HAT

HUMAN ACTIVE TECHNOLOGY™

Supplier Requirements Manual (SRM, QSP-002)

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Section 1.0 General Requirements

1.1 Preface

This manual contains Human Active Technology (Buyer) expectations and requirements of Suppliers that are applicable when invoked by a Buyer Purchase Order (PO), as that term is defined in the PO Terms and Conditions of Contract. Requirements include mandatory use of this manual for fulfilment of the Contract and related Quality Control and Assurance activities. Contents of Sections 1–3 shall be reviewed and complied with in conjunction with the Terms and Conditions of the PO. Along with this manual, Suppliers are required to comply with the **Supplier Code of Conduct Policy**. The current revision of both documents is available at **https://www.team-hat.com/resources/#supplier-info**

1.2 Applicability

The PO is the official binding contract in the order of precedence as described in its Terms & Conditions. The PO will identify the item(s) or service(s) being purchased from the Supplier by a unique item number or description. Examples of this are a Buyer item number, a Supplier item number, or an industry standard description. The identification given to an item on the PO will invoke the specifications and characteristics for the items that are applicable to determine their conformance and acceptability. Examples of these specifications are drawings, 3D models, standards, or functional requirements. The owner of such specifications controls them. Handwritten, lined-out or initialed changes to PO's or to the specifications they invoke will have no legitimate effect.

1.3 Quality and On-Time Delivery Requirements

The Supplier is required to have and abide by a formal Quality Management System. The core quality requirement is for all items and services delivered by the Supplier to comply with the specifications and to be delivered to the Buyer on time. Receipt of PO's must be acknowledged by the Supplier within one business day and confirmed within two business days. Supplier must provide proactive communication to the Buyer throughout any situation or development that can impact on-time delivery. If Supplier processes are not capable of these requirements, then it is the Supplier's responsibility to pursue measurable and continuous quality, delivery, and communication improvements.

The Buyer defines the performance expectations that can be measured in conventional ways like parts per million (PPM) for quality and percent shipments delivered on-time.

Buyer performance expectations for the Supplier are:

Quality - 1500 PPM or lower average based upon a 3-month moving average

Delivery - 98% On-Time Delivery based upon a 3-month moving average

1.4 Quality Non-Conforming Material Report (NCMR)

An NCMR is provided by the Buyer to a Supplier when there are quality conformance issues. It requires immediate acknowledgement by the Supplier so that a fair agreement can be obtained expeditiously with respect to material disposition and other associated actions necessary to avoid or minimize impact upon the Buyer and its customers. They may also be issued to help facilitate corrective and preventative actions that are mutually approved for implementation. The Supplier shall not wait for samples of the non-conforming material to be returned from the Buyer to begin an investigation.

1.5 Non-Conforming (NC) Material Procedures (Actions, Containment and Remedies)

NC material shall be identified and controlled by the Supplier to prevent unauthorized use or delivery to Buyer or to other designated destinations. Supplier will notify Buyer immediately upon recognition that a NC material issue may impact on-time shipment or delivery. Supplier shall also provide prompt, written notification to the Buyer if NC product or process escapes are identified after shipment occurs. Notifications shall include item numbers, revision, traceability (lot, serial, and manufacturer numbers), ship dates, quantities, and a description of the NC. This applies to any items that depart from specifications or PO requirements.

When a NC is detected, the Supplier must take immediate action to determine if the condition exists on any other work-in-process, in stores within the Supplier's facility or supply chain, or in prior shipments including those that are in-transit. Containment action must be taken and documented prior to the any further shipment of the product(s) involved.

In the event a Supplier provides NC items to the Buyer (or the Buyer's customer), Supplier will be responsible for remedies. To that extent, the Supplier may be subject to the following actions, of which can be executed in the manner which best services the needs of the Buyer's customers:

- Return of all items, or any portion thereof, to the Supplier at their expense for full monetary refund, account credit, or replacement with conforming goods at no cost to the Buyer. Accepting account credit or replacement with conforming goods (in lieu of monetary refund), is at the discretion of the Buyer.
- Inspection, sorting, containment, scrapping or rework by Supplier. Supplier is also responsible for the costs of these actions if executed or sub-contracted by the Buyer.
- Financial responsibility for all related shipping costs attributable to or caused by the NC.
- Costs imposed by Buyer's customers when NC product has reached their location. This includes sorting, containment, transportation costs for returned material, and punitive or chargeback costs.
- Remedies listed in this document are not intended to be exclusive and, in addition to those that are set forth, Buyer shall have the right to seek any other remedies available, either in law or by contract.
- Upon request and on a case-by-case basis, the Buyer will provide Supplier with cost estimates of the NC remedies described in this manual to facilitate decisions relating to material disposition.

