



## Supplier Quality Requirements

### **Quality Assurance Requirements:**

Refer to associated Purchase Order for applicable classification code.

#### **A) Standard Parts:**

Standard parts (e.g., rivets, washers, bolts) that conform to established industry-wide or government specifications. Such specifications stipulate design, manufacturing, and uniform identification requirements, and are readily available to any persons or organizations with intent to manufacture these parts.

**Reference Sections: 2.0, 3.0, 6.0, 9.0, 10.0, 13.0, 15.0, 17.0, 20.0**

#### **B) Raw Materials:**

Raw materials are bulk materials, chemical compounds, tubing, extrusions, etc. that are manufactured to a specification and provided in bulk form, then subsequently apportioned and formed or incorporated in whole or in part through a process to make a discrete part or assembly. Examples of raw materials include, but are not limited to: sheets of aluminum, thermoplastics (Delrin, polycarbonates, vinyl acetates), heat shrink, honeycomb panels, sealants, paints and paint additives, chemical conversion coatings and preparations (Alodine® and Alumiprep®), oils, lubricants, etc.

**Reference Sections:**

- a. **Metal: 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 9.0, 10.0, 13.0, 15.0, 17.0, 18.0, 20.0**
- b. **Paints, Sealants, Adhesives, Resins, Chemicals, Etc.: 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 9.0, 10.0, 15.0, 17.0, 18.0, 20.0**

#### **C) Make/Modified Parts (Fabricated or Processed):**

Parts or assemblies fabricated or processed by a vendor under design guidance requirements issued by UR engineering.

**Reference Sections:**

- a. **Metal Fabrication: 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 17.0, 18.0, 20.0**
- b. **Metal Special Processing: 1.0, 3.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 13.0, 14.0, 15.0, 17.0, 18.0, 19.0, 20.0**

**NOTE** – Examples of special processes include, but are not limited to:

- Painting/Coating (e.g. Powder)
- Heat Treating
- Plating
- Soldering
- Welding/Brazing

- c. **Non-Metal: 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 17.0, 18.0, 20.0**

**D) Purchased Parts:**

Parts purchased from a vendor who controls all design and manufacturing, directly or indirectly and/or catalog parts.

**Reference Sections: 1.0, 2.0, 3.0, 5.0, 6.0, 9.0, 10.0, 13.0, 15.0, 17.0, 18.0, 19.0, 20.0**

**E) Approved (FAA) Parts:**

Parts that have an FAA Production approval by anyone other than Aircraft Extrusion Co (e.g. PC/TC/PMA/TSO/LODA).

**Reference Sections: 1.0, 3.0, 5.0, 6.0, 9.0, 10.0, 13.0, 16.0, 17.0, 18.0, 20.0**

**F) Consumable/Shop Supplies:**

Towels, commercial cleaning agents, absorbents, tape etc., that are not used to make parts or to integrate into aircraft installations or parts. No certs required.

**Quality Assurance Codes:**

Code	Description
1.0	<p><b><u>Certificate of Conformance Required:</u></b></p> <p>The Supplier shall provide a certification of conformance for <u>each shipment</u> to the drawings and specifications referenced in this Purchase Order and/or in referenced drawings. The certification shall include the following at minimum:</p> <ul style="list-style-type: none"><li>• Purchase Order Number</li><li>• Part Number</li><li>• Drawing Rev Level (excluding raw materials and COTS items), including any applicable (non-rolling) Engineering Change Orders (ECO)</li><li>• Quantity of Parts</li><li>• Supplier Cage Code # (if applicable)</li><li>• Any documentation of nonconformance or deviation (see Code 7.0) – (Only for classification code C)</li><li>• Process Certifications – Include statement that processing was performed to the specification defined on the applicable drawing, including the type method or class – (Only for classification codes B and C)</li><li>• Company information (company letterhead or logo with name and address)</li><li>• Name/signature and/or other information indicating authorization of person(s) issuing the certification of conformance</li></ul>
2.0	<p><b><u>OEM's, Distributors and Warehouses:</u></b></p> <p>OEM's, distributors and warehouses that supply products from OEM's, may submit a pack slip in lieu of a signed Certificate of Conformance. The pack slip shall reference at a minimum the following traceability requirements:</p> <ul style="list-style-type: none"><li>• Purchase Order Number</li><li>• Part number</li><li>• Quantity of parts</li></ul>

