

## **PURCHASING QUALITY CLAUSES (PQC)**

### **PURPOSE**

This document describes the general and special product assurance requirements (Purchasing Quality Clauses or PQC) that will be used by FabTech Services, LP (FabTech) on the Purchase Order, Contract or other formal agreement (hereafter referred to as the Contract) between a Supplier and FabTech. The purpose of this document is to clearly define for each purchase of products or services, all the necessary and applicable technical and quality requirements with which the Supplier is required to comply to meet FabTech, FabTech customer and/or regulatory requirements.

### **RESPONSIBILITY AND AUTHORITY**

The Purchasing and Quality Managers are responsible that all the applicable requirements are communicated to the suppliers and that the suppliers are in conformance with these requirements. By delivering products or services on the Contract, the Supplier certifies that such products or services are in compliance with all applicable requirements of the Contract, and objective evidence of compliance is available and will be furnished to FabTech for review upon request.

### **SCOPE**

This document applies to all PO's where PQC's are identified. General requirement PQC's apply to all orders regardless of whether or not they are individually called out on the PO.

## **1. GENERAL REQUIREMENTS**

The following requirements apply to all products delivered to FabTech where the requirements of meeting the standard PQCs are referenced on the PO.

### **Acceptance at Destination**

Articles ordered on this PO are subject to final acceptance at destination. Materials received which do not conform to the provisions as indicated on the purchase order will be subject to rejection or such measures as may be deemed necessary by the Purchasing or Quality Managers or their designates. Should a Supplier Corrective Action Request (SCAR) be issued corrective action shall be taken and evidence shall be provided to FabTech within 30 days upon notice unless other actions are agreed upon between FabTech Purchasing or Quality manager and the supplier.

### **PQC-01 Quality System:**

The supplier(s) on this order must be controlled under a Quality Control System that conforms to the requirements of the current acceptable revision of the ISO 9001 or AS 9100 Quality Management System Standards or equivalent with written approval of FabTech.

For suppliers with a third party ISO Certificate, any renewal, probation or revocation of ISO Certificate requires immediate notification to FabTech Purchasing and Quality Departments.

Note: Additional quality system requirements may be applied due to FabTech customer flow-downs. If so, these additional requirements will be specified on the purchase order.

### **PQC-02 Calibration System:**

The supplier's measuring and testing equipment used in the performance of orders for FabTech shall be calibrated in accordance with ISO 10012-1 or equivalent.

### **PQC-03 Dimensional Test Data:**

The supplier shall perform dimensional inspection to verify all characteristics and notes on the drawing/specification. The supplier shall record the actual dimensional readings. The inspection results

must be kept on file and shall be made available to FabTech upon request at no additional cost. All recorded data must be legible.

The items delivered on this PO shall be controlled by the supplier/manufacture under a quality inspection system sufficiently adequate to verify that the material or service furnished meets all requirements of this purchase order. An AQL of 1.0 C=O sampling plan at minimum is required per the Table I below.

If key characteristic(s)(KC) are noted on the drawing or specified by FabTech to be verified then these KC shall be inspected as specified and recorded on an inspection form and supplied to FabTech with each shipment.

**Note:** Special inspection requirements may be required as identified in the supplemental PQC's later in this document and specified on the PO.

**Table I: Accept on Zero (C=0) Sampling Plan**

Lot Size	Acceptable Quality Level (AQL)			
	.65	1.0	2.5	4.0
2-8	ALL	ALL	6	3
9-15	ALL	13	6	3
16-25	20	13	6	3
26-50	20	13	7	7
51-90	20	13	11	8
91-150	20	13	11	9
151-280	29	29	13	10
281-500	47	29	16	11
501-1200	47	34	19	15

#### **PQC-04 Certificate of Conformance:**

A certificate of conformance must accompany each shipment of material. The Certificate of Conformance shall **be legible** and at a minimum include the following information:

- Supplier name and address
- FabTech Purchase Order Number and line number.
- Part Number
- Quantity shipped.
- Drawing Number and Latest Revision Letter. (unless specified otherwise on the PO)
- Specifications (standard / process number / PQC) called out on the PO/Product drawing must be present on the C ofC provided as written on the PO/Product Drawing.
- Manufacturer Name and CAGE code.
- Serial Number(s).
- Material LOT/Batch/Heat Number (Traceability Information).
- Date Code.
- Specimen ID number(s) (if applicable).
- Special Process (Specification Type and Class Used)
- A statement of work that confirms material shipped conforms in all respects to applicable specifications and/or standards.
- Signature, name and title of an authorized company representative to certify that the parts/items/material identified conform to all applicable drawings and/or specifications as evidenced by reports or other documentation on file and that all other purchase order and quality requirements have been met

When multiple lots of material are used in completing a shipment, the parts shall be packaged separately with a separate and complete certification package including a supplier Certificate of Conformance for

each lot of material.

