

Amphenol IPC

Supplier Quality Clauses



Quality Assurance Requirements

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General Requirements



This Quality Assurance Requirement Document outlines the general, administrative requirements with which suppliers must comply when providing materials covered by purchase order(s). All communications relative to these requirements must be directed through AIPC Quality Assurance. This document shall apply in its entirety to every purchase order where specified and apply to all items including those items normally supplied under FAR 52.246.2. All exceptions to a QAR shall be approved by AIPC Quality Assurance prior to shipment.

Terms:

“Supplier” is the same as a “Seller”

“Purchase Order” is the same as “Contract”

Acronyms:

AQL	Acceptable Quality Level
QAR	Quality Assurance Requirements
AIPC	Amphenol Interconnect Products Corp.
NIST	National Institute of Standards and Technology
MRB	Material Review Board
COC	Certificate of Conformance
FAI	First Article Inspection
DX Rating	Rating or priority assigned by the President of the United States.

See <http://guidebook.dcmamil/38/dpas%20guidebook.htm>

DO Rating Rating of priority assigned that is vital to the national defense.

See <http://guidebook.dcmamil/38/dpas%20guidebook.htm>

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QAR1: Inspection System

The supplier listed within this AIPC contract must provide and maintain an inspection system that is acceptable to AIPC and its customer pertaining to this contract. All measuring and test equipment used by the contracted supplier, to inspect the items to be delivered against the contract, shall be calibrated utilizing standards whose calibration is certified as being traceable to the National Institute of Standards and Technology (NIST) or equivalent. The inspection system will be subject to periodic audits by AIPC Quality Assurance to determine continued acceptability. The supplier is responsible for documenting and controlling any portion of this contract that is performed by the supplier or any other supplier performing work for the contracted supplier. AIPC contract requirements (terms and conditions) would extend to the other suppliers when used.

➤ QAR1.1 Quality Inspection System

The supplier must maintain an inspections system that is compliant to ISO9001 or it must be approved by AIPC Quality Assurance. AIPC reserves the right to perform inspection/audits when necessary to ensure requirements to the **Quality Inspection System** or Quality Clauses posted on this Purchase Order are being met. Supplier, at their option, may implement the equivalent or better inspection process (Example: AS9100) if such implementation is at no additional charge. Objective evidence shall be on file verifying that such a system is being maintained. These systems are subject to approval and/or periodical review by AIPC. Supplier is responsible to document and control any portion of this contract that is to be performed by them and extend applicable portions of this contract to any tertiary suppliers.

QAR2: Material Review Board

Limited material review board (MRB) approval is granted on this purchase order. This authority is limited to minor non-conformances that only impact internal supplier drawings. MRB is not allowed for any nonconformance which impacts/violates AIPC drawing Key Characteristics or material requirements. Supplier shall request in writing authorization from AIPC and receive approval to ship nonconforming product. All shipments of nonconforming products shall be sent with a documented "state of condition" in reference to the nonconformance (Example: rework, scrap) on the packing slip. Shipments made without written approval (and attached to the shipment) will be rejected and returned to the supplier at the supplier's expense. AIPC will return items that are nonconforming for rework or replacement.

QAR3: Inspection/Test Data Collection

Supplier shall have on file for each item delivered a copy of the actual inspection data, test data and chemical test results (if required). This data shall be made available to AIPC Quality Assurance or its representatives upon request.

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QAR4: Inspection/Test Data Submission

Supplier shall submit to AIPC Quality Assurance a copy of the actual inspection data or test data as verification of conformance to the drawing key characteristics. Data submittal should be included with the item packaging unless otherwise directed.

QAR5: Certificate of Conformance

The supplier shall furnish a Certificate of Conformance (COC) with each shipment attesting that the materials(s) meet all of the Technical Data Package requirements. Exceptions to conformance shall be approved by AIPC Quality Assurance prior to shipment. Unless otherwise directed, data supporting this COC shall be kept on file and made available to AIPC upon request. The COC must include signature, date and title of the responsible Quality Representative.

QAR6: First Article Inspection

First Article Inspection submission and approval is required before the first (1st) delivery of this line item order. It is suggested that the supplier use their own forms as long as they contain the following information at a minimum. If the supplier does not have a documented process/form, AIPC will supply a FAI form. AIPC reserves the right to waive FAI requirements. If so, AIPC Quality Assurance will notify the supplier in writing. This notification must be included with the shipment of parts.

➤ *FAI required items.*

- Verification to all notes are documented (Targets and actual to the notes)
- Quality Signature
- Purchase Order Number
- Quantity
- Part Number
- Revision
- Any deviations/waivers associated with this line item order

QAR7: Source Inspection

AIPC source inspection is required prior to shipment on this order. Supplier shall notify the buyer five (5) working days prior to start of acceptance inspection to allow for scheduling of a AIPC quality representative to be present. The supplier shall have data (e.g. drawing, test reports, specification, certification, verification of measurements, etc.) available for use in support of source inspection. AIPC reserves the right to waive

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source inspection. If so, AIPC Quality Assurance will notify the supplier in writing. This notification must be included with the shipment of parts.

