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Q CLAUSES QUALITY REQUIREMENTS

1.0 PURPOSE

This document establishes and flows down requirements applicable to items ordered under the Purchase Order of which this Form, is a part, to assure that such items are of the required quality and reliability.

2.0 DEFINITIONS

- A. The term "purchase order" means the purchase order, subcontract or other written agreement with the Seller (supplier) in which this form is incorporated by reference.
- B. The term "Buyer" means Qual-Pro Corporation.
- C. The term "Seller" means the legal entity which is the contracting party with the Buyer with respect to the purchase order.

3.0 QUALITY ASSURANCE REQUIREMENTS

The following General Quality Assurance Requirements (A through J) are imposed on each Qual-Pro purchase orders, and all Sellers are required to comply. Acceptance of the Qual-Pro purchase order constitutes agreement by the Seller to comply with these General Quality Assurance Requirements in addition to any specific Q-Clauses indicated on the Qual-Pro purchase order..

A. PROHIBITED PRACTICES

- 1. **Unauthorized Repairs:** Without Buyer's approval, Seller may not repair by any method (i.e., splicing, welding, brazing, soldering, adhesives or other means) parts damaged or found to be faulty during fabrication, if parts were not fabricated/assembled by supplier.
- 2. **Change in Approved Processes, Materials or Procedures:** Seller shall not change any Buyer approved process (internal or external), material or procedure without prior Buyer approval. As to any product which has been subjected to Buyer or Government specified qualification procedures to qualify the product or to permit the Seller to become a qualified source for the product, the Seller shall not change any process material or procedure from that used to qualify without prior notification to Buyer and approval by the Buyer or the Government, as appropriate.
- 3. **Resubmittal of Rejected Items:** Articles rejected by the Buyer and subsequently resubmitted to the Buyer shall be clearly and properly identified as resubmitted articles. Seller's shipping document shall contain a statement that articles are replaced or reworked articles and shall also refer to Buyer's rejection document.
- 4. **Notification of Facility Change:** Seller shall not relocate any production manufacturing and/or processing facilities during performance of the purchase order, without promptly notifying Buyer and affording Buyer an opportunity to examine such facilities for compliance with Quality Assurance requirements, including any necessary approvals.

B. BUYER SURVEYS, SURVEILLANCE, AUDITS, AND INSPECTION

- 1. Buyer has the right to conduct surveys, audits and surveillance of Seller's facility, or those of Seller's subcontractors or suppliers with prior coordination with Seller, to determine the capability to comply, and to verify continuing compliance, with the requirements of the purchase order.
- 2. Buyer and Buyer's customers shall be afforded the right to verify at the Seller's facilities or at sub-tier supplier facilities that product conforms to the specified requirements. Such verification shall not be used by the supplier as evidence of effective control of quality by the subcontractor. Verification by the customer shall not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by the customer.

C. CUSTOMER SOURCE INSPECTION

Qual-Pro's end customer has the right to inspect any or all of the work included in this procurement, at Seller's facilities or at sub-tier supplier facilities. The Seller's quality or inspection system and manufacturing processes are subject to review, verification and analysis by authorized Qual-Pro Customer Representatives. Verification by the customer does not constitute proof of quality control to ensure acceptable product nor does it

waive future rejection by Qual-Pro or the customer regarding non-conforming or defective material.

D. MEASURING AND TEST EQUIPMENT

Supplier shall establish and maintain documented procedures to control, calibrate, and maintain, inspection measuring and test equipment used by the Seller to demonstrate the conformance of product to the specified requirements. This system shall meet the requirements of ISO 10012-1, MIL-STD-45662, or equivalent, as a minimum.

E. NONCONFORMING MATERIAL

Seller shall provide for control, segregation, and identification of nonconforming material detected at the Seller's facility. Decisions to accept nonconformances (variances from Buyer drawings and specifications) detected at the Seller's facilities, must be made by the Buyer unless otherwise specified in the purchase order. Buyer must authorize in writing prior to shipment of nonconforming material.