Where applicable, required physical and chemical test certificates are to be included in the shipment.

**When material is provided by a distributor, the Certificate of Conformance from the original manufacture must be provided. The original manufacture C of C shall meet the requirements above.**

**PQC-05 Physical and Chemical Test Reports (Material Certification):**

For raw material shipments or supplier provided material, in the form of bar, plate, sheet, tubing and castings the material certification shall contain the following at a minimum:

- Chemical Composition - in percentages (%).
- Mechanical/Metallurgical Test - Tensile strength, yield strength, percent elongation, hardness, etc.
- Material designation.
- Specification and revision letter (to the latest revision in effect at time of shipment) that the material was purchased to.
- Heat Number.
- Country of Melt
- Any other requirement specified on the PO or drawing.

Material certification shall be supplied with each shipment and be legible. Certifications must be provided by the manufacturer. Distributor certifications are NOT ACCEPTABLE. If material is provided through distribution, the distributor must provide a C of C confirming that there is un-broken traceability from all intermediaries back to the original manufacturer including heat treating.

**PQC-06 Lot Traceability:**

All items fabricated under this purchase order shall be traceable to raw materials used. All traceability and inspection records must be identifiable with raw materials, parts, or assemblies to which they are applicable and shall be available upon request or audit by FabTech representatives. The lot or batch number may be by date or supplier shop order code, but must provide the capability for a lot or batch purge in the event of determination of a condition or discrepancy. Identification shall be per MIL-STD-130, or in the applicable specification

**Raw materials** used shall be identified by lot number as well as material type, specification, heat number, etc. and shall be identifiable with the lot of raw materials used when two (2) or more parts are joined in an assembly. The seller shall prepare an Assembly Parts List identifying each in the assembly and the lot of raw material from which it was fabricated.

**All materials fabricated** by the seller in one lot shall be identifiable to that lot when supplied to FabTech. When the seller is combining material fabricated in two or more different lots to fulfil purchase order requirements, these materials shall be segregated and identifiable to the lot in which it was fabricated. The seller shall request, from the buyer whose signature appears on the purchase order, written authorization to submit materials fabricated in two or more lots to fulfil the total quantity of each item on this purchase order.

**PQC-07 Material Review:**

FabTech Customer's Quality shall retain MRB authority on dispositions for any discrepancies affecting product performance and/or drawing requirements other than scrap or rework. Non-conforming material is to be identified, segregated, and controlled to prevent its unauthorized use for shipment. The cause of such non-conformances is to be identified and corrected.

**PQC-08 Special Test Report Origin Requirements:**

The test reports for chemical and mechanical properties required in this purchase order shall include those issued by the ORIGINAL Producer of the material which certify conformance to the specification(s) invoked herein. If this material has received subsequent processing (i.e. heat treat, testing, etc.) by the Supplier or his sub-tier supplier(s) to make it conform to the required specification, the test reports for the material in its final condition (as supplied to the Buyer), shall be in accompanied by a copy or copies of the ORIGINAL Producer's certification(s).

**PQC-09 Configuration Control:**

Seller shall make no change in design, manufacturing, or assembly process or source of supply, after approval of the first production test item or after acceptance of the first completed end item, without obtaining written approval from FabTech.

**PQC-10 Unauthorized Facility Change:**

The supplier shall give FabTech written notice before relocating any production, inspection, or processing facilities.

Written notice is also required when making changes to source of any major component or making any other changes which may affect product quality or reliability. Change in ownership or management representative with respect to the supplier's quality system also require written notification.

**PQC-11 Unauthorized Product Changes:**

The supplier may not make any changes or substitutions to any products or services required by the contract, drawing, specification or any other applicable document without submitting a Supplier Deviation Request (SDR) to FabTech and obtaining written approval from FabTech.

**PQC-12 Altering Data on Documents:**

The use of any method that caused the original data to be unreadable (i.e.: correction tape and fluids) is strictly prohibited.