- The supplier is responsible to assuring that the product is ready for AIPC source inspection at the scheduled time (See Purchase Order Due Date).

QAR8: Test Data

Test data must be made available to AIPC electronically and stored on a server. If stored electronically, a back-up procedure must be in place. The Supplier Certificate of Conformance will include the statement “test data available upon request”. If data is not available electronically, a hard copy of the test data must be sent with each order.

- **QAR8.1: Test Data Retention**
 - Supplier shall have on file for each shipment a copy of the actual physical test results and/or test data as required. These results shall be made available to AIPC on request within a reasonable amount of time.
- **QAR8.2: Functional Test**
 - Supplier shall furnish a certification with each shipment to indicate that the test requirements have been complied with and actual tests results are on file and available upon request. Certification must include signature, date and title of responsible supplier representative and specifically identify the shipment it relates to including serial number if applicable, for instance, by reference to the shipper number. This requirement can be added to the Certificate of Conformance as stated in **QA7 (See AIPC Quality Clauses at <http://AIPCELECTRONICS.COM/Supplier>)**.

QAR9: Shelf Life Requirements

The seller shall identify all items and/or assemblies which have a specific shelf life requirement. At a minimal the date manufactured, shelf life will be marked on each individual container. No less than twenty percent of the Product(s) useful life expired upon receipt at AIPC.

QAR10: Traceability

Each item / container supplied on this purchase order must be permanently marked with a minimum of one unique identified; Lot Number, Date Code or Serial Number which can consists of any combination of numbers and letters. Alpha and numeric letters must be clearly distinguishable. Unless agreed to in writing from AIPC, the supplier must ensure that Serial Numbers are not duplicated for previous or future shipments of the same part number. Any deviation from this QAR will require a waiver from AIPC Quality Assurance.

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*** NOTE: it is understood based on supplier batch production that Lot Numbers and Date Codes may duplicated. This will be accepted by AIPC.**

QAR11: Skip Lot Inspection

Skip Lot Inspection is required on this purchase order. Requirements/Frequency for skip lot will be on a lot-by-lot basis for dimension and/or performance characteristics imposed per specific requirements. Frequency of inspection or test, inspection method and inspection results shall be documented and supplied with each shipment to AIPC Quality Assurance receiving inspection.

QAR12: Use of Sub-Tier Suppliers

The supplier is responsible for ensuring that all requirements are flowed down to any sub-tier supplier used for this purchase order up to and including all DX/DO ratings. Supplier is responsible to notify AIPC of any Sub-Tier Suppliers and that all Purchase Orders or Certificates received from sub-tier suppliers shall be marked with AIPC part numbers for full traceability and review of all requirements.

QAR13: Packing

The supplier will package the material in a manner that will ensure protection from environmental and physical damage.

QAR14: Scrap

The supplier shall render their scrap unusable. Scrap is to be destroyed at the supplier. AIPC reserves the right to audit the supplier to ensure all actions are in place to assure scrap is destroyed. (To ensure nonconforming product is controlled.) Supplier is responsible for establishing a process to ensure nonconforming product to this purchase order is identified, segregated, disposition and controlled to prevent reissuance into the process.

QAR15: Sampling Plan

The supplier at a minimum shall use a minimum of 0.65 AQL. AQL is only in reference to sample size. Seller shall in all instances where lot sampling is utilized inspect in accordance with the following inspection plan unless directed otherwise by AIPC electronics in writing.

Reference: [Zero Acceptance Number C=0 Sampling Plans](#), by Vincent L. Squeglia

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C=0 SAMPLING PLANS
INDEX VALUES
(ASSOCIATED AQLS)

LOT SIZE	SAMPLE SIZE															
	.010	.015	.025	.040	.065	.10	.15	.25	.40	.65	1.0	1.5	2.5	4.0	6.5	10.0
2 to 8	*	*	*	*	*	*	*	*	*	*	*	*	5	3	2	2
9 to 15	*	*	*	*	*	*	*	*	*	*	13	8	5	3	2	2
16 to 25	*	*	*	*	*	*	*	*	*	20	13	8	5	3	3	2
26 to 50	*	*	*	*	*	*	*	*	32	20	13	8	5	5	5	3
51 to 90	*	*	*	*	*	*	80	50	32	20	13	8	7	6	5	4
91 to 150	*	*	*	*	*	125	80	50	32	20	13	12	11	7	6	5
151 to 280	*	*	*	*	200	125	80	50	32	20	20	19	13	10	7	6
281 to 500	*	*	*	315	200	125	80	50	48	47	29	21	16	11	9	6
501 to 1200	*	800	500	315	200	125	80	75	73	47	34	27	19	15	11	8
1201 to 3200	1250	800	500	315	200	125	120	116	73	53	42	35	23	18	13	9
3201 to 10,000	1250	800	500	315	200	192	189	116	86	68	50	38	29	22	15	9
10,001 to 35,000	1250	800	500	315	300	294	189	135	108	77	60	46	35	29	15	9
35,001 to 150,000	1250	800	500	490	476	294	218	170	123	96	74	56	40	29	15	9
150,001 to 500,000	1250	800	750	715	476	345	270	200	156	119	90	64	40	29	15	9
500,001 and over	1250	1200	1112	715	556	435	303	244	189	143	102	64	40	29	15	9

