

Supplier Quality Clauses

Clause 1: Quality System Requirements

- A. Sampling procedures, when used, must comply with ANSI/ASQ Z1.4 or ANSI/ASQ Z1.9 (latest revision) or equivalent and approved by Solutions Manufacturing.
- B. The supplier must maintain a “Lot Control System” and traceability records, as applicable.
- C. The supplier’s quality system must be in compliance with AS 9100, ISO 9001, and/or ISO 13485.
- D. The supplier is required to notify Solutions Manufacturing immediately, if non-conforming product was inadvertently shipped to Solutions Manufacturing
- E. The supplier is not allowed to ship non-conforming product with any disposition of “use as is” or repaired without prior written approval from Solutions Manufacturing.
- F. The supplier is required to flow down to all sub-tier suppliers all applicable requirements in the purchasing documents, including key characteristics on applicable drawings.
- G. Verification of purchased materials by the supplier at a sub-tier supplier’s facility does not absolve them from providing acceptable material. Such material must be submitted and accepted to standard inspections and testing by Solutions Manufacturing.

Clause 2: Industry/Workmanship Standards

The suppliers of custom built products shall use the current revisions of the following industry standards and/or Solutions Manufacturing supplied documents/requirements:

- A. IPC-A-610 Acceptability of Electronic Assemblies
- B. IPC-WHMA-A620 Requirements and Acceptance for Cable and Wire Harness Assemblies
- C. J-STD-001 Requirements for Soldered Electrical and Electronic Components
- D. IPC-7711/7721 Rework, Modifications and Repair of Electronic Assemblies
- E. AS9102 Aerospace First Article Inspection Requirements
- F. AS5553 Counterfeit Electronic Parts, Avoidance, Detection, Mitigation, and Disposition
- G. QAP 60-10 Fabricated, Machined and Molded Parts Cosmetic Specification

Clause 3: Employee/Process Certifications

The suppliers of custom built products shall provide with first shipment of each purchase order employee training certificates, Certificate of Conformance signed with an original authority signature and title of signer for the total quantity in the shipment.

- A. If special processes are required (heat treating, welding, etc.), the certification must reflect the applicable specification.
- B. If special inspection processes are required, an inspection/ test report with the applicable information must accompany each shipment
- C. If special training is required (i.e. IPC-A-610, IPC-A-620, J-STD-001) a copy of the certificates must be provided to Solutions Manufacturing with each shipment.

Clause 4: Certificates of Conformance and/or Certificate of Test

The suppliers of custom built products shall provide with each shipment a Certificate of Conformance and/or a Certificate of Test signed with an original signature and title of signer for the total quantity in the shipment:

- A. If special processes are required (heat treating, welding, etc.) the certification must reflect the applicable specification(s)
- B. If special inspection processes are required, a test report with the applicable information must accompany the certification.
- C. Certification requires (if applicable) proof of qualification for special processes performed by qualified personnel.



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D. Certificates must contain the following information: (as a minimum)

- ~ Date of Certificate of Conformance/Test
- ~ Supplier Name and Address
- ~ Purchase Order Number
- ~ Part Number
- ~ Part Revision
- ~ Manufacturing Date Code/Lot Number, as applicable
- ~ Serial Number(s), as applicable
- ~ Country of Origin
- ~ Identification of Quality Representative

E. Packing slips must contain: (as a minimum)

- ~ Ship Date
- ~ Ship To Address
- ~ Purchase Order Number
- ~ Purchase Order Line Item
- ~ Solutions Manufacturing Part Number
- ~ Manufacturer and Manufacturer's Part Number
- ~ Quantity
- ~ Country of Origin
- ~ Date Code, Lot Code and/or Serial Number , as applicable
- ~ Harmonized Tariff Schedule (HTS) Codes must be provided for each item, either on the packing slip, or in a Free Trade Agreement certification provided when eligible.

Clause 5: Counterfeit Parts Prevention

A counterfeit parts prevention program shall be implemented. This requirement shall also be flowed down to sub-tier suppliers.

