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AVEOX

Supplier Quality Requirements

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Revision U
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A Current
Revision of The
AVEOX Supplier
Quality
Requirements
Document Can Be
Found at
www.AVEOX.com

NOTE: The following Quality Assurance Clauses are applicable when referenced on the Purchase Order. If a conflict exists between the Clause numbers (requirements called out in the Purchase order) and any other documents specified on the Purchase Order (including engineering drawings), the conflict shall be brought to the attention of AVEOX Quality Assurance for clarification prior to the supplier providing any product or service.

Quick Reference by Procurement Activity and/or Commodity

Procurement Activity / Commodity	Standard Clauses
Castings and Forgings	1, 2, 8, 9, 10, 11, 11c, 12, 13, 14, 14a, 15, 15c, 16, 22, 25
Raw Material (Bar, Plate, Sheet, etc.)	1, 2, 8, 9, 10, 11, 12, 13, 14, 14a, 15, 15c, 16, 22, 25
Standard/Catalog Parts (non-electrical)	1, 2, 8, 9, 10, 11, 11a-11d, 13, 14
ESD Sensitive Standard/Catalog Components (electrical)	1, 2, 8, 9, 10, 11, 11a, 13, 14, 14a, 15d
Consumables, Life Sensitive Material	1, 2, 8, 9, 10, 11, 11d, 13, 14, 14a, 26, 26a
Manufacturing / Machining, Mechanical Assembly, Turn Key & Buy Complete Products (non-electrical)	1, 2, 8, 9, 10, 11, 11c-11d, 12, 13, 14, 14a, 15, 15a-15c, 16, 26, 26a, 28, (16a, 27, 30 as applicable)
Bare PCB & PCBA Assembly, Turn Key & Buy Complete Products (electrical)	1, 2, 8, 9, 10, 11, 11a-11b, 13, 14, 14a, 15, 15c-15d, 16, 18, 31, (16a, 27, 30, 32 as applicable)
Special Processing	1, 2, 8, 9, 10, 11, 13, 14, 15, 30 (11a-11d, 15a-15d, 16, 18, 19, 20, 22, 27, 31 as applicable)
Suppliers are required to review ALL clauses annotated in the body of the PO as they can differ from the Quick Reference by Procurement Activity and/or Commodity clause groups, and they may also contain special instructions	

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NOTE: The following Quality Assurance Clauses are applicable when referenced on the Purchase Order. If a conflict exists between the Clause numbers (requirements called out in the Purchase order) and any other documents specified on the Purchase Order (including engineering drawings), the conflict shall be brought to the attention of AVEOX Quality Assurance for clarification prior to the supplier providing any product or service.

1. Right of Entry

Articles defined in the Purchase Order are subject to inspection at destination and will not be accepted by AVEOX if the supplier fails to submit the certification, documentation, test data, and/or reports specified by clause in the purchase order. Notwithstanding the inspection rights granted to the Purchaser under the clause entitled "Quality System Requirements", representatives of the Purchaser, Purchaser's customer, and regulatory authorities, if required, shall be granted the right of access to all of the Seller's facilities, including sub-tier suppliers, at reasonable times for the purposes of reviewing applicable records to the Purchase Order.

1a MRO Materials

Materials purchased for Maintenance, Repairs, and Overhaul use only (typically referred to as MRO) do not require Quality related inspection at AVEOX.

2. Defense Contract Material "Select Evaluation"

The Government reserves the right to inspect any or all materials included in this order at the supplier's facility(s). Additionally, the Government reserves the right to perform Select Evaluation of the supplier's systems. If government Select Evaluation is being delegated on a Purchase Order, it will be stated on the Purchase Order as follows:

"On receipt of this order, promptly furnish a copy to the Government Representative who normally services your facility, or, if none, to the nearest Defense Contract Management Agency inspection office. In the event a Government representative or office cannot be located by the supplier, the AVEOX Purchasing Agent must be notified immediately."

NOTE: The supplier is required to hold all materials at supplier's facility until completion of Select Evaluation, at which time the supplier may ship to AVEOX or call for Source Inspection, if not completed.

3. Government Source Inspection

Government Source Inspection is required. The following statement applies (and is added) to the AVEOX Purchase Order: "Government Source Inspection is required prior to shipment from your facility. Promptly notify and furnish a copy of this Purchase Order to the Government Representative who normally services your facility, or, if none, to the nearest Defense Contract Management Office so that appropriate planning for Government inspection can be accomplished. In the event a government representative or office cannot be located, the AVEOX Purchasing Agent should be notified immediately."

4. AVEOX Customer Source Inspection

Items to be delivered under this Purchase Order require review by AVEOX's Customer Quality Representative at the supplier's facility. Parts, assemblies, processes, and tests are subject to detailed inspection by AVEOX's Customer Quality Representative prior to assembly, test and/or delivery.

When the product is ready for Source Inspection, the supplier shall notify AVEOX Quality Assurance and/or Buyer (805-915-0200 Ext.416 or 119) at least forty-eight (48) hours in advance, when practical, to permit scheduling of the Inspection. Upon request, the supplier shall make available to AVEOX's Customer Quality Representative; facilities, equipment, and personnel to operate the equipment as required.

5. AVEOX Source Inspection

All work performed under this order is subject to AVEOX'S inspection or test at the supplier's facility(s). AVEOX Supplier Quality Representative may elect to perform inspection or test on a sample basis or to the extent of one hundred (100) percent. In any event when the item(s) are ready for final inspection, the supplier shall notify AVEOX Quality Assurance that AVEOX Source Inspection is needed (805-915-0200 Ext.416 or 418) at least (24) hours in advance, when practical, to permit scheduling of the Source Inspection.