1.6 Supplier Corrective Action Request (SCAR)

Any quality non-conformance or deviation request may elicit a SCAR to be issued from the Buyer to the Supplier. The required format of the SCAR will be provided or approved by the Buyer. Supplier is required to provide a written reply to the Buyer regarding containment, temporary corrective action and root cause within 15 calendar days. If corrective/preventative action(s) and verification of action(s) taken cannot be accomplished within this timeframe, Supplier will communicate a timeline to the Buyer to accomplish these measures and update progress on a weekly or more frequent basis until the SCAR is closed.

1.7 Audit and Inspection Rights Reserved/Right of Entry

The Buyer may perform or appoint an agent to perform on-site assessments, audits and inspections at any facility used by or on behalf of the Supplier to make, assemble, or repair items used to fulfil a PO. Supplier materials, operations, process control and inspection records, and other related procedures are subject to review as part of this activity. When on-site verification of PO conformance is required, Supplier shall provide access to the equipment, facilities, inspection tools and personnel necessary for the Buyer or Buyer's agent to verify compliance. Buyer will contact Supplier in advance to schedule this activity.

1.8 Changes in Quality System, Facilities, Management or Ownership

Suppliers shall immediately notify the Buyer of changes to their quality system, management, or ownership. Changes requiring notification include but are not limited to:

- Change in location of facilities or manufacturing equipment. Notification must be prior to relocation and with adequate time (minimum 90 days) for tooling, hardware, system, and process re-qualification.
- Change in company name, ownership, senior management, quality leadership, or customer service contacts.
- Changes to quality system, controlled processes or certification/compliance status.
- Change in holder of part or product design authority.

1.9 Revision Level Management

The Supplier shall ensure that the current revisions of all drawings, specifications, and instructions required by the PO, as well as Buyer-authorized changes, are used for manufacturing, inspecting, and testing.
Current revisions of Buyer detail drawings and specifications will be sent with the Purchase Order and may also be obtained by contacting the Buyer to confirm the latest revisions.

1.10 Notification of Design and Manufacturing Changes

As related to their products being purchased by the Buyer, Suppliers with design authority are required to notify Buyer promptly, in writing, of any changes to fit, form, function, compliance and safety attributes of product and obtain Buyer approval prior to application towards PO's. Failure to comply with this requirement may result in Buyer not accepting the product.

1.11 Sources of Supply

Unless referenced by Buyer specifications as a “Commercial Part Drawing”, the source of supply that is specified on the Buyer drawing or PO is to be used exclusively by the Supplier as a source for PO fulfillment. Use of any alternate sources must be approved by the Buyer via an approved formal Deviation Request or added by the Buyer to the specifications or PO before use.

1.12 Quality Records

1.12.1 Access to Records

Buyer (or a Buyer appointed agent) reserves the right to access Quality Management System records of the Supplier and any sub-contractors involved in the manufacture of Buyer components and products.

1.12.2 Records Storage

Critical data shall be secure with back-up systems and audited to verify the integrity of the data.

1.12.3 Record Retention

Quality records shall be retained by the Buyer for a minimum of 7 years from the date of manufacture.

1.13 Prohibited Practices

These practices are prohibited:

1. Unauthorized Repair - Repairs (by welding, brazing, soldering, or the use of adhesives) of parts damaged or found faulty in the fabrication process, repairing holes in castings, forgings, or other materials by plugging or bushing without authorization from Buyer.

2. Unauthorized Processing - Addition, revision, or deletion of thermal, chemical, electro-chemical or mechanical processes in manufacturing when subject to specification control by Buyer.

3. Improper Material Submittal – In accordance with section 2.1 of this manual, submission or resubmission of material having known defects/problems to Buyer without notification and written deviation approval from Buyer.

4. Unauthorized Material and Information Transfer – Supplier shall not buy, sell, trade, or transfer Buyer owned or supplied drawings, models, data, materials, tools or equipment for purposes other than the performance of a Purchase Order from or other written agreement with the Buyer.

1.14 Obsolescence

Supplier shall notify Buyer regarding part or material obsolescence as soon as information becomes available, with an expectation to provide notification at least six months prior to non-availability and last-buy opportunity.

1.15 Contingencies

The Supplier shall have contingency plans in place, or a written plan to develop them, that would be implemented in the event of a deviation from normal business processes. Contingency plans shall be documented and include, at a minimum, key internal and external contacts, containment actions and recovery steps to return to normal levels of operation. Contingency planning shall include, but is not limited to, the following circumstances: IT disruption, equipment or tooling failures, transportation disruptions, catastrophic events, personnel cross-training programs and succession plans, sub-supplier quality or delivery issues, etc.

Section 2.0 Specifications and Compliance Information

2.1 Requirements and Deviation Requests

The applicable revision level status of specifications shall be the revision level identified with each item on the PO. All item substitutions or changes to items purchased must be requested by the Supplier using a Deviation Request Form that is provided and approved by the Buyer.