**PQC-13 Record Retention:**

The supplier shall retain all records that provide objective evidence of compliance to contract requirements pertaining to material, manufacturing processes, special processes, testing and inspection for a minimum of 10 years after final payment. There are special circumstances and customer requirements that may be longer.

Special requirements will be defined in the purchase order. Supplier is required to notify and obtain written approval from FabTech prior to destruction.

**PQC-14 Latest Revision:**

All suppliers are responsible to supply materials to the latest specification(s) revision defined on the drawing, purchase order or listed/referenced processing specification unless otherwise agreed to in writing by FabTech.

**PQC-15 Deviation to Purchase Order Requirements:**

A request for variance may be initiated by the Supplier prior to shipment for any deviation from drawings, specifications or other Purchase Order requirements and must adequately describe such deviations, including a complete description of the cause and corrective action to prevent recurrence. The request for variance via a Supplier Deviation Request (SDR) form shall be submitted to the FabTech Buyer who will initiate an FabTech Material Review Board. A copy of the FabTech approved SDR will be returned to the

Supplier, showing results of the Material Review Board.

Supplier shall not ship a discrepant item reported and submitted on a SDR until the Material Review Board has disposition the item. Items shipped on a request for variance must be segregated from other items to permit separate identification to be maintained.

Non-conforming conditions on items submitted and approved on request for variance's prior to shipment will not be charged to the Supplier's Quality Performance Record. Supplier is responsible for all costs incurred by FabTech directly associated with any nonconformance determined to be the supplier's responsibility and not accepted on deviation by FabTech.

**PQC-16 Flow Down of Requirements:**

Supplier is responsible to flow down all requirements of this purchase order and verifies that any sub-level supplier that is being used to manufacture/process this product meets all such requirements.

**PQC-17 Acceptance at Destination:**

Articles ordered on this PO are subject to final acceptance at destination. Materials received which do not conform to the provisions as indicated on the purchase order will be subject to rejection or such measures as may be deemed necessary by the Purchasing or Quality Managers or their designates. Should a supplier corrective action request (SCAR) be issued, corrective action shall be taken and evidence shall be provided to FabTech within 30 days upon notice unless other actions are agreed upon between FabTech Purchasing or Quality manager and the supplier.

**PQC-18 Marking of Shipments**

Supplier shall individually mark the outside of each box shipped with the FabTech P.O. Number, part number and the quantity of parts in the box. If the boxes are reused any previous markings must be completely removed or covered such that only the current contents of the box are visible. Lot numbers shall not be mixed within a box.

**2. SUPPLEMENTAL PQC's**

The following PQC's will apply when identified on the PO:

**PQC-1A First Article Inspection:**

A full or Delta First Article Inspection (FAI) must be performed in accordance with the latest revision of AS9102 on a part representative of the production process to be used in the manufacture of these parts. Customer FAI requirements supersede AS9102 when specified on the PO. The First Article Inspection is to be completed using FabTech's AS9102B FAIR form 1000-002B and reviewed using FabTech's Vendor FAIR checklist 1000-003 which can be obtained from FabTech. The Vendor FAIR checklist shall become part of the FAI submittal to FabTech. Alternate AS9102 compliant forms or FAI generation software may be used with FabTech's written approval. The FAI report shall reflect actual readings and show compliance to drawing and related specifications (i.e. 100% of drawing characteristics & notes). All FAI forms shall be completed electronically. Hand written FAI's will not be acceptable. The supplier shall account for all drawing characteristics and notes by assigning a unique identifier to each characteristic on the drawing and including that same unique identifier on the FAI report. The marked drawing (with unique identifiers) shall become part of the FAI submittal to FabTech. Use-as-is acceptance of FAI hardware nonconformance's does not constitute first article approval. The specific part used by the supplier for FAI must be clearly tagged / separated from the rest of the parts of the shipment. A copy of the FAI documentation is to accompany the first shipment of parts.

All FAIR reports shall be written to comply with the following documents available through the FabTech Quality Department.

- 1) Document 1000-002B AS9102B FAIR Form
- 2) Document 1000-003 Vendor FAIR Checklist
- 3) Document 1000-004 Vendor FAIR Requirements

**PQC-2A Customer Specific FAIR Documents:**

A full or Delta First Article Inspection (FAI) must be performed in accordance with the latest revision of AS9102 on a part representative of the production process to be used in the manufacture of these parts.