F. INSPECTION RECORDS

Seller shall maintain records for a minimum of 10 years, all inspections and tests performed on items delivered to the Buyer. These records shall identify nonconformances and shall be made available for Buyer's review.

G. SAMPLE INSPECTION

Sampling Plans used by the Seller shall conform, as a minimum, to ANSI/ASQ Z1.4. Buyer's acceptance is based on C=0.

H. CERTIFICATION OF CONFORMANCE

With each shipment of items covered by this purchase order, Seller shall submit a certificate of conformance, signed by a responsible representative, which shall constitute a representation by the Seller that:

- 1. Materials used are those which have been specified by the Buyer, and that the items delivered were produced from materials for which the seller has on file, reports of chemical or physical analysis, and any other required evidence of conformance of such items to applicable specifications.
- 2. Processes used in the fabrication of items delivered were in Compliance with applicable specifications forming a part of this purchase order.
- 3. The items as delivered comply with all specifications and requirements of the purchase order.
- 4. Certificate of Conformance will show the Qual-Pro part number and the manufacturers' part number, part revision revision, purchase order number, purchase order revision and signature accompanied by title, of the responsible person.
- 5. In the case of drop shipment, a copy of the above certificate shall be submitted directly to the Buyer at the time of shipment.

I. AGE CONTROL

The Seller shall have an effective system of age control for items whose acceptability is limited by the age of the item. The system must include a method of identifying the age of such items and provisions for the rotation of stock.

- 1. Seller shall show on each container of materials having a limited or specified shelf life (both Seller's in-plant containers and containers in which material is delivered to Buyer) the cure or manufacture date, expiration date, lot or batch number, and special storage and handling conditions applicable to the contents. This information shall be in addition to the normal identification requirements of name, part or code number, type, size, quantity, etc. Special handling conditions shall be recorded on certifications and shipping documents covering the material as delivered to the Buyer, in addition to normal identification information.
- 2. Time lapse between cure of manufacturing date and date of schedule receipt to the Buyer under the purchase order shall not exceed one-third (1/3) of the shelf life of the material without prior written waiver of Buyer as to each shipment.

J. PRESERVATION AND PACKAGING

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1. All material intended for the Buyer shall be protected against the usual hazards of corrosion, contamination, deformation, or other spoilage at the Supplier's facility and in transit.
2. All materials intended for the buyer shall be packed with suitable protection to prevent damage through handling, during storage at the Supplier's facility, and in transit.
3. All electrostatic sensitive material shall be protectively packaged to avoid damage due to electrostatic discharge.

Government source inspection is required prior to shipment from Seller's facility. Upon receipt of this purchase order, Seller is required to notify Buyer of the schedule for inspection.

Q-8 INSPECTION/TEST REPORTS

- A. Seller shall submit with each shipment, a report for the delivered end items or assemblies with the following information included as a minimum: part number, revision, purchase order number, lot number, lot quantity, inspection sample size, characteristics/parameters inspected and/or tested, inspection test data, quantity passed/rejected by characteristic, date of inspection/test, and signature/stamp of the Seller's inspection/test representative. If Go/No-Go test method is used, test program must be identified. In case of a drop shipment, a copy of the report shall be submitted directly to the Buyer at the time of shipment.
- B. Records of inspections/tests and raw material certifications relevant to this procurement shall be retained for a period of:
 1. 10 years

The following Q-Clauses apply per Table 1 and Table 2.

Acceptance of the Qual-Pro purchase order constitutes agreement by the Seller to comply with the specific Q-Clauses indicated on the purchase order in addition to the General Quality Assurance Requirements stated in section 3.0 and Tables 1 and 2 of this document.

Q CLAUSES:

Q-1 SELLER'S QUALITY SYSTEM

The Seller shall maintain a quality system which complies, as a minimum requirement, with the specification designated below. The Seller's system shall be subject to audit by the Buyer's Quality Representatives.