It is Buyer policy not to accept product unless it meets the requirements of the applicable specifications. Deviation requests for exceptions must be submitted to the Buyer, in their prescribed format, for review by a cross-functional authority to obtain Buyer approval. This should occur as soon as possible, and always prior to shipment so that the Supplier can identify an approved deviation within the shipment. The Buyer may deny the request or approve the request (partially or in its entirety). Incremental costs associated with the acceptance and use of any product under these conditions are the sole responsibility of the Supplier.

Items on confirmed and open PO's that are processed by the Supplier prior to a specification revision will be assessed by the Supplier and the Buyer for mutually acceptable disposition.

2.2 Sustainability/Environmental Compliance Requirements

Consistent with sustainability requirements contained in the **Supplier Code of Conduct Policy**, Supplier must validate recycled content and compliance of all products supplied to the Buyer with environmental safeguards. Other prerequisites of this nature may be requested by the Buyer on a case-by-case basis.

2.2.1 EU RoHS 10 Substances Amendment Directive (EU) 2015/863:

Amendment to EU RoHS 3 Directive adding four specific phthalate substances that will become restricted above a specific threshold July 22, 2021 (Legal Reference: Directive 2011/65/EU and (EU) 2015/863). **2024 RoHS Compliance Guide: Regulations, 10 Substances, Exemptions (rohsguide.com)**

2.2.2 US California Proposition 65:

This regulation requires the labeling of products containing any of the chemicals known to cause cancer, birth defects or other reproductive harm (Legal Reference Safe Drinking Water and Toxic Enforcement Act of 1986). **The Proposition 65 List - OEHHA (ca.gov)**

2.2.3 EU REACH 1907/2006: In accordance with Article 59(10) of the REACH Regulation, the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation requires the identification of Substances of Very High Concern (SVHC) contained in articles above the threshold 0.1% when manufactured or marketed and sold in the EU (Legal Reference EC 1907/2006). **Candidate List of substances of very high concern for Authorisation - ECHA (europa.eu)**

2.2.4 Toxic Substances Control Act (TSCA): Requires manufacturers and sellers of composite wood products to meet federal requirements on emission of formaldehyde. Manufacturers who produce laminated wood products must validate compliance with TSCA – Title VI requirements. **Formaldehyde Emission Standards for Composite Wood Products | US EPA**

2.2.5 Conflict Minerals - Dodd-Frank Act 1502: The United States Conflict Minerals Rule requires companies to provide a report to the U.S. Securities and Exchange Commission (SEC) on the due diligence processes in place to determine conflict mineral sources. Companies must also disclose the chain of custody used to avoid obtaining 4 specific minerals from countries in the Democratic Republic of the Congo (DRC) known to finance or benefit armed groups (Legal Reference Dodd-Frank Act). **COMPS-9515.pdf (govinfo.gov)**

2.3 Declaration Letter/Certificate of Compliance (CoC) and Identification

Upon Buyer request, Supplier shall provide a written declaration of material compliance to the Buyer (or to a designated third party representing the Buyer) with respect to the applicable requirements listed in Section 2.2 of this document. This includes updates when there are revisions to these specifications by the respective governing authorities cited, or when a supplier changes their raw material or purchased component sources. At their own expense and discretion, the Supplier may opt to utilize an industry recognized source, such as a certified laboratory, to furnish a CoC for these requirements. Supplier may (or be required by Buyer to) apply labeling or marking on product and/or product packaging displaying internationally recognized symbology to denote compliance.

Section 3.0 Approval of Suppliers and Requirements for Products Purchased

3.1 Supplier Evaluation and Approval

3.1.1 Scope

Suppliers that supply product that the Buyer purchases and provides to customers will be subject to the Buyer's assessment of their capabilities. These products may include finished goods, sub-assemblies, components, raw materials, out-sourced manufacturing processes and packaging. The methods and tools used to gather information and execute these assessments requires full cooperation and disclosure from the Supplier to attain sourcing approval.

3.1.2 Supplier Assessments

To evaluate the capabilities and suitability of the Supplier to meet Buyer expectations, an assessment shall be conducted. The method of this assessment is at the discretion of the Buyer and will be in the form of one, or both, of the following compositions:

- Self-evaluation survey (using Buyer's format)
- On-site audit conducted by the Buyer or by a third party designated by the Buyer

3.1.3 Required Documentation

The following documents are required to be provided by the Supplier:

- Non-Disclosure Agreement (may only be waived by the Buyer if confidentiality is not relevant to the course of anticipated business)
- Quotations specific to requests submitted by the Buyer.
- Form W-9 Request for Taxpayer Identification Number and Certification (U.S.-based companies only).
- Supporting documentation and follow-up reports relative to Section 3.12 of this manual.

3.2 Approval of Purchased Product

3.2.1 Scope

Procedures in this section are required to evaluate and qualify product to be purchased from the Supplier.