**PQC-3A Source Inspection:**

FabTech or their customers are required to perform source inspection prior to shipping from the supplier's facility. When material is ready for inspection, notify FabTech at least forty-eight (48) hours in advance. Source Inspection does not relieve the supplier of any of the requirements of this purchase order nor the responsibility of rework or replacement of material found to be defective during normal acceptance procedures. The supplier's gages, measuring and testing devices shall be made available for the Source Inspector.

**PQC-4A Government Source Inspection (GSI):**

GSI is required prior to the shipment of any items against this purchase order. Government inspection does not relieve the supplier or FabTech of their obligation to provide conforming parts/services.

Government inspection does not constitute acceptance. When Government Inspection is required, FabTech will add to his purchasing document the following statement:

*"Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the government representative who normally services your plant so that appropriate planning for government inspection can be accomplished."*

When, under authorization of the Government representative, copies of the purchasing document are to be furnished directly by the subcontractor or supplier to the Government representative at his facility rather than through Government channels. FabTech will add to its purchasing document a statement substantially as follows:

*"On receipt of this order, promptly furnish a copy to the government representative who normally services your plant, or, if none, to the nearest Army, Navy, Air Force, or Defense supply agency inspection office. In the event the representative or office cannot be located, our purchasing agent shall be notified immediately."*

**PQC-5A Special Process Approval Required:**

All special processes (welding, plating, heat treating, etc.) must be performed by a FabTech or FabTech customer approved source, unless other sources are defined on the purchase order. Special processes, once approved may not be changed without written FabTech approval of the changes.

**PQC-6A Special Process Certification:**

The supplier is required to submit with each shipment a certification of all the special processes performed on the delivered part (E.G., NADCAP). The certificate must relate specifically to the part number being purchased and contain the signature of an authorized company representative.

The Certificate of Conformance shall include the quantity processed, the specification number and revision of all special processing performed. Suppliers are not permitted to out-source machining or special process operations without prior written authorization from FabTech.

**PQC-7A Dimensional Test Data Supplied with Each Shipment:**

- A. In-process dimensional inspection data per PQC-03 or other specified AQL requirement shall be supplied with each shipment against this order. The data shall be representative of the parts and manufactured lot being shipped.
- B. 100% inspection report required for each part shipped. Each design characteristic shall have a unique identifier. The ballooned drawing shall have 100% accountability for all design features and notes. At a minimum the report shall contain the balloon #, drawing note/characteristic, actual reading, inspection instrument used, JOB/LOT number, drawing number and revision number.

**PQC-8A Restriction of Hazardous Substances (RoHS):**

The supplier shall provide with each delivery a certificate of compliance stating that all materials supplied are within the limits for hazardous substances as established by EU Directive 2002/95/EC. Should any material not comply, the concentration of the hazardous substance shall be reported on a chemical test report. At the discretion of FabTech the material may be rejected and returned to the supplier if the concentration of the hazardous substance is over the established limits. FabTech also reserves the right to request a written plan from the supplier detailing the necessary steps required to bring the material into compliance and the date when compliance will be established. Certification to meeting RoHS requirements must be included on the C of C.

**PQC-9A Restriction of Hazardous Substances (RoHS) Mercury specific:**

The supplier shall certify that all materials supplied are within the limits for hazardous substances as established by EU directive 2002/95/EC. Material supplied shall contain no metallic mercury and shall be free from mercury contamination. Upon request, the supplier will be required to certify that the product is mercury free. Certification to meeting RoHS requirements must be included on the C of C.

**PQC-10A Non-Conventional manufacturing methods:**

Unless required by the drawing, specification, or contract, the supplier may not use EDM, ECM, laser or abrasive water jet cutting or drilling, flame spray coatings, or any non-conventional manufacturing method without the written approval from FabTech.

**PQC-11A FOD Prevention**

Supplier shall establish and maintain an effective Foreign Object Damage/Debris (FOD) Prevention Program to reduce FOD using NAS412 as a guideline. Supplier shall utilize effective FOD prevention practices.

**PQC-12A Counterfeit Parts and Material Risk Mitigation**

Supplier must maintain a documented counterfeit part control plan compliant to the AS5553 Standard or counterfeit material control plan compliant to the AS6174 Standard.

**PQC-13A Packaging**

Newsprint shall not be used for wrapping of parts or as dunnage due to its acidic nature. Staples shall not be used at any time due to the possibility of foreign object damage (FOD). The supplier shall ensure that all items are packed adequately to prevent damage or contamination during the course of shipment and to assure acceptance by common carrier.

