



Plasma Ruggedized Solutions

Supplier Quality Clauses: F74-4QC

- **Quality Clauses Q1 through Q9E apply to ALL Purchase Orders.**
- **Quality Clauses Q10 through Q20 apply when referenced in the text of the purchase order.**

Q1: Quality Management System

The supplier shall maintain a business process management system to assure that all requirements of Plasma Ruggedized Solutions purchase orders are consistently met. Maintaining a 3rd party certification such as AS9100, AS9102 (for distributors), ISO 9001, TS16949, or ISO 13485 satisfies this requirement. Suppliers who do not maintain the aforementioned 3rd party certification will require review/approval from Plasma Ruggedized Solutions Quality Assurance. All suppliers of Calibration Service must be certified to ISO 17025 and/or ANSI Z540.3

Q1A: Ethics:

The supplier shall ensure that all employees are aware of the importance of ethical behavior in the work they perform.

Q1B: Product Safety and Product Conformity:

The supplier shall ensure that all employees are aware of their contribution to product safety as well as their contribution to product and/or service quality.

Q2: Certificate of Conformance

Each shipment for physical product shall contain a legible and reproducible Certificate of Conformance (C of C) indicating that the product and/or material have been manufactured, inspected, and/or tested, and meet the requirements of the Purchase Order. The minimum information on the Certificate of Conformance shall include the following: 1) date, 2) purchase order number, 3) supplier's name, 4) part number, drawing number, and/or specification number including revision, 5) lot# [if applicable] and 6) shelf life expiration date [if applicable]. An authorized representative of the supplier's quality organization must sign and date this certificate. A copy of this certificate shall accompany a packing slip, a Material Safety Data Sheet (MSDS) and/or a Chemical and Physical Analysis Report.

Distributors only. A copy of a Certificate of Conformance from the distributor specifying date code, lot/batch code or serial number(s) and a copy of the original manufacturer's material certification or test report traceable to the same lot number shall be shipped with each order.

Q3: Raw Materials / Limited Shelf Life Material

The supplier shall identify each item, package or container with the date of manufacture and shelf life expiration.

Shelf life material shall not be supplied with less than 50% of its shelf life remaining without prior written approval from Plasma Ruggedized Solutions. Preferred shelf life is 80%.

The seller shall furnish a copy of the original manufacturer's Certificate of Conformance with each shipment on this order.

Q3-1: Counterfeit Materials Avoidance Program:

Seller shall ensure that materials are only procured directly from the original manufacturer, or through the manufacturer's authorized distributor chain. Seller shall also have a documented counterfeit materials avoidance procedure in compliance with SAE AS6174 or equivalent standard. Seller shall make available to Buyer, upon request, documentation that authenticates and provides traceability of the material to the applicable manufacturer or manufacturer's authorized distributor. Purchase of Parts from independent or unauthorized sources (Gray Market) is not permitted under Buyer's Order without the prior written approval of a duly authorized representative of Buyer

Q4: Traceability

The supplier shall maintain traceability information on file of all materials, parts and assemblies used in Fabricating or producing the product. The supplier shall maintain records that provide evidence that the delivered product or service meets the requirements of the purchase order or contract. The records must be legible, readily identifiable and retrievable within (5) business days. The records shall be retained for a minimum of ten years (unless otherwise specified in the purchase order), after the final delivery of the product or service contracted under the purchase order or contract. Records can include, but are not limited to: Test Data, Purchase Orders, Certificate of Conformances, Travelers and Inspection



Plasma Ruggedized Solutions

Supplier Quality Clauses: F74-4QC

Q5: Right of Access to all Facilities

Plasma Ruggedized Solutions (PRS), PRS customer and/or Government or Regulatory authority reserves the right to review control methods and inspect material included in this order at the supplier's facility and at any sub-tier facilities. Access rights shall be extended to Plasma Ruggedized Solutions Customers and/or Government or Regulatory authorities.

Q6: Shipments, Deliveries and Packing

Plasma Ruggedized Solutions reserves the right to defer payment on advance deliveries until scheduled delivery dates. No over shipments accepted without prior approval in writing. Loss of or damage to any goods not packed in such a manner as to insure proper protection to same shall be borne by Supplier.

Hazardous Materials

Hazardous materials, as defined by the EPA, shall be packaged and clearly identified in such a manner as to include any and all special handling, packaging, storage, environmental, or other requirements imposed by statute or regulation.

Q6A: FOD Prevention:

The supplier shall assure that work is accomplished in a manner preventing foreign objects or material from entering and remaining in deliverable items.

Q7: Nonconforming Material Control and Notification of Non-Compliant Product

Supplier is to have a program in place to identify, segregate and disposition nonconforming material in order to assure the nonconforming material does re-enter the production stream.