3.2.2 Request for Quotation (RFQ)

Buyer will send an RFQ to the Supplier electronically. Supplier shall acknowledge receipt of the RFQ within one business day. Unless Supplier notifies the Buyer that additional time is required, the quotation will be sent to the Buyer on (or before) the RFQ due date. Information required on a Supplier quotation is:

- Item prices that can be offered at each quantity requested for quote.
- Minimum order quantity (if applicable or requested).
- Recommended multiple order quantity to conform with Supplier standard master carton packaging.
- Product country of origin.
- Shipping (Incoterms for imported product) and payment terms.
- Cost and lead-time for non-recurring charges, such as sampling costs, set-up fees and tooling.
- If Buyer provides product specifications with the RFQ, exceptions to them must be delineated.

3.2.3 Design for Manufacturability (DFM)

Before executing purchases, the Buyer may solicit feedback from the Supplier for consideration with regards to tooling, component or product design aspects that can optimize Supplier manufacturability. The intent of this is to reduce cost or improve quality, and the Supplier is expected to openly participate in this shared activity.

3.2.4 Samples and First Article (FA)

Sampling and FA submission from the Supplier are critical requirements prior to a product being qualified and approved by the Buyer for purchase. The table included in this section outlines the general requirements by product type. Note that raw material content validation via material certifications, Material Data Sheets (MDS), Safety Data Sheets (SDS) and Environmental Compliance (EC) are always a requirement for the Supplier to make accessible to the Buyer. Exceptions to these requirements may only be authorized by the Buyer.

Product Type	Samples	FAIR	Cpk	MDS/ SDS	EC
Buyer-designed components with custom tooling. Examples include custom fasteners, parts utilizing dies for extrusions, injection molds, forgings, casting molds/dies, dies for stampings and fixtures for machining or welding.	X	X	X	X	X
Buyer-designed components without custom tooling. Examples include parts machined without custom fixtures and fabricated sheet and tubing (plastic or metal).	X	X		X	X
Buyer-designed sub-assemblies and finished goods. *** Cpk typically applies to functional validations.	X	X	***	X	X
Supplier designed materials, components, assemblies or finished products. *** FAIR may apply to any value-added features specific to Buyer purchases.	X	***		X	X
Commercially available (industry specified) accessories, fasteners, packaging, and raw materials. Examples include line cords, plugs, power supplies, screws, bolts, nuts, washers, cardboard, bubble-wrap, in addition to metals, plastics, rubber, and neoprene (in sheet, rod or bar stock form).	X			X	X
Buyer-designed carton or insert for packaging.	X			X	X
Buyer-designed trays (plastic or molded pulp) and die-cut cartons or inserts for packaging.	X	X		X	X
Supplier-designed packaging.	X			X	X
Finishes. Examples include sanding or polishing (component specific), plating and painting (powder coating and wet spray).	X	X		X	X
Gas cylinders.	X	X	X	X	X
Custom hardware kits.	X	X		X	X
Custom electronic sub-assemblies, such as printed circuit board assemblies (PCBA's).	X			X	X

Tier 1 Suppliers of the Buyer bear responsibility for these requirements for any product that they outsource (to Supplier sub-tiers). Product features in Buyer designs (specifications owned by the Buyer) will be measured or tested for co-validation. The Supplier will submit a report of their validation to **faisubmittal@team-hat.com** via a First Article Inspection Report (FAIR) or Production Part Approval Process (PPAP) utilizing a Buyer-prescribed format. FA samples being validated must originate from the tooling and processes that the Supplier intends to use in mass production. When shipping FA samples to the Buyer, each sample must be marked by the Supplier in a manner to facilitate visual cross reference to the applicable set of validation data in the FAIR.

FA validation may also include specifications with Key Characteristics (KC), which are also selected and identified by the Buyer with hexagons on the item drawings. KC for a component, sub-assembly or system are those selected geometrical, material properties, functional and/or cosmetic features whose variation control is necessary in meeting customer requirements and enhancing customer satisfaction. For KC, the Supplier shall test (or measure) and record data from a 30-piece sample and submit this data with the FAIR. If a multiple cavity mold or die is incorporated, then a 30-piece sample validation must be submitted per cavity (or per shot/hit output). This KC data will be utilized for a Process capability index (Cpk) evaluation. Target Cpk value is 1.33. The minimum Cpk value for approval is 1.00, which can only be waived by the Buyer for consideration to the item application or tooling wear. The Supplier is expected to prepare an internal control plan for any KC which falls below the 1.33 Ck target and share this with the Buyer upon request.

Buyer approval of an FA does not relieve the Supplier of the responsibility and/or liability for full compliance with all contractual requirements.

FA requirements apply to each bill of material or parts list item with a Buyer part number that is invoked in the product design, including lower-level Buyer detailed drawings identified on upper-level assembly drawing(s), and each cavity or tool serial number for products whose dimensions are controlled by the tool.

An FA may also be required on Customer or Supplier drawings that are non-Buyer designs if specified on the Purchase Order. Suppliers may offer an alternate FAI plan to meet the requirements of this SRM. Approval to operate under this alternate plan shall only be authorized in writing by the Buyer.