Upon request, the supplier shall make available to the AVEOX Supplier Quality Representative; facilities, equipment, and personnel to operate the equipment, as required. Only the AVEOX Quality Assurance Manager or his appointed designee may waive AVEOX Source Inspection.

NOTE: Shipments received by AVEOX which have not been Source Inspected when required by Purchase Order, will be promptly returned to the supplier.

6. AVEOX Customer Approved Sources ONLY

All material suppliers and special process suppliers such as surface treatment, heat treating, plating, welding, painting, cleaning, and non-destructive testing required for completion of this Purchase Order shall be performed only by AVEOX Customer Approved Sources specifically identified on this purchase order. Vendor must contact Aveox for direction should the customer approved supplier not be clearly defined within the body of the AVEOX PO prior to outsourcing the material.

NOTE: Use of non-approved suppliers shall result in rejection and return of material to supplier for Credit, Rework, or Replacement.

7. AVEOX Approved Sources ONLY

All material suppliers and special process suppliers such as surface treatment, heat treating, plating, welding, painting, cleaning, and non-destructive testing required for completion of this Purchase Order shall be performed only by AVEOX Approved Sources specifically identified on the current AVEOX Approved Supplier List.

Contact AVEOX Quality Assurance for verification of current AVEOX Approved Suppliers – 805-915-0200 Ext.416 or 418.

NOTE: Use of non-approved suppliers shall result in rejection and return of material to supplier for Credit, Rework, or Replacement.

8. Quality Management Systems

This clause provides the minimum Quality System Requirements for suppliers of direct materials, manufacturing, and special processes to AVEOX Inc.

Suppliers of direct materials, manufacturing, assembly, and special processes must initially meet this requirement, as applicable to their business and/or service, and maintain a Quality Management System that supports the requirements outlined herein. This clause also provides the contractual Quality Assurance Requirements being flowed to the suppliers from AVEOX customer contracts.

Additional specific AVEOX Inc. Supplier Quality Requirements may appear on individual purchase orders. It is the responsibility of the suppliers to review this document as well as the purchase order to ensure compliance with all applicable Supplier Quality Requirements.

Supplier shall notify AVEOX Inc. of any changes in its certification, registration, or accreditation within 48 hours of receiving notification of the change.

Supplier shall notify AVEOX prior to implementation of any change that may affect quality and/or product fit, form or function including, but not limited to changes in ownership, company name, management, equipment, obsolescence, or inspection techniques.

- a) Certificated: Supplier's Quality Management System and/or Special Process is currently certified by a recognized aerospace accredited registrar or special process registrar (Nadcap, etc.) for their applicable business model or service offered at time of receipt and processing of AVEOX Purchase Order and associated material, as applicable.
- b) Compliant: Supplier's Quality Management System is currently "compliant", but not certificated, to a recognized aerospace standard at time of receipt and processing of AVEOX Purchase Order and associated material, as applicable.
- c) ITAR Compliance: This document may contain information subject to the International Traffic in Arms Regulations (ITAR) or the Export Administration Regulation (EAR) of 1979. This information may not be exported, released, or disclosed to Foreign Nationals outside the United States without first complying with the export regulations.
A Foreign National is defined as any person who is not a US citizen, a lawful permanent resident as defined by 8 USC 1101(a)(20), or a protected individual as defined by 8 USC 1324b(a)(3). Foreign Person also means a corporation, business association, partnership, or any other entity that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments, and any agency or subdivision of foreign governments (e.g., diplomatic missions).
- d) Proprietary Product Control: The supplier shall notify AVEOX in writing of any changes proposed in product design, fabrication methods, materials, or processes of AVEOX proprietary products; and shall obtain AVEOX approval prior to effecting such proposed changes. In the event of AVEOX approval, supplier shall identify those articles on which the change is incorporated, including but not limited to changes of suppliers, changes of manufacturing facility and location.

- e) Proprietary Information: All specifications, blueprints, digital design data, and other material provided by AVEOX, are considered proprietary information. Copies of AVEOX's customer drawings, specifications and/or procedures supplied by AVEOX shall not be reproduced except for internal use. Such proprietary items shall be controlled to preclude their use for other than AVEOX contracted work and shall be returned or destroyed upon completion of the contracted work.
- f) Flow Down Provisions: AVEOX suppliers shall pass on to their sub-suppliers all applicable Quality assurance requirements stipulated in the Purchase Order including, customer requirements.
- g) Sub-Contracting/Outsourcing: Suppliers will not sub-contract or outsource any AVEOX material unless specifically directed to do so in the body of the purchase order. Any requests to sub-contract or outsource, will be directed in writing to the AVEOX buyer identified on the Purchase Order. If AVEOX finds the request acceptable the Purchase Order will need to be amended to reflect the name of the sub-contractor, facility address and contact information and a brief description of what work / process the sub-contractor will be responsible for completing. AVEOX reserves the right to recall any Purchase Order and associated material a supplier is unable to effectively process within the purchase order body at any time.
- h) Configuration Management and Revision Control: Suppliers are to use current process and material specifications unless otherwise directed in the body of the AVEOX Purchase Order. Design specifications provided by AVEOX must be current and/or match the revision noted in the body of the Purchase Order. Any discrepancies will be immediately brought to the attention of the AVEOX buyer identified on the Purchase order for resolution. No work is to begin at the supplier until all issues are resolved in writing. AVEOX suppliers will provide test specimens for design approval, inspection/verification, investigation, or auditing when applicable and upon request.
- i) Manufacturer's/Seller Controlled Products: The supplier shall furnish two (2) legible and reproducible copies of the manufacturer's catalog, drawing or blueprint which fully describes the items being supplied, along with the initial shipment of this Purchase Order.
- j) Records: The supplier shall maintain adequate records of all manufacturing, inspections, and tests. The records shall indicate the nature and number of observations, the number and type of deficiencies found, the quantities approved and rejected and the nature of corrective action taken. These records shall be available for review, and copies of individual records furnished, upon request, to AVEOX representatives. Records shall be kept for a period of no less than Ten (10) years after final payment for supplies or services unless otherwise specified in writing from AVEOX. Examples of these records are certified material test reports, personnel qualification records, purchase orders, process sheets, travelers, inspection records, and checklists, X-Ray records & reports, special processing, operational test reports, nonconforming records, drawings and revision history, calibration records, first articles and any other applicable records. If required by purchase order, electronic media for NC programs, test programs or drawings may be required for archive purposes at the direction of the AVEOX buyer.