Notification of Nonconforming Product or Material

The seller is to provide immediate notification, in writing, of suspected problems with previously delivered product. This notification shall be sent to Plasma Ruggedized Solutions Buyer and Quality Manager. The supplier shall notify Plasma Ruggedized Solutions Buyer within 48 hours when a nonconformity is discovered in the supplier's processes or products that may affect product already delivered. Notification shall include a clear description of the discrepancy, parts affected including customer part number (serial numbers, lot numbers or manufacturing date) quantity delivered and corrective action plan.

Q8: Corrective Action

Acceptance of this purchase order obligates the supplier to perform, upon request, a corrective action investigation when nonconforming material/product is received by the buyer. Supplier shall investigate the cause of each nonconformance, whether identified by supplier or by Plasma Ruggedized Solutions. A written report shall be furnished, within ten working days whenever PRS has identified a nonconformance to the supplier and requested a corrective action response.

Q9: Quality Records

All quality records are to be legible, reproducible, identifiable and traceable to the purchase order. Quality Records are to be stored and maintained in such a way that they are readily retrievable in facilities that provide a suitable environment to minimize deterioration or damage and to prevent loss, including suitable means of backup for electronic records. This applies to our suppliers and any sub-tier suppliers. Retention period for quality records shall be a minimum of ten (10) years unless otherwise specified. Plasma Ruggedized Solutions, our customers, Government or Regulatory authorities shall have access to review quality records as they pertain to this order.

Q9A: Calibration System

Where measurement instruments are used to verify compliance during the processing of material or products procured by Plasma Ruggedized Solutions, the system shall provide for calibration and control of gauges and test equipment traceable to the National Institute of Standards Technology (NIST) requirements.

Q9B: Deviations

When it is known by the supplier prior to the start of production that there is some product feature that results in departure from PO requirements or a process specification, the supplier shall first contact the Plasma Ruggedized Solutions Buyer, and obtain written approval for such deviation. The request must be in writing and contain (as a minimum):



Plasma Ruggedized Solutions

Supplier Quality Clauses: F74-4QC

- A. Purchase order number, line item and revision level.
- B. Product specification.
- C. Requirement that will not be met.
- D. Actual condition that is being proposed.

The supplier will not proceed without documented authorization from Plasma Ruggedized Solutions Buyer or other authorized Plasma Ruggedized Solutions authorized representative.

Q9C: EU REACH and RoHS Compliance:

REACH – Registration, Evaluation, Authorization and Restriction of Chemicals: The reporting products containing Substances of Very High Concern. The European Union (EU) has adopted regulation no.1907/2006, also known as the REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation, which became effective June 1st, 2007.

REACH Compliance: Seller and their subcontractors shall be responsible for continuous monitoring of the publication and updates of the European Chemicals Agency list of Substances of Very High Concern ("SVHC") (viewable at <http://echa.europa.eu/web/guest/candidate-list-table>) and immediately notify Buyer if the delivered Goods contain SVHCs that are greater than > 0.1% by weight or substances restricted under Annex XVII of REACH.

RoHS stands for Restriction of Hazardous Substances, and impacts the entire electronics industry, many electrical products and raw materials as well. EU Directive 2002/95/EC restricts use of these substances and products shipped to Plasma ruggedized must meet RoHS requirements for restricted use of the following substances:

- **Lead (Pb):** < 1000 ppm
- **Mercury (Hg):** < 100 ppm
- **Cadmium (Cd):** < 100 ppm
- **Hexavalent Chromium: (Cr VI)** < 1000 ppm
- **Polybrominated Biphenyls (PBB):** < 1000 ppm
- **Polybrominated Diphenyl Ethers (PBDE):** < 1000 ppm
- **Bis(2-Ethylhexyl) phthalate (DEHP):** < 1000 ppm
- **Benzyl butyl phthalate (BBP):** < 1000 ppm
- **Dibutyl phthalate (DBP):** < 1000 ppm
- **Diisobutyl phthalate (DIBP):** < 1000 ppm

Refer to <http://www.rohsguide.com/rohs-substances.htm> for additional information

Q9D: Supplier Performance Requirements

On-Time Delivery:

It is expected that products will be provided no later than the dock date established on the Purchase Order. Suppliers must maintain a minimum of 96% or better On-Time-Delivery rating. Early deliveries are acceptable.

Product Quality:

It is expected that the products and or services provided will be 100% free of defects and be compliant with all applicable material, performance and Purchase Order requirements.

Parts Obsolescence / End of Life (EOL) Provisions:

Immediate Notification is required on discontinued products and lower level parts. In the event of product discontinuation for any reason, including the obsolescence of any part, material or subassembly contained in the product, the Supplier shall provide immediate notification to Buyer no more than five (5) days of learning of such discontinuance.

Q9E: Flow Down of Requirements:

The seller shall flow down to their direct and sub-tier suppliers the applicable requirements of the purchasing documents, including key characteristics (when identified) and these quality provisions.