Code	Description
3.0	<p><b><u>Sub-Tier Management:</u></b></p> <p>The Supplier assumes all responsibility for the deliverable item(s) and any associated documentation. In the event that the Supplier uses a third party in the fulfillment of this Purchase Order, the Supplier shall:</p> <ul style="list-style-type: none"> <li>• Manage the sub-tier supplier</li> <li>• Provide sub-tier documentation to AEC upon request</li> <li>• Flow the requirements of this document and any other documents or requirements listed on the PO to that sub-tier supplier</li> <li>• Require that any Special Process sub-tier supplier of any process listed in Section C) b. on the first page of this document be certified by at least one accredited third party (e.g. ISO9001, AS9100, NADCAP) OR pass an audit performed by AEC (Aircraft Extrusion Co) Quality personnel.</li> </ul>
4.0	<p><b><u>Raw Material Certification:</u></b></p> <ul style="list-style-type: none"> <li>• Each lot of raw material must be kept separate from (is not to be intermixed with) subsequent lots of the same material</li> <li>• Each shipment must be accompanied by at least one legible copy of the Raw Material Certification, and shall meet at least one of the following criteria: <ul style="list-style-type: none"> <li>○ Be from the Mill Source/OEM (preferred method), which lists Mill Source/OEM name and actual test values where applicable.</li> <li>○ Be from the Distributor, which lists the name and address of the Mill Source/OEM, specification values with a statement that the material conforms to the specification. <u>Please note:</u> Some non-metal materials are not required to provide actual test results IAW industry standards unless specifically asked to do so via PO instructions. In these cases, certs that state “Typically Meets” IAW a particular industry standard will be acceptable.</li> </ul> </li> <li>• Include documentation that the material is Mercury-Free</li> <li>• Supplier (including all sub-tiers) agrees to comply with the requirements of the Defense Federal Acquisition Supplement (DFARS) clause 252-225-7003 concerning the purchase of raw metallic materials. Additional information can be found in subsection 225.872-1 of (DFARS).</li> <li>• Supplier (including all sub-tiers) agrees to comply with requirements of DFAR 252.225-7008 and 252.224-7009 for the definitions of specialty metals and the permitted countries of origin</li> <li>• Supplier (including all sub-tiers) agrees to comply with requirements of DFAR 252.225-7007, Prohibition on Acquisition of the United States Munitions List Items from Communist Chinese Military Companies</li> </ul>

