



Telonic Berkeley Inc.

1080 La Mirada Court, Vista, CA 92081
web: www.telonicberkeley.com

Ph: 760-744-8350 Fax: 760-744-8360
email: info@telonicberkeley.com

PURCHASE ORDER QUALITY CLAUSES

BASIC QUALITY REQUIREMENTS (BQRs)- All suppliers shall comply with the quality requirements identified below, at a minimum. All accompanying documents submitted to Telonic Berkeley by the supplier shall be of a nature which will allow legibility and reproduction.

QS Quality System - The supplier shall maintain a documented Quality System. The Quality System shall address as a minimum: Receiving and Final Inspection. Calibration of measuring equipment (except distributors). Retention of Quality Records shall be 12 years minimum or as required by the customer.

Competence, Training and Awareness - The supplier shall ensure personnel processing orders or performing work affecting conformity to product or service are trained and aware of the relevance and importance of their activities in relation to meeting the requirements of Telonic Berkeley purchase orders and associated documentation.

Awareness of Product & Service Conformity, Product Safety & Ethical Behavior – The supplier shall ensure personnel processing orders or performing work affecting conformity to product or service are aware of their contribution to product and service conformity, product safety and the importance of ethical behavior.

Non-Conformances - The supplier must notify the Buyer of product or process anomalies, and changes in product definition. All nonconformance's to requirements shall be promptly reported to Telonic Berkeley Purchasing.

Changes – The supplier shall maintain control over their manufacturing and supply chain processes. The supplier must notify Telonic Berkeley, in writing if any changes occur which include, but are not limited to 'Manufacturing Location, Manufacturing Process, Manufacturing Equipment, Sub-tier Suppliers or Base/Raw Materials'.

Flow Down - The supplier shall flow all P.O. Quality Clauses to sub-tier suppliers, as applicable.

Right of Access - Telonic Berkeley, its customers, and regulatory agencies reserve the right of access to the supplier's facility at any reasonable time during performance of the Purchase Order.

Counterfeit Parts and Materials Avoidance - Components, parts and materials shall be procured only through Original Equipment Manufacturers or their franchised dealer or distributors. The supplier shall verify the procurement source and perform appropriate incoming inspection to detect potential counterfeit parts and materials.

Conflict Minerals – Supplier must comply with the requirements of the Dodd Frank Act on Conflict Minerals. Upon identifying that any of your suppliers procuring products containing minerals identified in the Dodd Frank Act from specified conflict regions, that end up in the final products that are sold to Telonic Berkeley, supplier will notify Telonic Berkeley in writing within 60 days.

ADDITIONAL REQUIREMENTS – Beyond the Basic Quality Requirements (BQRs), the following matrix applies additional quality clause requirements for suppliers of Raw Materials, Machined Parts, Chemicals, Electronic/Electrical, Components, Assembly Components, Machining Services, Testing Services, Calibration Services, Packaging Services, Assembly Services, Inspection Services, and Plating Services. The Quality Clauses defined in Table 1 apply to the supplier providing the respective product or service.

Beyond the requirements defined by Table 1, Additional Requirements listed below also apply to any order when specified in Telonic Berkeley's purchase order.

Table 1

Raw Materials	Basic Requirements +	Q1	Q2	Q2A	Q3	Q6	Q13	Q23
Machined Parts	Basic Requirements +	Q1	Q2	Q4	Q9	Q12	Q16	
Chemicals	Basic Requirements +	Q1	Q2A	Q6	Q13	Q22		
Elect. Components	Basic Requirements +	Q1	Q2	Q12				
Other Components	Basic Requirements +	Q1	Q2A	Q4	Q12			
Machining Services	Basic Requirements +	Q1	Q4	Q9	Q10	Q16		
Testing Services	Basic Requirements +	Q2A, Q3, Q4 As Appropriate						
Calibration Services	Basic Requirements +	Q20						
Packaging Services	Basic Requirements +	Q1	Q14					
Assembly Services	Basic Requirements +	Q1	Q12					
Inspection Services	Basic Requirements +	Q1	Q20A					
Plating Services	Basic Requirements +	Q1	Q2A					

Q1 Quality Inspection System Compliance – The supplier shall maintain a Quality Inspection System which conforms to the requirements of AS9003, at a minimum.