Supplier will submit a new FA with samples for any production tool that is replaced (or not utilized for a period exceeding 2 years), or at Buyer's discretion for changes outlined in Section 1.8 of this manual. Supplier will submit Partial FA with samples to the Buyer under these circumstances:

- To re-validate item characteristics that changed via revision to the item specifications. (This will not apply to revisions where tolerances of a characteristic are increased.)
- To re-validate item characteristics that were not approved in a prior FA submission.

3.2.5 Inspections, Testing and Process Control

Suppliers shall have a verifiable methodology for controlling their operations and recording and monitoring inspections of all product design characteristics. This includes methods to validate products received from their sub-tier suppliers. The Supplier must document their inspection and testing plans to ensure that critical product attributes are inspected and controlled with appropriate methods. Consistent with Section 1.12.3 of this manual, related records must be kept for a minimum of 7 years, and may include supporting documentation such as routings, work instructions, receiving or in-process inspection sheets, final test/inspection reports, or statistical data. When prescribed by the Buyer, the Supplier will conform with Buyer-specified methods and procedures to accomplish this undertaking.

3.2.5.1 Operational Metrics

It is expected that the Supplier utilizes data-driven techniques to ascertain the efficiency and effectiveness of their operations, and to establish metrics to monitor continuous improvement towards a goal. At a minimum, the Supplier shall be able to demonstrate detailed knowledge of their performance with respect to the following facets of their business:

- On-time delivery performance (from suppliers inbound and to customers outbound).
- Product quality.
- Production capacity.

3.2.5.2 Inspection Methodology

For Buyer-designed product, Buyer will prescribe the inspection methodology for the Supplier to use or will approve a methodology selected by the Supplier. Methodology shall include identification of the attribute(s) to be inspected, frequency and quantity comprised of/in the inspection, and instrumentation or testing equipment to be used. Some examples of the latter include gages, Coordinate Measuring Machine (CMM), calipers, optical comparator, durometer and cross hatch adhesion testers. Calibration programs for such devices require strict Supplier oversight. Unless specified by the Buyer, inspection methodology of product not designed by the Buyer will be at the Supplier's discretion.

3.2.5.3 In-Process Inspections

Suppliers are expected to monitor their manufacturing operations and possess a full understanding of their process capabilities. This necessitates identification of each manufacturing operation at which an item characteristic is inspected and the inspection method and instrumentation to be used. Attributes that are subject to change after in-process acceptance (such as growth, shrinkage, and/or distortion) must be reinspected by the Supplier prior to final acceptance. Due to continuous improvement benefits, it's preferred that Suppliers use Statistical Process/Quality Control (SP/QC) for in-process inspections.

3.2.5.4 Final/Pre-Shipment Inspections/Certification of Conformance (CoC)

The Buyer will provide the Supplier with pre-shipment inspection instructions in a prescribed format. Adherence and completion of this inspection report by the Supplier is a requirement with every shipment, and it must be forwarded to **inspections@team-hat.com** prior to shipment. Buyer must approve acceptability of any other pre-shipment inspection format provided by the Supplier. Product that conforms to the inspection criteria (as evidenced in the report) may be shipped with no further action required. If a non-conformance is detected during this inspection, it is the responsibility of the Supplier to immediately alert the Buyer to specifically request direction regarding disposition of the shipment. In these instances, Buyer approval is required for the shipment to occur, and Sections 1.6 and 2.1 of this manual may also be incorporated if Buyer determines them to be applicable. This pre-shipment inspection requirement is not intended to replace any other inspection requirements. In accordance with Section 1.7 of this manual, the Buyer may arrange for an additional pre-shipment inspection to be performed at the Supplier's facility by a third party prior to shipment.

3.3 Supplier Management of Buyer Tooling and Other Buyer-Owned Property

Production tooling or other property utilized by the Supplier that has been provided or purchased by the Buyer is owned by the Buyer and cannot be used for any purpose that is not authorized by the Buyer. This includes tooling that is under the purview of an active amortization agreement between the Buyer and Supplier. The following requirements also pertain:

- The Supplier is responsible for the planning and execution of all routine maintenance.
- Supplier is responsible for tracking and recording usage data. For example, a tool used to mold components requires the Supplier to record usage data in the form of quantity of parts produced from the tool. So as to avoid interruption of use or service, this responsibility extends to the Supplier providing timely notification to the Buyer with regards to tooling wear that necessitates refurbishment or replacement.
- In accordance with Section 3.2.4 of this manual, Supplier may not utilize tooling for mass production until obtaining FA approval from the Buyer. As part of this process, tooling specifications, including but not limited to lay-out drawings and mold 3D simulations, require Buyer's approval before fabrication can begin. Additionally, adding texture to a tooling mold requires approval of the Buyer.
- Supplier is responsible for repairs or replacement when covered by Supplier warranty or guaranteed tooling shot life.
- In the absence of an alternate written agreement between the Buyer and the Supplier stating otherwise, Buyer is responsible for repairs or replacement if warranty or guaranteed shot life has expired.
- The Buyer is responsible for modifications or replacement that is necessitated by requesting a revision to the design of a product.