Code	Description
5.0	<p><b>Configuration Management:</b> All Items from Supplier shall be of the configuration depicted and described on the drawing. The Supplier shall notify Buyer immediately if the attached drawing does not represent the current characteristics and configuration of the item required.</p> <p><b>5.1 Order of Precedence:</b> Should a conflict exist between requirements contained in this Purchase Order, precedence shall apply in the following order:</p> <ul style="list-style-type: none"> <li>• Authorized changes to the Purchase Order</li> <li>• Purchase Order</li> <li>• Authorized changes to the drawing(s)</li> <li>• Drawing(s)</li> </ul> <p><b>5.2 Engineering Information/Requests for Changes or Variance</b> Refer to section 7.0</p> <p><b>5.3 Qualified Products List</b> Any items applicable to a Government Qualified Products List/Database as defined by the specifications must be manufactured and traceable to a DLA-approved source.</p> <p><b>5.4 Part Marking/Identification</b> When required by the Purchase Order or drawing to be completed by the supplier, the Supplier shall ensure that items are legibly marked in accordance with Purchase Order and drawing requirements.</p>
6.0	<p><b>Traceability, Identification and Control:</b> The Supplier shall maintain positive traceability of parts/product throughout the manufacturing process (from raw material to delivery). Documented evidence of such shall be included with each shipment or otherwise available upon request by AEC.</p>
7.0	<p><b>Material Review Board (MRB):</b> MRB authority is not granted for any part or product for which AEC (Aircraft Extrusion Co) has design authority. Any nonconformance or deviation from drawings, specifications, or other Purchase Order requirements must be reported to AEC (Aircraft Extrusion Co) and submitted for disposition. This includes any defects or non-conformances noted after delivery. A dispositioned copy of the SCRR must accompany any shipments to AEC (Aircraft Extrusion Co).</p> <p>The document to be used for submission of nonconformance or deviation, or to request information from Engineering, is the Supplier Concern Resolution Request (SCRR) (Form AS-199). The current revision of this form along with its instructions can be found on the AEC website: <a href="http://www.aircraftextrusion.com/supplier-portal/">http://www.aircraftextrusion.com/supplier-portal/</a></p> <p>Items dispositioned as Scrap must be positively controlled until returned to AEC or rendered unusable unless indicated otherwise on the SCRR.</p>
8.0	<p><b>Re-Submission of Rejected Material (Rework/Repair):</b> All items rejected by AEC (Aircraft Extrusion Co) and re-submitted by the Supplier for inspection after any rework/repair shall reference any AEC (Aircraft Extrusion Co) rejection Non-Conformance Report number (NCR, SCRR, etc.) or RMA number on all applicable certification documentation.</p>

Code	Description
9.0	<p><b><u>Packaging/Shipping:</u></b></p> <p>All parts must be packaged in a manner to preserve product conformance and to prevent damage during handling and transit.</p> <p><b>9.1 Cleanliness and Preservation</b></p> <p>The Supplier shall only supply parts that are free from corrosion or contamination that would risk compromise of the performance of the part/product. Any openings (e.g. electrical components) will be appropriately capped to prevent contamination.</p> <p><b>9.2 ESD Packaging</b></p> <p>Any parts, assemblies or equipment as defined by MIL-STD-1686 are to be handled in accordance to requirements specified by that standard.</p> <p><b>9.3 Hazardous Materials</b></p> <p>Such materials shall be clearly packaged and labeled per current, applicable regulations and be shipped with the corresponding Materials Safety Data Sheet (MSDS).</p>
10.0	<p><b><u>Record Retention:</u></b></p> <p>Unless otherwise noted on the Purchase Order, the Supplier is required to maintain all production records for a minimum of 5 years for Non-critical parts and 10 years for critical parts. Prior to discarding, transferring to another facility, or destruction of such records, the Supplier shall notify AEC (Aircraft Extrusion Co) <u>in writing and allow</u> AEC (Aircraft Extrusion Co) the opportunity to gain possession of such records, including applicable records at any Sub-Tier sources.</p>
11.0	<p><b><u>Inspection:</u></b></p> <p>If required by this Purchase Order, the Supplier shall inspect 100% of the parts produced for this Purchasing Agreement to all drawing characteristics, drawing notes and Purchase Order requirements and will maintain records of the following:</p> <ul style="list-style-type: none"> <li>• Supplier name and address of production</li> <li>• Purchase Order number and line number</li> <li>• Item number, description, and revision as they appear on the Purchase Order</li> <li>• Lot quantity</li> <li>• Material certificates (where applicable)</li> <li>• Special process certifications (where applicable)</li> <li>• First Article test reports (where applicable), to include records meeting AS9102 requirements or equivalent (reference section 12.0)</li> <li>• Production (in-process, final) test reports (where applicable), to include methods/equipment used to perform inspection and actual numerical values obtained</li> <li>• Printed name, signature and date for the inspector(s)</li> </ul> <p>Records of inspection shall be available to AEC (Aircraft Extrusion Co) upon request.</p> <p><b>11.1 Measuring and Test Equipment</b></p> <p>The Supplier shall establish and maintain a documented calibration system to verify conformity of all measuring and test equipment. This system shall be compliant with current ISO9001 or AS9100, or otherwise approved by AEC (Aircraft Extrusion Co).</p>