All electronic records shall be retained, retrievable and readable on storage media capable of maintaining the data integrity for the full retention period.

Corrections to records shall be recorded, dated, and traceable to the qualified person making the change using a permanent marking method with the original data being legible and retrievable after the change.

Records associated with the processing of AVEOX or AVEOX customer owned material may be destroyed (shredded, etc.), after 10 years unless otherwise directed by AVEOX Management.

- k) Corrective Action: The supplier shall take prompt action to correct assignable conditions which have resulted or could result in non-conforming products or services being offered to AVEOX for acceptance, which do not conform to (1) the quality assurance provisions of the item specification, (2) inspections and tests required by the contract or purchase order, and (3) other inspections and tests required to substantiate product conformance. Documented corrective action statements shall include the nature of the defect, containment, immediate corrective action, root cause and root cause correction taken to prevent recurrence. Material identified as conforming delivered to AVEOX that is later determined nonconforming by AVEOX Quality Assurance may constitute a Supplier Corrective Action Report (SCAR) be issued for completion.
- l) Traceability: A lot identification code number which is unique to a single raw material lot, batch or heat or raw material must be permanently marked on each item of raw material. The lot number must be reflected on the associated test report or certification. Special Process suppliers are not responsible for permanently marking the material unless

specifically directed to do so in the body of the Purchase Order. However, lot segregation is required through all phases of receipt, processing, and packaging for return to AVEOX.

When two or more parts are joined in an assembly, manufacturing and inspection records shall identify each part-by-part number, revision, and if applicable, change number and serial/lot number.

The Supplier may determine lot size unless otherwise specified in the purchase order or design document. Serial/ lot numbers shall not be duplicated during the manufacture of the same part(s)/material(s).

If part(s)/material(s) are scrapped or rejected, their serial/lot numbers shall not be reused. Unless otherwise specified in the purchase order the Supplier shall maintain traceability records on file and available for review by AVEOX.

- m) Acceptance Authority Media: Supplier is required to implement necessary controls and awareness, including records of training, on Acceptance Authority Media requirements as defined in AS9100 and Federal Aviation Regulation Title 14, Chapter 1, Sub-Chapter C, Part 21, Section 21.2. The supplier is subject to compliance audits from AVEOX, AVEOX Customers, Federal Aviation Administration, Defense Contract Management Agency representatives and other relevant interested entities.
- n) Material Substitutions: Material substitutions or replacement is not permitted, unless specifically instructed in writing from AVEOX with adequate lot segregation controls in place.
- o) Counterfeit Material Prevention Program: The supplier shall implement a system to prevent and mitigate the use of counterfeit parts. Supplier shall comply with the requirements of AS5553 for electronic components and AS6174 for non-electronics product. The system shall require that all applicable parts (e.g., electrical components and fasteners) are procured from the Original Equipment Manufacturer (OEM) or an OEM-franchised or authorized distributor. Procurement from "Brokers" is strictly prohibited. If purchase from the OEM, OEM-franchised, or authorized distributor is not possible or practical, the system shall provide a process for validating authenticity of the purchased parts including applicable certifications, test/inspection results, and all other documentation that provides identification and verification to design, traceability, and acceptable packaging and handling.

The Supplier shall certify in writing that parts are traceable to the Original Equipment Manufacturer (OEM), OEM-franchised, or authorized distributor. Should suspect/counterfeit parts be furnished under the purchase order, these items shall be impounded and destroyed by AVEOX. The Supplier shall promptly replace such suspect/counterfeit parts with parts acceptable to AVEOX and the Supplier shall be liable for all costs including, but not limited to, AVEOX's internal and external costs.

The supplier shall request and obtain approval from AVEOX prior to the use of shipment of material with broken traceability or material provided from a non-authorized supplier.

- p) F.O.D. Control / Prevention: The Supplier shall be in compliance with AS9146, FOD prevention Program, and establish and maintain a written Foreign Object Debris (FOD) control program assuring work is accomplished in a manner preventing foreign objects or material from entering and remaining in deliverable items or contaminating deliverable items.

The following items constitute the minimum requirements under this clause:

- The Supplier shall establish and implement a FOD program procedure.
- The Supplier shall identify a single FOD control person responsible for implementing the FOD prevention program.
- Employees shall be trained in FOD recognition and response. Records of such training must be available upon request.
- Establishment and maintenance of a training program for the FOD program.
- The Supplier shall document and investigate all FOD incidents assuring elimination of the root cause.
- Housekeeping of the work area shall preclude the risk of FOD incidents.
- Control of tools, parts, and material shall preclude the risk of FOD incidents.
- Tooling, jigs, fixtures, test equipment, and handling devices shall be maintained in a state of cleanliness and repair to prevent foreign object damage.
- Assessment of proposed process changes to determine potential FOD issues.