**PQC-14A DFARS 252.225-7008-7009 Applies:**

Per DFARS 252.225-7008-7009: If the metal or component(s) for this order contain "Specialty Metals"

then these “Specialty Metals” must be MELTED in the United States or in a Qualified Country as defined in the Defense Federal Acquisition Regulation Supplement 225.003(9). This requirement applies to every sub-tier under contract with your company. The vendor supplier C of C must show compliance to DFARs.

**PQC-15A ITAR:**

This document, which includes any attachments and exhibits hereto, may contain information subject to International Traffic in Arms Regulation (ITAR) or Export Administration (EAR) of 1979, which may not be exported, released, or disclosed to foreign nationals, inside or outside the United States, without first obtaining an export license.

**PQC-16A Shelf Life:**

The supplier shall assure that all limited life components used or contained within provided assemblies are within their respective shelf life at the time of installation or use. The supplier shall record and maintain documented evidence of compliance with this requirement for each of the limited life components and consumables used for each assembly. This documented evidence is not required to accompany shipment of assemblies; however, it shall be retained and shall be made available upon request.

**PQC-17A Traceability (Serialization):**

Each part, component, or assembly furnished on this purchase order shall be identified with a distinct serial number. Serial number shall not be duplicated on one part, component, or assembly number when manufactured in sequential lots. Marking of serial number shall be MIL-STD-130, or in the applicable specification.

**PQC-18A Elevated AQL Inspection levels:**

When PQC-18A is specified the minimum AQL's listed below shall be followed:

Specification	AQL Level
Tolerance range greater than .004	2.5
Tolerance range less than or equal to .004	.65
Any angle tolerance range less than 1 degree	.65
Any critical characteristics	100%
Visual Inspections	100%

Per C=0 Sampling Plan

**PQC-19A Material Validation:**

The supplier shall ensure and provide documented evidence that critical parameters and key characteristics of metallic raw materials are validated by a Nadcap accredited or A2LA approved, independent laboratory (other than original Mill source) on first receipt from each supplier or distributor of raw materials and on an annual basis thereafter.

The validation documents must certify that the chemical composition, element analysis, maximum



impurity levels, microstructure, and physical properties of the material conform to the design specification. (Example; material and or test specifications indicated on order)

**PQC-20A Hardness Validation:**

When a hardness value is specified on the engineering drawing, industry material specification (AMS, ASTM, etc.) or any purchase order flow down, a re-validation (second hardness verification) shall be performed and documented prior to shipment to FabTech. The re-validation performed shall be performed by qualified parties impartial and independent of the original verification.

**PQC-100A Customer Specific Flow Downs:**

- A. Customer Specific Requirement - **STATEMENT TO PREVENT TRANSACTIONS WITH DENIED PERSONS/DEBARRED PARTIES/SDN:** To ensure compliance of U.S. export laws, Customer does not conduct any business transaction with the “Denied Persons List” published by the U.S. Department of Commerce, the “Denied Parties List” published by the Department of State and the “Specially Designated Nationals” list published by the Department of Treasury, Foreign Assets Control. Customer expects all suppliers and its sub-contractors to comply with these laws as well. Supplier agrees to include this requirement in lower-tier Purchase Orders and/or subcontracts. (You may view the U.S. Government web sites of the Agencies noted above to access their lists).
- B. Customer Specific Requirement – Any product supplied which contains cadmium must be identified by sending notification in writing to the procurement representative issuing this purchase order.
- C. Supplier shall permit Customer and its agents, during reasonable business hours at a mutually agreed upon time to inspect the Facilities where the Products are manufactured, handled, stored, as well as all processes relating to the manufacture, storage, handling, or testing of the Products. Where appropriate and upon Customer request, Supplier shall ensure that access for an inspection or audit of its sub-contractors involved in the production of Customer Product is also granted. Customer may review Supplier’s employee training records during an inspection as necessary.

REV	Nature of changes	Approval	Date
1	Original release.	Chad Klodner	10-16-2015
2	Update company name and formation	Chad Klodner	03-01-2016
3	Updated PQC-03, PQC-05, PQC-06, PQC-13, PQC-1A, PQC-7A, PQC-10A, PQC-18A. Added PQC-19A, PQC-20A	Chad Klodner	01-09-2017
4	Inserted Table under PQC-03. Added PQC-18,	Chad Klodner	11-10-2017