At minimum, the program shall encompass the following:

- Document the necessary avoidance, detection, mitigation, and disposition processes to prevent the usage of Suspect, Fraudulent or Counterfeit Parts.
- Compliance with aerospace standard AS5553.
- Maintain traceability, with objective evidence, to the original manufacturer.
- Immediate notification to the Customer when Suspect, Fraudulent or Counterfeit parts are discovered.
- Ensure an effective containment process.
- Evidence that the pertinent process owners are trained on this program

Clause 6: Right to Access by

Acceptance of any purchase order is authorization for access to their facility and applicable documented information by Solutions Manufacturing's personnel, customers and/or regulatory agencies with or without reasonable notification. This applies to facilities and equipment, supply data, and performance tests as required by the applicable drawings, specifications, and inspection instructions.

Clause 7: First Article Inspections (AS9102 current revision)

When a First Article Inspection Report (FAIR) is required by our purchase orders will be performed in accordance with all available specifications for the product being produced. The final results must meet all the requirements of the Solutions Manufacturing purchase order and the applicable Solutions Manufacturing supplied data (i.e. drawings, bill of materials). Solutions Manufacturing expects complete and correct AS9102 FAIR documentation package to be submitted with shipment unless previous written authorization has been agreed upon by Solutions Manufacturing Quality Assurance Manager. Any incorrect and/or falsified data will result in a monetary penalty.



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Once the first article is accepted the supplier shall make no changes to the process or materials used without written authorization from Solutions Manufacturing.

Clause 8: Final Inspection

Final inspection is required on all our purchase orders of custom built products. This inspection will be performed by the supplier in accordance with all available specifications for the product being inspected. If first article is required by the Solutions Manufacturing's purchase order, inspection will be to the current revision of AS9102. All supporting documentation, including raw material certifications, and test certifications must be maintained in compliance with Clause 9 of this document. The final inspection results must meet all the requirements of the Solutions Manufacturing's purchase order and all applicable Solutions Manufacturing supplied data (i.e. drawings, bill of materials). Solutions Manufacturing expects complete and correct documentation to the supplied purchase order and documentation. Any incorrect and/or falsified data may result in monetary penalty and/or automatic disqualification. Once the first lot is accepted the supplier shall make no changes to the process or materials used without written authorization from Solutions Manufacturing.

Clause 9: Tool, Gauge and Measuring Equipment

The supplier shall maintain a system that will insure adequate controls over all tools, gauges, measuring and testing equipment used for product acceptance in accordance with ISO 10012-1 or equivalent (this includes a system for periodic recall for calibrations). Calibrations must be traceable to the National Institute of Standards and Technology (NIST) and calibrated using manufacturer's requirements. In the event the manufacturer does not define environmental requirements the following environment shall be used to calibrate equipment: Relative Humidity (RH) between 35% thru 65% and Temperature Range of 18C thru 27C (65F thru 80F).

Clause 10: No Change Clause

Supplier shall make no change in design, data, fabrication, or manufacturing processes, after acceptance of the first production lot, without the written approval of Solutions Manufacturing.

Clause 11: Quality Records

The supplier shall maintain all inspection/test reports, material and/or component manufacturer certificates of conformance for each order (distributor certificates of conformance are not acceptable). These shall be provided to Solutions Manufacturing within twenty-four hours of request (24hrs). If unable to supply within this time a reasonable monetary penalty may be applied based on the criticality of the quality record being requested.

Quality records shall be maintained in a manner to ensure they remain legible, readily identifiable, and are easily retrievable. Quality records shall be maintained, electronically, for a period no less than 10 years from the date of purchase. These records shall include inspection and test results of supplied parts, all material/component manufacturer certificates of conformance. Said records shall be available for review by Solutions Manufacturing and our customers, upon request. Disposal of records shall be done in a manner that shall prevent reconstruction.



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Document Approval

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Document History

Revision Effective Date	Summary
8/17/21	Initial Release
2/25/23	Updated Clause 9 to include manufacturer requirements and environment conditions