- Procedures relating to closing inaccessible or obscured areas or compartments during assembly and packaging shall provide for inspection for foreign objects/materials.
 - AVEOX shall have the right to perform inspections and/or audits as a method of verification that the Supplier's FOD control program is functional, documented, and effective. The Supplier is strongly encouraged to expand and tailor the FOD program for their product lines.
- q) Raw Material Marking: The raw material supplier must, at a minimum, identify the heat number and Purchase Order number on the raw material certification being supplied to AVEOX. Utilizing vibration marking tools, electrochemical etching, steel stamping of fluid marking materials, solid marking materials or a removable tag the supplier will physically identify the material with the heat number at a minimum and Purchase Order number (when allowable).
- r) Segregation of Heat Lots: When more than one heat lot of raw material, casting or forging is being supplied, the quantity of each heat lot must be noted on the certification of conformance, packing slip and invoice and each heat lot must be separately packaged or bundled.
- s) Prohibited Material:
- Mercury – The use of Mercury bearing instruments or equipment is prohibited during fabrication, assembly, testing or any phase of manufacture of any material furnished under this Purchase Order. Certification to this effect must be furnished with each shipment. During assembly, testing, storage and shipment, components shall not come in contact with materials containing halogens in excess of 250 ppm.
 - Lead – or other low melting point metals, their components, or materials containing low melting metals as a basic chemical constituent, shall not be used in direct contact with stainless-steel surfaces of any items, at any time. This prohibition includes tooling, fixtures, marking materials, fluxes, temperature crayons, paints, coating, etc. used during fabrication.
 - Conflict Minerals - Material must comply with Section 1502 of the Dodd-Frank Wall Street Reform Act. This requirement is being flowed down to your company because some of AVEOX's customers are publicly traded and therefore, the regulation requires that publicly traded companies using materials in their manufacturing process defined as "conflict minerals" must identify and report on the source of those minerals. AVEOX suppliers must not produce any products that were smelted or originated from; the Democratic Republic of Congo, containing directly/indirectly or procured the following minerals for sale or distribution to AVEOX in any manor: (Gold, Cassiterite, Wolframite, Columbite-tantalite, Tin, Tungsten, Tantalum)
- t) Calibration System/Control/Positive Recall: The supplier shall control the calibration of all measuring and testing devices against certified standards traceable to the National Institute of Standards Technology (NIST). At a minimum, the Calibration Program shall be in accordance with ISO 10012 OR ISO 17025 calibration system requirements.
- u) AVEOX Furnished Tooling/Gages: All tooling, gages or test equipment fabricated by the supplier at AVEOX expense, or supplied by AVEOX for use by the supplier shall be considered the property of AVEOX and shall be used only for production of articles on AVEOX Purchase Orders. Such tooling, gages or test equipment shall be inspected, controlled, and maintained as follows:
- Upon receipt, the supplier shall examine / inspect tooling, gages or test equipment to assure damage has not occurred during shipment. On all items found to be damaged, the supplier shall immediately contact AVEOX Quality Assurance for disposition instructions.
 - The supplier shall be responsible for controlling and maintaining such tooling, gages, and test equipment to prevent damage (other than normal wear) or deterioration. Tooling, gages, or test equipment damaged while in possession of the supplier will be debited to the supplier's account. Tooling, gages, or test equipment shall not be reworked or modified without prior authorization by AVEOX in writing.
 - Tooling, gages, or test equipment subject to calibration shall be returned by the supplier to AVEOX sufficiently in advance so that calibration can be accomplished on or by the designated due date. Repeated failure to do so will result in suspension of further loaning of tooling, gages, or equipment to the supplier.
 - The supplier's control of tooling, gages or test equipment shall be subject to review by AVEOX authorized representatives.
- v) Sample Inspection: Sampling inspection procedures used by the supplier to determine quality conformance shall be as established in Zero Acceptance Number Sampling Plans as recommended by the Department of Defense or specifications

applicable to the product being supplied. Regardless of specification allowances; no nonconforming material will be accepted at any time. The entire lot will be inspected for the same nonconforming characteristic on the detection of one (1) nonconforming piece (C=0). Manufacturing and machining suppliers will use AVEOX's current Approved Sampling Plan and shall be non-bias and random in nature during the entire manufacturing / machining process. (i.e. – first, middle & end of each lot). Suppliers may submit their internal sampling plan to AVEOX Supplier Quality Engineer for review and approval.

- w) Report of Nonconformance: Any material that will not meet final requirements of the drawing or purchase order must be reported to AVEOX. A preliminary disposition must be received from AVEOX Quality Assurance or the AVEOX Buyer prior to shipment of nonconforming parts. The AVEOX Supplier Nonconformance Waiver (Form 6890185-00) **must** be requested through AVEOX Supplier Quality or Purchasing Department. If approved, a copy of the completed form must accompany each shipment of related parts.

Supplier shall inform AVEOX within 24 hours of discovery of suspect nonconforming product having been shipped regardless of destination.

The appropriate certifications shall so state the exact nonconformance, quantity of conforming and nonconforming, and authority to ship. AVEOX may formally document and process any nonconforming material received from the supplier using internal documentation and processing or scrap the material upon receipt following approved internal scrap processing procedures.