3.4 Buyer-Designed Purchased Product Marking Requirements

3.4.1 Scope

All markings shall be in accordance with Buyer drawing and/or specification requirements. In the absence of specified item marking on the drawing or product specification the product shall be identified using the methods described in this manual. If there is a conflict between this document and the identified specification or drawing, the product specification or drawing takes precedence.

3.4.2 Purchased Assemblies and Finished Product Marking.

- Product shall be identified with the Buyer item number and revision level, Buyer-assigned vendor and/or factory number and traceability identifier such as date of manufacture or job/lot number.
- Marking shall be in an area agreed upon by both Buyer and the Supplier. Location shall be such that the product marking is not visible to the end user under normal operation or use, yet visible with little to no disassembly of the product.
- Product marking will typically be accomplished by laser etching, stamp, pad or screen printing, an adhesive label, or other means provided that the product marking is easily readable.

3.4.3 Marking on Purchased Components

- Markings are specified on the Buyer drawing and/or specification and are primarily applicable to components (and components contained in purchased assemblies) that are produced by plastic injection mold tooling and metal casting tooling. As such, markings must be inscribed by the tooling.
- Components (and components contained in assemblies) requiring markings shall be marked with Buyer item number and revision level, Buyer-assigned vendor and/or factory number, manufacturing identifier such as date code or Job/ lot number, tooling cavity number and the Universal Recycling Symbol specifically applicable to the material that is contained in the component.
- Marking shall be in an area agreed upon by both Buyer and the Supplier that is typically not visible to the end user across all finished product applications.
- Marking requirements for gas cylinders will always be delineated on Buyer's drawing or specifications.

3.4.4 Certification Labeling

This requirement applies to any product certified and listed to be compliant with a safety, sustainability, durability or comfort standard. Requirements and procedures are prescribed by an industry recognized agency or association. In certain cases, Suppliers must pass an audit to establish and maintain qualification to manufacture and then apply the labeling specific to the certification. Suppliers are required to adhere to all requirements applicable to these circumstances. Examples (which can vary if country specific) include but are not limited to Business + Institutional Furniture Manufacturers Association (BIFMA), Underwriters Laboratories (UL), Electrical Testing Laboratories (ETL) and Federal Communications Commission (FCC ID).

3.5 Product Packaging and Identification/Labeling Requirements

3.5.1 Scope

Product packaging requirements apply to all Suppliers that provide material, components or assemblies used by the Buyer to manufacture finished products as well as Suppliers manufacturing finished products purchased by the Buyer for resales to its customers. Once the packaging method is approved, the Supplier shall not change or alter the packaging method without written approval from Buyer.

3.5.2 Product Delivery

The Supplier must ensure that all items are packaged and preserved adequately to guarantee that the hardware or assembly is delivered to Buyer or Buyer's end user undamaged and free of contaminants or corrosion. Unless otherwise specified, all products shall be packaged and preserved in accordance with the drawing, applicable specifications and standards, or PO requirements.

3.5.3 Physical Packaging

This section applies to pallets, corrugated cartons, totes, bins, interior protective materials and 20'/40'/40"-High Cube freight/transportation shipping containers.

3.5.3.1 New Shipping Pallets

Pallets must be made with wood, or wood composite, and processed/treated in accordance with standards prescribed by (ANSI) MH1-2016 of the Uniform Standard for Wooden Pallets (USWP) from the National Wooden Pallet and Container Association (NWPCA), or International Organization for Standardization (ISO) 6780. Pallets must be debarked, heat treated, certified and marked according to International Standards for Phytosanitary Measures (ISPM 15). The following prescriptive standards pertain:

- Acceptable classes and sizes (length and width) are 48" X 40" stringer pallet, EUR-2 1200mm X 1000mm block pallet or EUR-3 1000mm X 1200mm block pallet. The width direction is always parallel to the top deck boards.
- Stringer pallets must have two 6" or two double 4" top and bottom lead deck boards, five 4" interior top deck boards, three 4" bottom interior deck boards and 3 or 4 notched stringer boards.
- Block EUR-2 (1200mm X 1000mm) pallets must have nine blocks, three stringer boards, nine top deck boards, and five bottom deck boards (17 total). The lower edges of the bottom deck boards shall be chamfered.
- EUR-3 (1000mm X 1200mm) must have nine blocks, three stringer boards, seven top deck boards, and three bottom deck boards (13 total). The lower edges of the bottom deck boards shall be chamfered.
- Block pallets may be made from wood composite materials meeting the requirements stated in (ANSI) MH1-2016. However, blocks made of laminated veneer lumber or plywood are prohibited.