A: ISO 9001 or equivalent

Q-2 CERTIFICATIONS

- A: Shipment of material must be accompanied by the manufacturer or mill inspection/test report for the material containing:
 1. Name and location of the raw material manufacturer or mill.
 2. Material identification by specification number and material condition.
 3. Manufacturer or mill identification number of raw material.
- B: If the seller is other than the original manufacturer, Seller shall provide a copy of the original manufacturer's certification signed by an authorized company official.

Q-9 SOLDERABILITY, PCB CERTIFICATIONS

Seller shall provide parts which meet the solderability requirements of ANSI/J-STD-001.

- A. Printed Circuit Board seller (s) shall submit one no charge solder sample for each part number furnished under this purchase order.
- B. Test coupons and cross sections shall be supplied with each lot.
- C. 100% net list testing shall be performed, records maintained and available for review upon request.

Q-3 TEST AND PHYSICAL ANALYSIS

The Seller shall submit a report as indicated below (actual or typical) with each lot of material shipped. In case of a "Drop Shipment" to other than Buyer's plant, a copy of the report shall also be submitted to the Buyer, together with a copy of the packing slip, at time of shipment.

- A. Actual Values Test Report: The test report shall list the actual test results obtained from an analysis of representative sample of each lot of material used to fill the order.
- B. Typical Value Test Report: The test report shall list the range of values within which the properties of the material used to fill this order fall.

Q-10 SPECIALTY METALS ACQUISITION RESTRICTION

Seller shall comply with DFARS 252-225.7008 Restriction on Acquisition of Specialty Metals for all items furnished under this purchase order.

Q-11 FIRST ARTICLE INSPECTION

Review drawing provided to you by Qual-Pro and obtain clarification before fabricating this part. One sample from the initial lot fabricated per the drawing will undergo first article inspection.

- A. Point-point or net-list testing is required and evidence provided.
- B. If not stated otherwise, a cross section sample is required with first article for pwbs equal to or greater than 8 layers.
- C. All other fabricated material, such as sheet metal, cable assemblies, etc. will be per drawings/specifications provided.
- D. When required on the PO, produce one item for approval before producing the complete order.
- E. Seller shall provide Buyer with a first article report (FAI).
- F. FAI per AS9102 is required, supplier will follow the guidelines of the AS9102 standard.

Q-4 CONTROL OF SPECIAL PROCESSES

- A. The seller must be approved by the Buyer to perform required special processes or must use special process suppliers acceptable to the buyer. A list of such suppliers will be provided upon request. If the seller wishes to use alternative suppliers, a written request must be submitted and approved by the buyer prior to commitment to an unlisted supplier. Special processes to include welding, plating and painting.
- B. Material Safety Data Sheets (MSDS) as required by OSHA, shall be provided with this procurement.

Q-12 SUB-TIER CONTROL

The supplier shall be responsible for flow down of all the requirements and provisions of Qual-Pro's purchase order applicable to the supplier's sub-contractor(s).

Q-5 LOT CONTROL AND MATERIAL TRACEABILITY

- A. Items furnished under this purchase order, packing list, certifications and other applicable documents, must be identified by manufacturing date code, lot or batch number. Where impractical to stamp individual parts due to size or shape, the lot or batch number will be stamped on identifying tags or the smallest unit package. Traceability records shall be available for review upon request. The lot or date code information **MUST** appear on the Certificate of Conformance.

Q-13 ORIGINAL CERTIFICATES OF CONFORMANCE

Seller shall provide original manufacturers' Certificates of Conformance for each component and each shipment.

Q-6 BUYER'S SOURCE INSPECTION

The Purchasing Department shall be notified forty-eight (48) hours in advance of the time material will be ready for inspection/surveillance, and all items submitted under this clause shall have passed Seller's inspection. Inspection/Surveillance does not relieve seller of the responsibility for compliance with all requirements of this purchase order. Evidence of Buyer Inspection/Surveillance must accompany or be shown on the shipping documents.