- x) Resubmitted Product: When material is resubmitted to AVEOX after having been rejected back to the supplier, documentation that accompanies the material shall be identified with the AVEOX Rejection Report Number. The shipping document shall indicate whether material was "reworked", "replaced" or "returned as is". Resubmitted articles shall not be mixed with new materials and lot segregation **MUST** be maintained. Evidence of re-inspection with recorded actuals and/or range of actual measurements taken, of reworked characteristics must be provided with the shipment.
- y) Control of Scrap: Supplier will segregate and return all scrap to AVEOX upon completion of work for each purchase order. All scrap material will be bagged and tagged separately from conforming material, with a brief description of the reason for scrap.
- z) Cost of Poor Quality: Supplier will take appropriate action to minimize excessive nonconformance's and scrap and correct process escapes to preclude recurrence.
- aa) On-Time Delivery: Supplier will maintain a minimum, or better than, 90% monthly rolling average of on-time delivery to AVEOX Purchase Order due dates. Suppliers that fall below 90% on-time monthly rolling average will take immediate action to correct issues impeding acceptable on-time results. Suppliers are also expected to immediately notify AVEOX buyers when they will not be able to meet purchase order due dates, to discuss a recovery plan and possibly amend the purchase order due date. Amending PO due dates will be at the discretion of the AVEOX buyer.
- bb) Accident Investigation Support: If the Government or AVEOX Customer elects to conduct an investigation of an accident involving aircraft, missiles or space launch vehicles in accordance with FAR 52.228-700 the supplier shall cooperate fully and assist in the accident investigation when required by AVEOX, AVEOX Customer or the Government under any Purchase Order.
- cc) Contribution to Product Safety: Supplier shall ensure personnel are aware of their contribution to product safety e.g. individual accountability, compliance to process, attention to detail, "Human Factors", potential impact relating to product issues.
- dd) Importance of Ethical Behavior: Supplier shall ensure personnel are aware of the importance of ethical behavior e.g. code of conduct, management/employee working relationships, fair treatment, employee work recognition, confidential reporting mechanisms, protecting anonymity, no blame culture.

9. Workmanship

All items on this Purchase Order shall be fabricated and finished in a skilled, high quality manner. Attention shall be given to: freedom from blemishes and burrs, thorough cleaning, and removal of foreign material (F.O.D.), legible and accurate identification, general appearance, legible and accurate processing, inspection, and certification documentation.

10. Part Identification

All items supplied under this Purchase Order shall be identified as stated on the drawing and/or Purchase Order, and when applicable, heat lot number, in accordance with MIL-STD-129 & 130, unless otherwise specified on the purchase order or Engineering drawing.

11. Packaging and Shipping

Parts shall be packaged in containers bearing the AVEOX part number and supplier's standard part number, when applicable. Materials are to be shipped in containers or pallets for large items and should be in keeping with good commercial practice to preclude any possible damage incurred during transit and storage at buyer's facility. Each package shall be identified with the Purchase Order Number on the outer container. All parts must be protected from F.O.D. and corrosion at all times. **ALL LOTS SHALL BE PACKAGED INDIVIDUALLY.**

11a Electrostatic Discharge Control

The Supplier shall create and maintain an electrostatic discharge plan in accordance with the requirements of ANSI/ESD S20.20.

11b Printed Circuit Board Packaging

Each printed wiring board/flex shall be packaged individually in silver saver bags that conform to MIL-B-131H, Type I, Class I or II; MIL-B-81705B, Type I; or MIL-D-117E, Type III, Class E, Style 1. A desiccant and humidity indicator shall be placed inside each bag and the bags shall be heat-sealed. There shall be adequate space between the heat seal and the board to allow opening and resealing the bag a minimum of three times. At a minimum the part number, date code, and panel location designator or serial number shall appear on each bag.

11c Packaging of Machined Product/Materials

The supplier shall clean and package each part in a clean, FOD free packaging to prevent abrasion, contamination, corrosion, and/or damage. If required, using an appropriate corrosion preventive prior to packaging. Package shall be pressed closed (zipped, heat sealed, taped). Unit packaging shall provide for safe removal, repackaging and storage of part(s)/material(s).

External opening and/or threaded part(s)/material(s) must be protected by the use of plugs and/or caps to prevent damage.

11d Packaging of Synthetic Rubber and Elastomer Products

Rubber products shall be packaged in a manner to minimize deterioration due to such factors as temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, and rodents.

11e Drop Shipments

Unless otherwise specified, the supplier shall notify AVEOX of part number and quantity when materials are dropped shipped.

11f Drop Shipments for Processing

Unless otherwise specified, the processor shall notify AVEOX of the part number and quantity of materials received from the drop shipper before processing begins. Should the processor use sub-tier processors for additional functions this requirement shall be flowed down to the sub-tier processor(s).

12. DFAR 252.225-7014 Supplement Compliant Material Only

Material certifications and associated test reports must be furnished to AVEOX for all designated domestic "specialty metals" per DFARS 252.225-7008 and DFARS 252.225-7009, should clearly state that all materials are melted in the United States or another qualifying country per DFARS 252.225-7002. (e.g. Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Greece, Israel, Italy, Japan, Latvia, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom of Great Britain and Northern Ireland)

13. General Certification Requirements

All certifications and reports must contain the following information at a minimum, as shown in **TABLE 1**:

SEE NEXT PAGE FOR TABLE 1

TABLE 1

Certification & Report Requirements**	COC (14)	Process Cert (15)	INSP RPT (16)	Cert Mtl Tst Rpt (21)	Raw Mat'l Cert (22)	Func Tst Cert (18)	Func Tst Rpt (19)
Date of Issue	X	X	X	X	X	X	X
P.O. & Item No.	X	X	X	X	X	X	X
Spec. & Revision	X	X	X	X	X	X	X
Title, Printed Name & Signature of Authorized Rep.	X	X	X	X	X	X	X
Company Name and Address	X	X	X	X	X	X	X
Description of Process		X					
AVEOX Work Order / LOT#	X	X	X			X	X
Material Type, Condition & Form		X	X	X	X		
Heat No. *		X	X	X	X		
Qty. Run, Qty. Acc., Qty. Rej.	X	X	X				X
Wording per AVEOX QA Clause	X	X				X	
Part Number & Revision	X	X	X	X	X	X	X

*Must include reference to melt or heat lot number

** The number within the parentheses () refers to the AVEOX Supplier Quality Requirement Clause Number

14. Certificate of Conformance

A Certification of Compliance addressing each item or lot of material shipped against the PO must accompany each shipment. AVEOX part numbers, Mil-Spec devices, or Supplier equivalent identification (see further details below) must be referenced as a part of the certification format.