- Acceptable category is limited use “L” pallet, designed for an average of up to nine (9) trips, assuming an average of five (5) handlings per trip, and an average handling environment as defined in the Pallet Design System (PDS) before first repair, per USWP.
- Acceptable type is four-way or partial four-way entry, with openings at both ends and sides with limited accessibility of the openings to common handling equipment (i.e., notched stringer pallet with overlapping bottom stringer boards and bottom deck boards or panels).
- Pallets must have a safe working load of at least 2,200 lbs (1000 kg).
- Single-use pallets or any pallet constructed from corrugated or honeycomb fiberboard, plywood, laminated veneer lumber, or other nonsolid wood materials (partially or completely) are prohibited unless specifically approved by the Buyer.

3.5.3.2 Used Shipping Pallets

The term “Used” includes recycled, remanufactured, or repaired pallet not made entirely from new lumber.

Used GMA 48 x 40 partial 4-way entry stringer pallets are allowed if they meet the following criteria:

- Class 1 or Class 2 as defined by (ANSI) MH1-2016 or NWPCA Uniform Standard for Wood Pallets having all deck boards present and securely attached.
- “Premium A” – a common industry name describing a slightly used and very clean pallet not having repairs, mending plates, companion stringers, or protruding nail heads.
- “Grade #1” or “A Grade” – a common industry name for a repaired pallet in almost new or near original condition. Broken stringers may have been replaced or repaired with metal plates. All damaged deck boards are replaced and nail heads are flush. This is a fairly clean pallet that is structurally sound.
- “Grade #2” or “B Grade” – another common industry name for a used pallet having two or fewer damaged stringers repaired by attaching companion stringers (also known as block stringer, or double stringer). All deck boards must be present, repaired, and securely fastened. Some protruding nail heads are allowed.

Used EUR-2 or EUR-3 block style pallets are allowed if they meet the following criteria:

- Satisfy the criteria and repair practice stipulated by ISO 18613.
- Pallets constructed from corrugated or honeycomb fiberboard, plywood, laminated veneer lumber, or other nonsolid wood materials (partially or completely) are prohibited unless specifically approved by the Buyer.
- Used pallets (including repairs) must be certified and marked according to ISPM 15 (recommend that the ISPM 15 mark is on all four sides).

3.5.3.3 Special Purpose Wood or Wood Composite Bases

Oversized or uniquely configured products may require special purpose wooden bases other than pallets described above. The design, application and use of a special purpose base must be reviewed and approved by the Buyer prior to use.

3.5.3.4 Pallet Loading

The following requirements pertain:

- Full Pallet Utilization – Product shall be stacked within 3” of all four sides of the skids. Product shall not overhang the skid.
- Partial Pallets – The pallet must be loaded to ensure stability of the overall load. Packages shall be evenly distributed from the center of the pallet.
- Pallets shall be packed to ensure containers are not crushed or damaged. Damaged or crushed containers will be considered non-conforming.
- Maximum Height of the pallet with product shall not exceed 48” total.
- Maximum Weight of the pallet shall not exceed 1,500 lbs. based on a 24” load center.
- Mixed loads are acceptable, provided there is only one item number per package and each like item number is clearly identified, facing outwards on the pallet, and stacked vertically in segregated columns.
- Small items, such as fasteners may contain several lots on a single load but shall be packaged separately and identified to avoid potential confusion.
- Pipe, tube, bar, extrusion and similar items of long length shall not exceed 144” in length unless authorized by the Buyer.
- Pallets shall be secured to remain stable during shipment. Secure loads using either clear film or plastic banding. Use of steel banding is only acceptable for very heavy loads and must be approved by Buyer prior to shipping.

3.5.3.5 Corrugated Carton Requirements (Containing Materials or Components)

The following requirements pertain:

- Must be in accordance with Buyer specifications. When not specified by the Buyer they must comply with requirements contained in Sections 3.5.1 and 3.5.2 of this manual. Cartons must fit all product contents appropriately, without damage or overloading.
- The maximum loaded weight of manually handled containers shall be 50 lbs. Any carton that exceeds 50 lbs. shall contain a label indicating the weight exceeds 50 lbs.
- Closure Tape – Paper, water-activated tape (WAT) of size 2”-6” shall be used. Other common terms for this style of tape are: Reinforced tape, gum tape, gummed tape, reinforced gummed tape (RGT), non- asphaltic tape, Kraft (non-reinforced) tape, etc. Any container with a weight greater than 50 lbs. shall use reinforced tape. Use of staples is not acceptable unless approved by Buyer prior to shipping.

3.5.3.6 Bins, Totes, Freight Containers and Returnable Packaging

The following requirements pertain:

- Large/heavy bins and totes shall be forklift accessible. Smaller bins/totes shall have handles for manual movement.
- Freight containers shall be loaded to optimize space utilization and loaded with heavier product on bottom and lighter product on top to prevent crushing.
- Use of returnable packaging requires mutual agreement between the Buyer and Supplier prior to shipment.