Q1A AS9XXX Quality System Certification – The supplier shall maintain a Quality System which conforms to the requirements of AS9100, AS9120, or AS9110, at a minimum.

Q1B Quality System Certification – The supplier shall maintain a Quality System which conforms to the requirements of ISO 9001, at a minimum. Certificates shall be made available upon request.

Q2 CERTIFICATE OF CONFORMANCE: The Supplier shall provide a Certificate of Conformance with each shipment. The Certificate shall include as a minimum:

- Supplier's name and location
- Manufacture's name and location (if different)
- Date of Manufacture / expiration **if applicable**
- Date of Certification
- Telonic Berkeley Part Number, Revision level, and Description
- Telonic Berkeley Purchase Order Number
- Quantity
- Identification of the lot, batch, serial number **if applicable**.
- All required Governing specifications and revisions as specified on the Telonic Berkeley Purchase Order or Material specification.
- A statement of conformance indicating that all requirements have been met.

Q2A CHEMICAL TEST REPORT - RAW MATERIAL: A test report must accompany each shipment. The report must indicate the actual percentage of each element that makes up the chemical composition properties of the raw materials. The report shall specifically identify the material by indication of the number of the melt, batch, lot, or other designators, as well as the applicable specification and revision. All certifications must be issued from the OEM or a 17025-certified lab.

Q2B PROHIBITED MATERIAL CERTIFICATION: Certify per Q2 and provide an XRF or equivalent test or mill report. The report should quantify the prohibited materials. A statement that the supplied product either contains no prohibitive materials and or meets the specific limits of the prohibitive materials described at the following website:

<https://nepp.nasa.gov/npsl/Prohibited/index.htm>

Q2C LOT/BATCH TRACEABILITY: The supplier and its sub-tier suppliers shall include certificates of conformance or documentation which maintains lot/batch traceability, tracing back to the OEM, including traceability to OEM name, part numbers, certificate of conformance, and country of origin with the exception of COTS (Commercial off the shelf) commodities which can generally be purchased out of a commercial catalog or website.

Q3 PHYSICAL TEST REPORT - RAW MATERIAL: A test report must accompany each shipment. The report must indicate the actual physical properties of the raw materials. The report must specifically identify the material by indication of the number to the melt, heat, batch, lot, or other designators, as well as the applicable specification and revision. The suppliers name and address shall appear on the certificate. All pages will be numbered using the following format: Page X of X.

Q4 DIMENSIONAL INSPECTION REPORT: The supplier shall submit dimensional inspection acceptance data, identifiable to the material supplied, with each shipment made. Data is to include sampling plan (if applicable), actual dimensions, and quantities inspected, accepted and rejected, as well as the name of the responsible representative for the test results. Unless otherwise specified, 100% inspection of all materials, notes, and features required on all parts. Sampling plan, if approved, must be specified in the Telonic Berkeley Purchase Order Line-Item Detail Notes. The suppliers name and address shall appear on the certificate. All pages will be numbered using the following format: Page X of X.

Q4A GD&T: Dimensioning and tolerancing for products supplied for this order shall be in accordance with ASME Y14.5 2009.

Q6 MATERIAL SAFETY DATA SHEET: A Material Safety Data Sheet (MSDS) must accompany initial shipment made against this Purchase Order.

Q7 MANDATORY INSPECTION POINT - Completed items: require inspection and test verification by Telonic Berkeley Quality at the Supplier's facility prior to shipment. Supplier shall provide 72 hours advance notice of activities to Telonic Berkeley purchasing to permit scheduling of Source Inspection.

NOTE: Any source inspection by Telonic Berkeley or its customer does not absolve the supplier of the responsibility to provide acceptable products.