The supplier must maintain "Chain of Custody" to material origin, for all items delivered to AVEOX. Evidence of full chain of custody documentation must be made available to AVEOX upon request.

Mil-Spec fasteners used shall be of the latest revision of the applicable specification when received.

Supplier or sub-tier supplier certifications for specific processes or tests are acceptable provided they reference the exact requirements (i.e., drawing, specification, test or process that was performed) on their certification. Material/chemical/physical test reports and Certificate of Compliance (C of C) for processes performed by suppliers are kept on file at the supplier for verification.

The Certificate of Conformance will state at a minimum the following, or any variation thereof:

"We hereby certify that all products/material supplied with this certificate have been manufactured, processed and inspected in accordance with all contract/purchase order requirements and conform to all OEM or industry standard(s), engineering design, and process data".

"We also hereby certify; that no material substitutions were made and lot segregation has been maintained throughout all processing".

"All inspection/test reports and records indicating completed processing and conformity to design and contract/purchase order requirements are retained on file for a minimum of 10 years or as required by contract/purchase order and available for review upon request".

Note: - All procured material certifications and certification/test result packages, (excluding procured special processors), must provide thorough traceability and chain of custody to point of origin.

(See Table 1 for more certification content requirements)

14a Functional Mercury

Each shipment is to be accompanied by one legible and reproducible certification stating that the delivered item does not contain any functional mercury (i.e. mercury that is required for the proper operation of the item), and is free from mercury contamination (i.e. during processing the item has not come in direct contact with mercury or any of its compounds).

15. Special Process Certification

For the purposes of this quality clause the term supplier refers equally to prime suppliers and their contractors. All special processing required via a government, ASTM, or AVEOX process specification shall be performed by NADCAP and/or AVEOX approved suppliers only.

This QA clause applies to (but is not limited to) soldering, welding, brazing, heat treating, magneforming/swaging, plating/coating, cleaning/etching, passivation, electro polishing, acid pickling, impregnating, bonding, high speed balancing, glass sealing, shot peening, bead blasting, silk-screening, EDM, Waterjet Cutting, Painting, Magnetic Particle inspection, Penetrant inspection, and X-Ray/N-Ray inspection.

All employees who are involved with special processes must possess a valid certification of training in the related processes as appropriate.

It is the responsibility of the supplier to request and ensure the supplier has and understands all required specifications. Should the prime supplier elect to subcontract special processing, the prime must receive written approval for the subcontractor selected prior to the processing of the items. All AVEOX PO requirements imposed on the prime document shall be flowed down to the subcontractor by the supplier.

For all processes required by Purchase Order and performed by the supplier or by their sub-tier suppliers, the supplier shall furnish the original certification/test report or an exact duplicate/copy issued by the supplier or the sub-tier supplier that performed the process.

Each shipment must include a report/certification with the following information:

- AVEOX Purchase Order number
- Part Number(s)
- Serial and/or lot number(s), of the part(s)/material(s) processed (if applicable)
- Objective evidence demonstrating compliance with the applicable process shall be made available upon request.
- Hardness test results for heat treatment, destructive test results, etc.
- The certification/test report shall include a complete description of the special process performed (name, applicable process specification, type, class, grade, etc.), the quantity and description (parts number, name) of the items processed and when applicable a statement that the process was performed by certified operator(s). (See Table 1 for more certification content requirements).
- Supplier's name and address
- When special processor is other than the special processor stating the special process was performed per the applicable drawing/specification requirements. Certification must include the processor's name, address and be signed and dated by a company official.
- Each certification must be signed and dated by a company official of the Supplier and/or Processor attesting to the acceptances of the process performed of the required specification(s)

The Special Process Certification will state the following, or any variation thereof, noted below:

"We hereby certify that all products/material supplied with this certificate have been manufactured, processed and inspected in accordance with all contract/purchase order requirements and conform to all OEM or industry standard(s), engineering design, and process data".

"We also hereby certify that; no material substitutions were made and lot segregation has been maintained throughout all processing. All inspection/test reports and records indicating completed processing and conformity to design and contract/purchase order requirements is retained on file for a minimum of 10 years or as required by contract/purchase order and available for review upon request".

The following criteria shall be used to define original certification/test reports or an exact duplicate/copy:

- Certifications/documents that have been written in ink, typed, or typed carbon copies, signed by a responsible official of the issuing organization in ink, with printed or typed name of that official. Signature stamps are not acceptable.
- Computer prepared certifications/documents that have been signed by a responsible official of the issuing organization in ink, with printed or typed name of that official.
- Reproduced copies of certifications/documents that have been attested and notarized in ink as true copies of the original certifications/documents.

NOTE: Generally, most special process suppliers will provide extra copies of certifications/test reports that meet the above requirements upon request. It is the supplier's responsibility to assure that sufficient copies of such certifications are obtained and available upon request.