3.5.3.7 Protective Interior Packaging

Use of dividers, pads, inserts, paper and similar materials is normally required to protect product during transit. Materials used by the Supplier shall follow applicable National Motor Freight requirements. Consideration shall be given to minimize dunnage. Foam packaging material should be eliminated whenever possible, while still maintaining sufficient packaging to prevent product damage during transit.

3.5.3.8 Environmental Aspects and Hazardous Materials/Chemicals (HAZMAT)

HAZMAT is defined via OSHA standard “29CFR 1910.1200”. All packaging, labeling and identification of HAZMAT must comply with the Department of Transportation Code of Federal Regulations, Title 49. Supplier shipments shall be free of foreign contaminants, including rust. Protective coatings used by the Supplier that are not specified by the Buyer to protect metal components from corrosion must be authorized by the Buyer before shipment. These products are prohibited from containing paraffin wax, silicone, or any other substances banned from use in the U.S. Whenever possible, Supplier will use packaging made with recycled materials while also maintaining packaging functionality and integrity to protect the product. Using Styrofoam or polystyrene materials is prohibited without written authorization from Buyer.

3.5.4 Packaging Label Requirements for Material and Components

The information listed in the section is the minimum content required to be on all shipping carton labels. Labels must be self-adhering and attached to every carton, including inner cartons or bags inside bulk/master packaging. Tags are permissible on items such as bins, totes, tubing, steel columns, and rolled/ sheet steel.

- Buyer Item Number (also included in Barcode) and Revision Level
- Buyer PO Number (also include in Barcode), PO Line Number, PO Release Number (for Blanket Orders)
- Item Nomenclature, Quantity, Unit of Measure and Date of Manufacture
- Buyer-assigned Vendor and/or Factory Identification Number (as derived from Purchase Order)
- Country of Origin
- All packages over 50 lbs. must be identified on the carton with a 2 person lift requirement.

Label printing size shall have 0.5” minimum height for Item Number, Item Revision Level and Quantity. Every individual container requires a label. Labels are to be placed on the smallest container and on the outer carton when bulk packed. Labels should be placed on a minimum of 2 surfaces and should not extend to another. This includes individually bagged components. For material shipped on a pallet, each carton shall have a label that is visible from the outside of the pallet.

3.5.5 Packaging Requirements for Finished Products

For Buyer to supply products to the distribution market and direct sales, it is the Supplier’s responsibility to package products in such a manner that the product and shipping carton arrive at the PO designated destination in an undamaged condition. Package cartons and labels must not be distorted, cut, scarred, smashed, torn or have other/unauthorized labeling applied directly to the carton.

The Supplier must ensure packaging for finished products passes all testing requirements of ISTA Procedure 3A: Packaged-Products for Parcel Delivery System Shipments 70 kg (150 lb.). To achieve this, it’s particularly important that all portions of the finished product be individually protected (boxed or bagged) in a manner that prevents unwanted contact between components. Suppliers are required to have packaging tested at an ISTA accredited testing facility. Passing test results shall be supplied to Buyer. Testing physically performed by the Supplier can only be used during development, not for final approval.

Other requirements include:

- Corrugated packaging must consist of a minimum ECT 48 (275lb Mullen) for double wall cartons and a minimum of ECT44 (275lb Mullen) for single wall cartons.
- Packaging shall not contain any foreign materials
- Packaging shall be clean of erroneous markings and labeling.
- All material should be recyclable and be marked with the proper material recycling symbols.
- Expanded polystyrene (EPS foam) foam is not allowed as any part of the packaging solution.
- Expanded polyethylene (EPE foam) is permissible as a packaging material but should be kept to a minimum or eliminated whenever possible.

Once the packaging method is approved, the Supplier shall not change or alter the packaging method without written approval from Buyer.

3.5.6 Packaging Label Requirements for Finished Products

For the Buyer to supply products correctly to the distribution market and direct (dropship) sales, all packaging labels used by the Supplier shall be specified and approved by the Buyer, including placement. The Supplier is responsible for compliance, as well as handling products carefully so that shipments arrive at the PO designated destination in an undamaged condition. Packaging cartons and labels must not be distorted, cut, scarred, smashed, torn or have other/unauthorized labeling applied directly to the carton.

The following information are normally the minimum requirements for label content:

- Buyer Item Number and Revision Level
- Buyer PO Number, PO Line Number, PO Release Number (for Blanket Orders)
- Item Nomenclature, Quantity, Unit of Measure and Date of Manufacture
- Buyer-assigned Vendor and/or Factory Identification Number (as derived from Purchase Order)
- Country of Origin
- Barcode
- UPC Code (as assigned by Buyer)
- All packages over 50 Lbs. must be identified with a 2 man lift requirement

If products ship with more than one product type on a pallet, each individual carton on the pallet must contain the information listed above. For products shipping in a master carton with multiple items in a single carton, each item type must be bagged or boxed and labeled separately. The outer carton must contain the information listed above and each individual inner container must have a label which includes the product Item Number, Item Number Revision Level and the Manufacturing Date Code or Lot Number.