*Indicates entire lot must be inspected
NOTE: The Acceptance Number in all cases is ZERO.

TABLE NO. 1-a

QAR16: Quality Record Retention

The supplier shall have a process/system for establishing and maintaining control of documents/records. Records shall have traceability to contract / purchased products, drawings, revision levels, and specification numbers (when required) that indicated acceptable product. Inspection records are to indicate (at a minimum):

- Acceptable requirements of the item
- The number of observations made
- Quantities approved and Rejected
- Disposition

Records are to be maintained for a minimum of ten (10) years. After 10 years, supplier must give AIPC the option to maintain/retain these records at AIPC. AIPC reserves the right to audit these records or any supporting documentation at any time

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QAR17: Corrective Action Program

Supplier is responsible for implementing a quality system capable of resolving problems adversely affecting quality and correcting those conditions. Suppliers shall segregate and contain discrepant parts in stock or in process, determine root cause and institute measures to prevent recurrence and implementing corrective action. AIPC may request supplier to respond to a Supplier Corrective Action. If the supplier fails to respond to a Supplier Corrective Action this may result in the suspension of business/dealings.

QAR18: Print/Data Sheet Release for Verification of Supplied Product

Supplier to submit the hardware print/data sheet associated with this purchase. These requests to be applied on a purchase order to assist receiving inspection verify materials purchased. Once print/data sheet is received against a purchased part number for AIPC, supplier will not be required to re-submit unless material has changed (up-rev or down-rev) to last purchase.

QAR19: Metals Verification through (X-Ray fluorescence)

AIPC may elect to perform an X-Ray fluorescence (XRF) verification on this purchased product. If required, AIPC will perform a spectrum analysis on the plating and verify thickness.

QAR20: Counterfeit Parts Avoidance

A Counterfeit part is defined below and is not limited to:

- a. A purchased part that is an illegal or unauthorized copy or substitute of an Original Equipment Manufacturer
- b. Any part that does not have the correct materials or parts required by the Original Equipment Manufacturer or that is not built like the Original Equipment Manufacturer design.
- c. Any part that is used, refurbished or reclaimed but the seller represents as being a new part.
- d. An item that has not successfully passed all Original Equipment Manufacturer required quality control but that Seller represents as having met or passed such requirements.
- e. A part with markings intended to mislead a person into believing the part is not Original Equipment Manufacturer.

Supplier **shall** maintain a Counterfeit Item risk mitigation process internally and with its suppliers using SAE AS5553 or equivalent as a guide. Supplier **shall** participate in the GIDEP (<https://members.gidep.org/mgmt/mgmt.htm>) monitoring and acting on GIDEP reports which affect product delivered to AIPC. When suspect or confirmed counterfeit parts associated with this purchase order are discovered the supplier **shall** issue a GIDEP report and **shall** ensure suspect counterfeit items are not delivered to AIPC.

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Supplier shall immediately notify AIPC with all information that pertains to parts supplied to AIPC as soon as the supplier becomes aware in accordance with the AIPC purchase order QAR's. When requested by AIPC, supplier **shall** provide Original Equipment Manufacturer documentation that authenticates traceability of the affected items. Supplier **shall** provide evidence of the Sellers risk mitigation process to AIPC Corporation if request.

QAR21: Conflict Material Avoidance

Suppliers (Approved and Conditionally Approved) are required to review all materials and components which are necessary for the functionality or production of the goods being sold under this Order and determine if any of the "Conflict Minerals" are present, and if so, to determine the country of origin (where the minerals were originally mined and processed) or whether the minerals originated from scrap or recycled sources. To the extent your firm does not purchase the Conflict Minerals directly, and then this information must be flowed down to the appropriate sub-tier suppliers. In any case at any given time, your firm may be required to prove out any conflict material by returning the certificate. There are no exceptions for "insignificant" amounts of Conflict Minerals. So, for example, if you provide printed circuit boards which contain a small amount of gold, you use a small amount of tin in the production process of your goods or a contact contains gold plating, those minerals should also be included. This inquiry applies to any conflict minerals purchased after January 31, 2013.

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Revision	Revision Date	Comments
1	10/27/2022	Document Release