Note: For all purchase orders, (unless otherwise specified) the seller must use the latest revision level of all applicable specifications or drawings that are in effect at the time that the purchase order is issued. Buyer will identify applicable drawing or part revisions per each line item on the order, however it is the seller's responsibility to process the order using the most current revision of industry standard specifications identified on the order.



Plasma Ruggedized Solutions

Supplier Quality Clauses: F74-4QC

-Quality Clauses Q10 through Q20 apply when referenced in the text of the purchase order

Q10: First Article inspection

A First Article Inspection Report shall be required when the first production units are manufactured. The report shall include all drawing characteristics and notes, required tolerance range, actual measurement results, and where physical testing is required, the results of the test(s). Material certifications shall be included.

Q10AS: AS9102 First Article inspection

A First Article Inspection Report in compliance with AS9102 is required. Material certifications shall be included. part shall be included.

Q11: Government Inspection

Government Inspection is required prior to shipment from your facility. Upon receipt of this order, promptly notify the Government authority who normally serves your facility so that appropriate planning for Government Inspection can be accomplished. In the event the representative or office cannot be located, our buyer should be notified immediately

Q12: Reserved

Q13: Test and Inspection Records

Test data readings and/or inspection measurements of materials on this order must be taken and documented as indicated below. Particular emphasis shall be given to those characteristics which cannot normally be inspected upon receipt at Plasma Ruggedized Solutions. The above record shall be adequate to ascertain the quality level of required materials and of the production processes used in the manufacture of this order. The use of electronic media is encouraged (e.g. PDF format) for delivery to PRS.

Q14: Standard Hardware Items

Where the supplier supplies hardware items (e.g., bolts, nuts, screws, etc.) of standard design (whether Industry Standard or PRS Customer Standard) and the hardware is controlled by a qualified producer's list (QPL) identified by Buyer, the supplier shall provide a certificate of conformance identifying source of supply.

Where the PRS customer requires the distributor to be approved, then the supplier shall only use and or supply hardware from PRS customer approved distributor. The distributor will be identified on the buyer PO.

Q15: Special processes

If this order is for production work that includes special processes, the supplier shall use only those processors approved by PRS. Supplier should contact PRS Quality Assurance for assistance in assuring that supplier uses only approved processors. Use of any NADCAP accredited processor is allowed. Original processor certification must be retained on file and traceable to end item products delivered to Plasma Ruggedized Solutions. The special process certification shall be delivered with the item or service identified on the PO.

Q16: Certification of Ozone Depleting Substances

Supplier must provide one of the following certifications on each shipping document:

- a. The supplier certifies these goods were not manufactured with and do not contain ozone depleting substances.
- b. The supplier certifies these goods are in compliance with the ozone depleting substances labeling requirements under the US law.

If certification to paragraph b is made, precautionary labeling must accompany the statement and must comply with 40CFR Part 82 Subpart E.

Q17: Certification of Calibration

The calibration service shall provide a certificate of calibration for each item calibrated. The certificate must comply with, at minimum, requirements identified in ISO 17025. The certificate must also identify all equipment/standards used traceable to the National Institute of Standards and Technology (NIST).

Q18: Statistical Process Control (SPC)

SPC shall be implemented and maintained as part of this purchase order agreement. The supplier's SPC program shall be documented and include provisions for: selection and identification of key characteristics and/or processes, statistically based control charting, demonstration of continuous improvement, management supervision, corrective action, training, and flow down to sub-tier supplier. The requirement for and establishment of SPC key characteristics and/or key processes may be based on similar parts or processes.



Plasma Ruggedized Solutions

Supplier Quality Clauses: F74-4QC

Q19: Source Inspection by Buyer

All items covered by the purchase order are subject to source inspection by a Plasma Ruggedized Solutions Quality Representative. When requesting source inspection, call the buyer whose name appears on this purchase order at least three (3) working days in advance or as agreed upon with Buyer or Buyer's Quality Representatives.

Q20: Certificate of Analysis

A Certificate of Analysis is required, showing confirmation that the product meets its product specification. Actual test results must be shown and traceable to the lot number or batch number tested.

Revision History:

| Rev. | Date | Description | Approval |
|------|---------|---|-----------|
| 0 | 1/27/09 | Doc# F74-4; Initial release | R. Steele |
| 1 | 8/9/10 | Doc# 74-4; Shelf life requirement change from 80% to 50% | R. Steele |
| 2 | 3/2/12 | Doc# 74-4; Add design authority and 48hr notice to Q7 | R. Steele |
| 1 | 4/12/17 | New document# assigned (74-4QC). Complete re-write of document for Quality Clauses only. Add Q19 Source Inspection, Q20 Certificate of Analysis. Doc# 74-4 now Ts & Cs of Purchase | G. Tyler |
| 2 | 2/5/18 | Add Q1A (Ethics), Q1B (Product Safety & Product Conformity), Q6A (FOD prevention). Add RoHS requirement to Q9C. re-instate 48hr notice for nonconforming (Q7) | G. Tyler |
| | 2/5/20 | Review and re-issue of document due | |