15a Weld Sample

Weld one QA sample using weld schedule and production set-up prior to production run. Section sample and visually inspect at 20X magnification in accordance with the master traveler or drawing. Include sectioned sample with the parts shipment to AVEOX. In addition, the supplier must reference the P.O. and part number on their certification.

15b Heat Treat

All heat treat suppliers must comply with AVEOX Quality Clause 15 along with this quality code. The supplier must provide a copy of the chart(s) that confirm that treat time and temperature requirements have been met.

15c Plating and/or Coating

Provide a test panel and/or gauge block representative of the processed parts. Mask a portion of the panel or gauge prior to processing so that the base material can be accurately measured with a micrometer. In addition, the supplier must reference the PO and part number on their certification.

15d Soldering

All soldering on deliverable product shall be soldered and inspected in accordance with J-STD-001 Class 3 and IPC-610. The supplier shall provide certification that soldering and inspection was performed in accordance with one or both of these standards.

All "blind" through hole and any other solder connections that cannot be visually inspected after solder flow MUST be 100% X-Ray inspected to verify adequate solder flow has been achieved per specification. X-ray records, films, technique sheets, and reports must be available upon request for a minimum of 10 years from fulfillment and final delivery of products on the contract / purchase order.

16. Inspection Report

The supplier shall furnish a copy of the completed internal Inspection Report along with shipment of the items to AVEOX on physical/dimensional characteristics created per AVEOX PO requirement. The Inspection Report (X-Ray, NDT, DT, Microscopic, Hardness, Metallurgical, etc.) must indicate the AVEOX PO#, design/dimensional requirement, range of actual dimensions obtained during measurement of the sample items, total lot quantity, sample size, quantity accepted, quantity rejected, and date of inspection to serve as objective evidence of inspection. (See Table 1 for more inspection report content requirements).

16a First Article Inspection Report

Vendors that are certified to ISO9001/AS9100 must supply a First Article Inspection Report (FAIR) documented on the latest revision of the AS9102 form. The first article inspection report and the part used should be packaged separately, clearly identified, and shipped with the production parts on the first delivery of a new lot.

Vendors that are not certified to ISO9100/AS9100, may submit their own detailed inspection report as long as it meets the following report requirements:

1. The supplier report must list AVEOX part number, part number revision, purchase order number.
2. The supplier report must list all drawing characteristics with the tolerances in an adjoining column, plus notes.
3. The supplier report must include evidence of conformance to all elements, including material and processes.
4. The supplier report must record each measured condition.

5. The supplier report must record any calibrated gage/tool & its serial number used for each drawing characteristics.

AVEOX reserves the right to witness the actual inspection and/or require spot checks to verify the data. The first article inspection report and the part used should be packaged separately, clearly identified, and shipped with the production parts on the first delivery of a new lot. If subsequent shipments are from the same lot as a previous shipment a copy of that first article report is acceptable.

17. Production Part Approval Process (PPAP) Required

Supplier will perform all steps prior to and during processing in accordance with AVEOX PPAP requirements as stated in the body of the purchase order.

18. Functional Test Certificate

The Functional Test Certificate must state the following, or any variation thereof, noted below:

"We hereby certify that all products/material supplied with this certificate have been tested and inspected in accordance with all contract/purchase order requirements and conform to all OEM or industry standard(s), engineering design, and process data".

"We also hereby certify that; no material substitutions were made and lot segregation has been maintained throughout all processing. All inspection/test reports and records indicating completed processing and conformity to design and contract/purchase order requirements is retained on file for a minimum of 10 years or as required by contract/purchase order and available for review upon request". (See Table 1 for more certification content requirements).

19. Functional Test Reports

Furnish test results (data sheets) with documented actual reading for all functional test parameters. Actual inspection/test reports must be attached to the packing sheet for each shipment. These reports must reference the purchase order number, supplier's name and address, part number, part name and, where applicable, serial numbers, and date and run time of units, including actual results. These reports must be validated by an authorized supplier representative. If equipment of sufficient capacity to inspect/test the articles is not available on-site, the items must be inspected/tested in a laboratory approved by AVEOX. In addition, the supplier must reference the PO and part number on their certification.

Test reports must be identifiable with each individual item submitted by lot number, and signed by a responsible representative of the supplier. (See Table 1 for more certification content requirements).

20. Original Copy of Test Reports

Supplier shall provide original copy of test report covering the full range of required industry specification/standard conformance tests as required on the purchase order.

21. Typical Certified Material Test Reports (CMTR)

Supplier to furnish manufacturer's typical certified material test reports (mill test reports) for the raw material supplier or used during fabrication under this Purchase Order. (See Table 1 for more certification content requirements).

22. Raw Material Physical/Chemical Test Reports

Supplier to furnish quantitative physical and/or chemical characteristics of the raw material supplied or used during fabrication under this Purchase Order. Test reports must attest to the acceptability of all characteristics required by the material specification and shall be identifiable to the specific material tested. (See Table 1 for more certification content requirements).

23. Test Specimens (Castings)

The supplier shall furnish with each shipment of castings:

- a) Mechanical Properties: Test bars produced from the same heat of material as the castings supplied. The quantity of test bars to be submitted shall be specified on the Purchase Order, drawing or specification. Specimens shall conform to Federal Test Standard Number 151. Test bars shall be permanently identified with the suppliers' name or trademark, melt/heat number, heat lot number, alloy identification and all mechanical properties with requirements and actuals.
- b) Chemical Composition: One (1) spectrographic disc representative of the entire melt or written report providing the same information. The disc or report shall be permanently identified with the supplier's name or trademark, melt/heat number, heat treat lot number, alloy identification and all chemical properties with requirements and actuals.