Q8 GOVERNMENT SOURCE INSPECTION: Items are subject to Government Source Inspection at the Supplier's facility prior to shipment. On receipt of this order, promptly furnish a copy to the Government Representative who normally services your facilities, or, if none, to the nearest Defense Supply Agency Inspection Office. In the event the Office cannot be located, contact Telonic Berkeley purchasing immediately.

Q9 FIRST ARTICLE INSPECTION: First Article Inspection Report is required. A part representing the tooling and methods to be used for the finalized production process shall be inspected by the Supplier, and documented in accordance with AS 9102 or the relevant Telonic Berkeley material specification. The report must include dimensional and functional data as required. The First Article Inspection Report shall be submitted prior to the first shipment. A new or revised First Article Inspection Report is required when a change in design, tooling, materials, or methods of the production process occurs.

Q10 FIRST ARTICLE INSPECTION-SUPPLIER'S FACILITIES: First Article Inspection Report is required. A part representing the tooling and methods to be used shall be inspected by the supplier, and documented in accordance with AS 9102 or the relevant material spec, and witnessed by a Telonic Berkeley Quality Representative or designee. The report must include dimensional and functional data as required. Determination of Acceptability will be made by the Telonic Berkeley representative and shall be noted on the report. A new or revised First Article Inspection Report is required when a change in design, tooling, materials, or methods of production process occur.

Q11 SPECIAL PROCESS SUPPLIERS: Telonic Berkeley Suppliers and supplier Sub-Tiers who perform special processes or tests as identified below must assure personnel are qualified/certified as required. They shall include with each shipment: Supplier or Sub-Tier Certification and/or Test report identifying the specifications and revision to which they conform. Certification shall include;

- Name and location of the process facility
- Date of service
- Telonic Berkeley Part Number, Revision level, and Description
- Telonic Berkeley Purchase Order number
- Quantity
- Identification of the lot, batch, serial number if applicable.
- Materials used and Processes performed
- All required processing specifications and revisions as specified, see Telonic Berkeley Purchase

Order Line-Item Detail Notes for specific requirement or relevant material specification.

- Supporting Test data, Oven Charts, Time/Temperature Charts, Point maps, Data Files, etc. as applicable.
- A statement of conformance indicating that all requirements have been met.
- Each page of the test report shall be numbered using the following format: Page x of x.

Examples of Special Processes are: Firing, Pyrolysis, Autoclave cure, Flame/Metal Spraying, Welding, Heat Treatment, Plating and Coatings, Etching and priming, Nondestructive Testing (i.e. Ultrasonic, Magnetic Particle, Dye Penetrate, and X-ray inspections, etc.), Environmental and Laboratory Testing, De-scaling, Bronzing, etc.

Q11A SPECIAL PROCESS SUPPLIERS - Customer Approved: Telonic Berkeley Suppliers and supplier Sub-Tiers who perform special processes or tests, as identified in Q11, must be approved by Telonic Berkeley's customer. Contact Telonic Berkeley for a list of customers approved special process suppliers. Certification shall be per Q11.

Q11B SPECIAL PROCESS SUPPLIERS - NADCAP Approved: Telonic Berkeley Suppliers and sub-tiers who perform special processes or tests, as identified in Q11, must be NADCAP approved. NADCAP certificates shall be made available upon request.

Q12 PART IDENTIFICATION: Minimum identification shall consist of the Manufacturer's part number, and

trademark if applicable. If the part does not lend itself to stamping due to size, composition, etc., the container or tags shall bear appropriate identification. Parts manufactured to Telonic Berkeley drawings shall be identified as specified on the drawings.

Q13 CONTAINER IDENTIFICATION: Supplier shall identify each unit and multiple over-pack container with the Part Number, Telonic Berkeley P.O. #, Traceability number, recommended storage conditions, and hazardous warnings as applicable. If not otherwise specified, all items shall be protectively packaged to prevent contamination and damage during handling, shipping, and storage.