- A. Set-up and process verification required prior to production run.
- B. In-Process inspection or test, or both are required prior to delivery.
- C. Final inspection or test, or both are required prior to delivery.

Q-14 NADCAP Certification

Supplier must show certification to the following special processes:

- | | |
|----------------|-----------------------|
| A – Anodizing | D – Welding |
| B – Heat-treat | E – PWB manufacturing |
| C – Chem Film | |

Q-15 Counterfeit Prevention

Only new and authentic materials are to be used in the products delivered to Qual-Pro. No counterfeit or suspect counterfeit parts are to be delivered to Qual-Pro. Electronic components shall be purchased directly from the OCM/OEM or through their franchised distributor. Documentation must be available that authenticates traceability to the applicable OCM/OEM. Independent distributors (Brokers) shall not be used without written consent from Qual-Pro. Independent Distributors (Brokers) must comply with SAE Aerospace Standard AS5553. When no longer an authorized distributor, Qual-Pro shall be notified and supplier will not deliver affected material to Qual-Pro.

Q-7 GOVERNMENT SOURCE INSPECTION

Q-16 CONFLICT MINERALS

Due diligence to comply with Conflict Minerals Report imposed by the Dodd-Frank Act, Section 1502. Suppliers shall disclose if any conflict

minerals are used in the products delivered to Qual-Pro. (conflict minerals defined as tantalum, tin, gold or tungsten) and if any of these minerals

originated in the Democratic Republic of the Congo (DRC).

Q-17 Foreign Object Debris (FOD)

When and/or wherever FOD entrapment or foreign objects can migrate, Seller shall maintain FOD prevention methods. Seller's FOD prevention methods shall include the review of manufacturing processes to identify and eliminate FOD entrapment areas and paths through which FOD can migrate. Seller shall ensure work is accomplished in a manner preventing FOD or material in deliverable items. Seller shall maintain work areas and control tools, parts and materials in a manner sufficient to preclude the risk of FOD incidents. Seller shall document and investigate each FOD incident and ensure elimination of the root cause of each incident. Prior to closing inaccessible or obscured areas and compartments during assembly, Seller shall inspect and prevent FOD and ensure no FOD barriers remain embedded.

Q-18 Personnel Performance

Supplier shall ensure that personnel are aware of their contribution to product or service conformity; their contribution to product safety and the importance of ethical behavior.

Q-19 ITAR Flow-down

Supplier is required to comply with the International Traffic and Arms Regulations (ITAR) to safeguard products, technical data and services from foreign persons. Any data or services will not be disclosed, exported, or transferred in any manner to any foreign person or any foreign country without prior written approval. Supplier is also required to exercise due diligence and flow-down the requirement to sub-tiers.

Q-20 Calibration Suppliers

Certificate of calibration document must include in addition to measurement results, calibration interval, acceptance criteria and verification method. Gauge results have to be within 95% of target. Supplier shall have in place an annual eye examination program for technicians involved with verifying measurements of calibration.