24. Test Specimens (Forgings)

The supplier shall furnish with each shipment of forgings:

- a) Mechanical Properties: Test produced from the same heat of material as the forgings supplied. The quantity of test bars to be submitted shall be as stated on the Purchase Order, drawing or specification. Specimens shall conform to Federal Test Standard Number 151. Test bars shall be permanently identified with the suppliers' name or trademark, melt/heat number, heat lot number, alloy identification and all mechanical properties with requirements and actuals, and must have the same percentage of reduction as the parts supplied.
- b) Chemical Composition: One (1) spectrographic disc representative of the entire melt or written report providing the same information. The disc or report shall be permanently identified with the supplier's name or trademark, melt/heat number, heat treat lot number, alloy identification and all chemical properties with requirements and actuals.
- c) Grain Flow: For aluminum forgings, the grain flow requirements of AMS-A-22771 are to be met. All other material forgings shall meet the grain flow requirements, as required, by industry standard specifications and/or other engineering design data unless otherwise directed on the AVEOX purchase order.

25. Latent Raw Material Defects

Latent raw material defects detected during subsequent processing of castings, forgings, extrusions, and raw bar/rod material will be the responsibility of the supplier.

26. Consumables and Limited Shelf-Life Material

Each package of consumables and life sensitive material shall be marked (as applicable), with date of cure and/or manufacture, date of expiration or shelf life limitation, part number, purchase order number, quantity, batch or lot#, compound number (as applicable), and manufacturer's identification (if different than the part number on the purchase order), applicable specification number and any special storage requirements. Products must have 75% shelf life remaining upon receipt at AVEOX, any exceptions to 75% life remaining must be noted in the body of the purchase order. The supplier will include the applicable OSHA/GHS Material Safety Data Sheets with each product delivered and ensure that all packaging and containers are properly marked with OSHA/GHS MSDS and PSD information for handling and storage as required by federal, state, and local regulatory agencies.

26a Synthetic Rubber Products

Each package of synthetic rubber products shall be marked with date of cure, shelf life, expiration date, compound number, part number, quantity, Purchase Order, drawing or specification. Cure on "O" rings shipped to AVEOX shall be within the limits imposed by MIL-HDBK-695 and/or AVEOX Purchase Order. Items which have shelf-life limitations shall have at least 75% of the shelf life remaining upon receipt at AVEOX unless otherwise noted in the body of the Purchase Order.

27. First Piece Inspection

It is recommended that the supplier submit a fully processed sample first piece to AVEOX along with a formal dimensional report for AVEOX review and approve prior to making production item(s). It is emphasized that production parts should not to be run prior to formal first piece approval by AVEOX Quality, unless so authorized by AVEOX Management to support schedule and minimize machine down time. Should the supplier elect to run production without or pending first piece acceptance, the supplier does so at his own risk and will be fully responsible for nonconformance's identified after completion of a production run without 1st piece acceptance by AVEOX Quality.

28. Material and Processing Must Comply with Boeing H900 Requirements

Requirements for producing and processing any material designated for U.S. Government Defense Contracts applies to this purchase order. Flow down of this requirement is mandatory throughout all levels of the supply chain.

29. Material Sample Required

A material sample must be furnished to AVEOX with the first shipment of the product, unless otherwise specified. The size of the sample shall be determined by AVEOX or the material specification. The sample shall be cut or molded from the same material lot as the product supplied. In addition, the supplier must reference the PO and part number on their certification.

Note: If the sample does not pass its material specification tests, the product supplied with the sample shall be considered unacceptable and may be returned to the supplier.

30. AVEOX Furnished Material/Components

It is the Supplier's responsibility to inspect AVEOX-furnished material/components upon receipt for identification, count, condition, and assurance of the presence of required documentation. Nonconforming material or material not fitting the Supplier's tooling, fixtures, machines shall be identified, segregated, and withheld from further processing and AVEOX shall be notified.

The Supplier shall ensure that handling, preservation, and storage are such that material is protected at all times. AVEOX furnished tooling and/or excess material shall be identified on Supplier packing lists and returned at the completion of the order.

When material is AVEOX-furnished and the Supplier Inspection Plan requires a certificate of conformance (C of C), record the words "AVEOX-Furnished" in the C of C along with the specification or part number and lot or serial number of the material. If acceptance data is supplied with the AVEOX-furnished material, include the data in the inspection data package when required by the Supplier Inspection Plan

31. 100% Inspection Required

Supplier shall perform 100% functional, electrical, dimensional inspection, as appropriate, on finished good to ensure integrity of the item/lot. Unless otherwise specified, procedures shall be implemented to ensure that eye examinations, including visual acuity and color vision, as applicable, are administered by a medically qualified /trained person to all individuals performing visual inspection, other product acceptance activities and/or M&TE calibration that require visual acuity.

- Intervals shall not exceed one year.
- Individuals shall be tested in at least one eye, either corrected or uncorrected.
- Color Perception testing is required one time only. Individuals shall be capable of adequately distinguishing and differentiating colors used in the method for which certification is required, the process being performed or inspection activity
- Records shall be retained for each individual.

32. Tin Whisker Management Plan

Supplier shall adopt the practice outlined in the GEIA-STD-0005-2 level 2B requirements for mitigating the risk of Tin Whiskers. Multiple mitigation methods shall be employed.

The supplier must not use any Tin solders that contain less than 36 percent lead (Pb) composition. The gap of any surface containing tin plating will exceed 250 microns prior to coating.

Materials found in noncompliance to GEIA-STD-0005-2 level 2B, shall be rejected, and reworked to a conforming condition or submitted to Aveox Quality on a supplier request for deviation, for MRB review and formal disposition in accordance with Aveox procedures.