Q14 HANDLING & PACKAGING: When Purchase Order, drawing, and/or specifications do not otherwise specify, at a minimum all items shall be enclosed with wrappings, bags, cartons, boxes, or other container, as applicable to the extent necessary to provide protection from hazards of static electricity, contamination, and physical damage encountered in general handling, shipping, and storage. Material in direct contact with metal surfaces shall not cause or promote corrosion. Packaging material used shall be non-abrasive, chemically neutral (Ph Scale 6.5 to 7.5) and have a water-soluble acidity of not more than .02% equivalent sulfur trioxide. Packages containing product deliverables shall be free for foreign objects (FOD) and packaging peanuts of any type are prohibited from the inside of any packaging containers.

Q14A HANDLING & PACKAGING of CRITICAL HARDWARE: The supplier shall provide a Critical Hardware plan indicating special precautions to be taken to meet Q14 on Critical Hardware.

Q14B HANDLING & PACKAGING of BONDABLE MATERIAL: The material shall be free of corrosion or contamination from oils, other foreign materials (FOD), or any agent detrimental to bonding.

Q14C HANDLING & PACKAGING of ESD MATERIALS: All class 1, 2, or 3 electronic sensitive parts delivered shall be packaged per ESD requirements specified on the drawing, parts lists, and/or specified on the purchase order.

Q16 CUSTOMER FURNISHED MATERIAL: Verify quantity received, paperwork matches, visual inspection for identification and possible transit damage.

Q18 WEIGHT: The supplier shall provide a weight report for each individual item procured on the PO. Traceability shall be maintained to all part numbers, serial/lot numbers, material designations, and/or any other specified data/information.

Q19 MATERIAL RETENTION: The Supplier shall retain for a period of at least 12 months from the date of shipment, sufficient material of the same lot of each shipment to perform 2 sets of certifiable tests as required by specifications and/or drawings pursuant to the Purchase Order.

Q20 CALIBRATION LABS: Calibration Labs shall maintain and provide evidence of lab accreditation to ANSI/IEC ISO17025, and only perform calibration to Telonic Berkeley equipment within their scope of accreditation. If Telonic Berkeley requests the calibration of equipment outside of the of the Calibration Lab's scope of accreditation, the Lab shall notify Telonic Berkeley prior to acceptance of the purchase order.

Q20A CALIBRATION REQUIREMENTS FOR SUPPLIERS: Supplier shall calibrate monitoring and measurement equipment traceable to NIST or other recognized standards, by a 17025 accredited laboratory. Validity of previous inspections shall be recorded when adjustment to a gage is necessary.

Q21 STATISTICAL PROCESS CONTROL: Statistical Process Control (SPC) techniques must be used on *Key Characteristics* as specified on the part drawing. See Telonic Berkeley Purchase Order, Line Item Detail Notes, or Telonic Berkeley material specification for specific requirements.

Q22 LIFE LIMITED MATERIAL: The Supplier shall identify the material and the Certificate of Conformance with the date of expiration, including (if applicable) out-time requirements. At the time of shipment, at least 90% of the Shelf Life must be remaining. Life Limited Materials shall be packaged to assure required storage temperatures and life limited requirements are not adversely affected by the transport and/or interim storage prior to delivery. When required by specification, temperature recorders shall be included.

Q22A LIFE LIMITED MATERIAL: The Supplier shall identify the material and the Certificate of Conformance with the date of expiration, including (if applicable) out-time requirements. At the time of shipment, at least 85% of the Shelf Life must be remaining. Life Limited Materials shall be packaged to assure required storage temperatures and life limited requirements are not adversely affected by the transport and/or interim storage prior to delivery. When required by specification, temperature recorders shall be included.

Q22B LIFE LIMITED MATERIAL: The Supplier shall identify the material and the Certificate of Conformance with the date of expiration, including (if applicable) out-time requirements. At the time of shipment, at least 80% of the Shelf Life must be remaining. Life Limited Materials shall be packaged to assure required storage temperatures and life limited requirements are not adversely affected by the transport and/or interim storage prior to delivery. When required by specification, temperature recorders shall be included.