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12.0	<p><b>First Article Inspection:</b></p> <p>If required by this Purchase Order, the Supplier shall perform a First Article Inspection (FAI) in accordance with AEC (Aircraft Extrusion Co) and AS9102 (preferred) requirements. An FAI shall be performed on a new product representative of the first production run.</p> <ul style="list-style-type: none"> <li>• For assemblies, the assembly level FAI shall be performed on those characteristics specified on the assembly drawing or DPD</li> <li>• Prototype parts shall not be used, or parts manufactured using methods different from those intended for the normal production process for the FAI.</li> </ul> <p>A full FAI, or partial (delta) FAI shall be performed for affected characteristics when any of the following is met:</p> <ul style="list-style-type: none"> <li>• A change in the design affecting fit, form or function of the part.</li> <li>• A change of supplier(s), process(s), inspection method(s), location of supplier, tooling or materials that can potentially affect fit, form or function.</li> <li>• A change in numerical control program or translation to another media that can potentially affect fit, form or function.</li> <li>• A natural or man-made event, which may adversely affect the manufacturing process.</li> <li>• An implementation of corrective action required to complete a previous FAI (Code 8.0 applies)</li> <li>• A lapse in production for two years shall require an update for any characteristics that may be impacted by the inactivity. This lapse is from the completion of last production operation to the actual restart of production. Or as specified by the customer.</li> </ul> <p>Suppliers shall use required AEC (Aircraft Extrusion Co) documents (e.g. AS9102 forms 1, 2 and 3 (or equivalent) to record their results. Suppliers shall provide a “ballooned” drawing for all features, including dimensions and specifications, with every FAI. FAI reports shall be included with applicable certification documents.</p>

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13.0	<p><b><u>Suppliers Quality Control System:</u></b></p> <p><b>13.1 Notification Responsibilities</b></p> <p>The Supplier shall notify AEC (Aircraft Extrusion Co) <u>in writing</u> for:</p> <ul style="list-style-type: none"> <li>• Significant change in organizational structure (e.g. Quality or Operations management)</li> <li>• Change or update in the Quality System (e.g. new or updated registration/certificate)</li> <li>• Change in facility where the product listed in this Purchase Order is manufactured</li> <li>• Planned change to the manufacturing process (e.g. obsolescence)</li> <li>• Products, articles, or services that have been released from or provided by the supplier and subsequently found not to conform to the production approval holder's requirements.</li> </ul> <p>Failure to notify AEC (Aircraft Extrusion Co) in a timely manner may result in an on-site audit or jeopardize future Purchase Order awards.</p> <p><b>13.2 Supplier Monitoring and Rating</b></p> <p>AEC (Aircraft Extrusion Co) monitors and rates suppliers based on product quality (first-pass yield), on-time delivery, responsiveness of the supplier, and Buyer assessments. Suppliers that fall below an established level of performance may be subject to on-site audit, corrective action request, or disqualification.</p> <p><b>13.3 Quality Management System</b></p> <p>The Supplier shall maintain a quality management system that is acceptable to AEC (Aircraft Extrusion Co). ISO9001, AS9100 or equivalent is preferred.</p> <p><b>Note:</b> Per AEC procedures, special process suppliers (see page 1, Category Cb) are required to be certified to ISO9001, AS9100, NADCAP or equivalent, OR pass an audit performed by AEC (Aircraft Extrusion Co) Quality personnel.</p> <p><b>13.4 Corrective Action</b></p> <p>Suppliers must respond to Corrective Action Requests within 30 days. Failure to respond may result in financial penalties, up to and including removal as an approved supplier.</p>
14.0	<p><b><u>Source Inspection:</u></b></p> <p>Source inspection is applicable only when notes are added to the Purchase Order invoking this clause. Source inspection requires a AEC (Aircraft Extrusion Co) representative to inspect the product for approval at the Supplier's location prior to shipment. Please provide notification 3 to 5 days prior to the product being ready for inspection when requested/notified by a designated AEC (Aircraft Extrusion Co) representative.</p>
15.0	<p><b><u>Military Specification Items:</u></b></p> <p>The current revision at the time of placing this Purchase Order applies unless otherwise notified.</p>