Group Code	Analysis Code	Description
Electronic Components	ActiveF	Active Filters
Electronic Components	Amplifie	Amplifiers
Electronic Components	ICANALOG	Analog IC
Assemblies	ASSY	Assembly
Chemicals	Batterie	Batteries
Electronic Components	BoardCo	Board Connectors
Hardware	BOLT	Bolt
Hardware	BUSHING	Bushing
Cables	CABLE	Cables
Electronic Components	CAP	Capacitors
Chemicals	CHEM	Chemicals
Electronic Components	Circuit	Circuit Protection Devices
Electronic Components	Circular	Circular Connectors
Electronic Components	Connecto	Connector Support
Electronic Components	CONN	Connectors
Electronic Components	ICCONSUM	Consumer ICs
Electronic Components	Converte	Converters
Electronic Components	XTAL	Crystals/Resonators
Electronic Components	SOCKET	Device Socket
Electronic Components	DIODE	Diodes
Electronic Components	ELECMECH	Electromech Other
Electronic Components	ELECRELA	Electromech Relay
Electronic Components	ELECSW	Electromech Switch
Chemicals	EPOXY	Epoxy
Electronic Components	FiberOp	Fiber Optic Connectors
Electronic Components	FIBERO	Fiber Optics
Electronic Components	FUSE	Fuse and Circuit Protection
Hardware	GROMMET	Grommet
Electronic Components	IC	IC
Electronic Components	IND	Inductor
Electronic Components	Inductor	Inductors
Hardware	INSERT	Insert
Electronic Components	ICINTERF	Interface ICs
Hardware	KEY	Key And Key Seat
Misc	Limited	Limited Part Number Data
Electronic Components	ICLOGIC	Logic ICs
Machined Part	MACHINE	Machine Part
Hardware	MECH	Mechanical
Electronic Components	ICMEM	Memory ICs
Misc	MetricD	Metric Devices
Electronic Components	ICMICROP	Microprocessor IC
Misc	Non-Metr	Non-Metric Devices
Hardware	NUT	Nut
Hardware	NUTPLATE	Nut Plate
Electronic Components	OPTO	Optoelectronics
Electronic Components	OSC	Oscillators
Misc	OTHER	OTHER DEVICES
Electronic Components	OtherIn	Other Interconnects
Electronic Components	OtherSe	Other Semiconductors
Electronic Components	FILTER	Passive Filters
Electronic Components	Passive	Passive Netw orks
Hardware	PIN	Pin
Hardware	PINSRNG	Pins Spring
Electronic Components	POST	Post
PCB	PCB	Printed Circuit Board
Electronic Components	ICPRGLOG	Programmable Logic ICs
Electronic Components	RCNET	RC Netw ork
Electronic Components	Rectangu	Rectangular Connectors
Electronic Components	Regulato	Regulators
Electronic Components	Relays	Relays
Electronic Components	RES	Resistors
Electronic Components	RFConne	RF Connectors
Electronic Components	RFMWDEV	RF/Microw ave Devices
Hardware	RIVET	Rivet
Hardware	SCREW	Screw
Electronic Components	SENSOR	Sensor
Electronic Components	Sensors	Sensors/Transducers
Sheetmetal	SHTMET	Sheetmetal
Electronic Components	SNAP	Snap
Electronic Components	Sockets	Sockets and Chip Carriers
Chemicals	SOLDER	Solder
Misc	SC	Source Controlled
Hardware	SPACER	Spacer
Hardware	STUD	Stud
Electronic Components	SMT	Surface Mount
Electronic Components	Sw itches	Sw itches
Electronic Components	Telecom	Telecom and Datacom Conn
Electronic Components	ICTELEM	Telecom ICs
Electronic Components	TERM	Terminal
Electronic Components	TERMBLK	Terminals and Terminal Blo
Electronic Components	Thermal	Thermal Support Devices
Chemicals	THRDLOC	Threadlock
Electronic Components	TH	Thru Hole
Electronic Components	TRANSFORM	Transformers
Electronic Components	TRNSISTR	Transistors
Electronic Components	TRIGGER	Trigger Devices
Misc	UNCLASS	Unclassified
Electronic Components	uPsuCs	uPs/uCs/Peripheral ICs
Hardware	WASHER	Washer
Hardware	WIRE	Wire

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Color	Group Code Name	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18	Q-19	Q-20
	Electronic Components	x	x										x	x		x	x	x	x	x	
	Chemicals	x	x		x								x	x		x	x	x	x	x	
	Hardware	x	x								x		x	x		x	x	x	x	x	
	Misc	x	x										x			x	x	x	x	x	
	Cables	x	x	x		x			x	x	x		x	x		x	x	x	x	x	
	PCB	x	x	x		x			x	x	x		x	x		x	x	x	x	x	
	Sheetmetal	x	x	x	x	x			x		x		x	x		x	x	x	x	x	
	Machine Part	x	x	x	x	x			x		x		x	x		x	x	x	x	x	
	Services (Calibration)																				x

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