Q23 MATERIAL CERTIFICATIONS: Supplier shall provide a Certificate of Conformance for all raw materials purchased from a sub-tier used in deliverable items to Telonic Berkeley. See Telonic Berkeley Purchase Order, Line-Item Detail Notes or Telonic Berkeley Material Specification for Telonic Berkeley specific requirements.

Q23A MATERIAL ORIGINS: Materials sourced from, and/or made in China are prohibited for this order and will be returned at the supplier's expense.

Q23B MATERIAL ORIGINS: Materials must be sourced from USA only.

Q24 PROHIBITED MATERIAL - MERCURY: Materials and parts supplied shall contain no functional mercury and shall not be contaminated by mercury or mercury compounds.

Q24A PROHIBITED MATERIAL - PURE CADMIUM: The use of pure cadmium is prohibited. The supplier shall provide a certificate with each shipment, stating that the delivered product does not contain pure cadmium.

Q24B PROHIBITED MATERIAL - PURE ZINC: The use of pure zinc is prohibited. The supplier shall provide a certificate with each shipment, stating that the delivered product does not contain pure zinc.

Q24C PROHIBITED MATERIAL - PURE TIN: The use of pure tin is prohibited. The supplier shall provide a certificate with each shipment, stating that the delivered product does not contain pure tin.

Q24D PROHIBITED MATERIAL - CORROSIVE & NO-CLEAN SOLDER FLUXES: The use of corrosive and/or no-clean solder flux (paste) is prohibited from being used in the products provided in this order.

Q24E PROHIBITED MATERIAL - MAGNESIUM OR SELENIUM: Magnesium and/or selenium shall not be used unless inside a hermetically sealed device.

Q24F PROHIBITED MATERIAL - URANIUM, POTASSIUM, RADIUM, THORIUM: The use of materials known to exhibit natural radioactivity, such as uranium, potassium, radium, thorium, and/or any alloy of the above are prohibited from being used in the materials and products of this order.

Q24G PROHIBITED MATERIAL - BERYLLIUM, TOLUENE, LITHIUM: The use of materials known to exhibit health hazards, such as unalloyed beryllium, toluene, lithium, and/or any alloy of the above are prohibited from being used in the materials and products of this order.

Q24H PROHIBITED MATERIAL - GOLD PLATING: The use of gold plating over silver is prohibited from being used in the products for this order without a nickel barrier coating. The use of silver under-plate on gold contacts and silver-plated terminals and contacts are also prohibited for the products for this order, except movable contacts.

Q25 SUPPLIER INSPECTION RECORDS: must be retained for 12 years minimum about test or inspection points. Records shall be available for review by customers and regulatory authorities.

Q26 FAR: Federal Acquisition Regulation's apply to this order.

Q26A DFAR: Defense Federal Acquisition Regulations apply to this order.

Q27 ITAR: The products, designs, specifications, intellectual property, software, and technology are subject to the regulations of the International Traffic in Arms Regulations (ITAR).

Q27A EAR: This order and the products provided within it are subject to the Export Administration Regulations (EAR).

Q28 DATE OF MANUFACTURE: Date of Manufacture for all supplied batches shall be documented on the Certificate of Conformance and shall not exceed 24 months.

Q28A DATE OF MANUFACTURE: Date of Manufacture for all supplied batches shall be documented on the Certificate of Conformance and shall not exceed 12 months.

Q29 OEM/OCM/AUTHORIZED DISTRIBUTOR: All products provided as part of this order shall be sourced and/or manufactured by the Original Equipment/Component Manufacturer or from an authorized distributor for the OEM/OCM.

Q29A NEW MATERIALS & PRODUCTS All materials and products provided to Telonic Berkeley, as part of this order, by the supplier and their sub-tier supplier shall be new.

Q30 DOCUMENTED RECEIVING INSPECTION PROCESS: The supplier shall maintain a documented receiving inspection process to ensure that materials/products received from sub-tier suppliers meets the requirements of the purchase order. Material received shall be identifiable to the purchase order. Material certifications shall be maintained for a period of 12 years.