMAGES	Damage	In Container Position	Unit Load	As Shipped With Label Shown

PACKAGING DETAILS	Description	Manufacturer	Material	Lead Time	RETEXP	COMMENTS
	Damage					
Container Color						
Container Type						
Cover/Top Cap						
Pallet						
Stretch/Strap Film						
Banding						
Other						

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