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16.0	<p><b><u>FAA Repair Station:</u></b></p> <p>The Supplier is <u>required</u> to be a FAA-certified Repair Station. All shipments <u>MUST</u> include the following <i>at minimum</i>:</p> <ul style="list-style-type: none"> <li>• FAA form 8130-3 tag or appropriate return to service documentation</li> <li>• Signed/approved 'Return to Service' Tag</li> <li>• Repair/overhaul report (containing actions performed, to what document, and at what revision)</li> <li>• Test data (if applicable)</li> </ul> <p><b><u>TSO Supplier:</u></b></p> <p>Documentation is required indicating that the TSO part was built within an FAA-approved manufacturing system.</p> <p><b><u>PMA Supplier:</u></b></p> <p>Document is required indicating that the PMA holder has built the part within a FAA-approved manufacturing system. This documentation shall also indicate that there are no outstanding MRB actions associated with the part.</p>
17.0	<p><b><u>Documentation language:</u></b></p> <p>All documentation must be submitted in English.</p>
18.0	<p><b><u>Right of Access:</u></b></p> <p>AEC (Aircraft Extrusion Co) and its Customers and Regulators (e.g. FAA, DOD) reserve the right to perform inspection of product, witness testing, and/or review manufacturing and inspection processes at any one of the Supplier's or Supplier's sub-tier facilities at which any part of the processes used to fulfill this Purchase Order have been completed. In addition, the Supplier will make available any related inspection equipment, records, technical data, or process documentation. Such activities may be requested at any point during execution of this Purchase Order at no additional cost to AEC (Aircraft Extrusion Co).</p>
19.0	<p><b><u>Lead Free Electronic Components:</u></b></p> <p>A Lead Free Control Plan ("LFCP") is required from suppliers of Materials that include lead-free materials. The LFCP shall:</p> <ul style="list-style-type: none"> <li>• Follow the guidelines set forth in GEIA-STD-0005-1, "Performance Standard for Aerospace and High Performance Electronic Systems Containing Lead-Free Solder" or its equivalent.</li> <li>• Include tin whisker mitigation plans in accordance with GEIA-STD-0005-2, "Standard for Mitigating the Effects of Tin Whiskers in Aerospace and High Performance Electronic Systems" or its equivalent, at control level 2C or equivalent.</li> <li>• Include any special design considerations, manufacturing process controls, test and qualification requirements, quality inspection and screening, marking and identification, maintenance and repair processes, and any other steps taken by the Supplier/sub-tier supplier to mitigate risks.</li> </ul>



Code	Description
20.0	<p data-bbox="217 275 597 302"><b><u>Safety, Compliance, and Ethics:</u></b></p> <p data-bbox="217 317 1312 344">Per current AS9100 Requirements, suppliers shall ensure that their employees are aware of:</p> <ul data-bbox="266 365 1130 464" style="list-style-type: none"><li data-bbox="266 365 1130 392">• Their contribution to AEC (Aircraft Extrusion Co) product conformity.</li><li data-bbox="266 401 1130 428">• Their contribution to AEC (Aircraft Extrusion Co) product safety.</li><li data-bbox="266 436 737 464">• The importance of ethical behavior.</li></ul>