



Nota Técnica de Compras
Supplier Quality Requirements (SQR)
NT-COM -02

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TICO SUPPLIER QUALITY CLAUSES				
Quality Clause #	Name	Quality Requirement	APLICABILITY	
			AEROSPACE	NOT AEROSPACE
01	Quality System	Quality System Requirements - Suppliers must maintain a quality system that, at a minimum, complies with ISO9001 (latest revision at time of Purchase Order). When supplier compliance and/or certification to AS9100, ISO9001 is specified by Tico Electronics, the supplier is responsible to notify the Tico Electronics Buyer in writing within 5 working days of any changes in Quality System status, including extensions or reductions in scopes of approval, third party and/or regulatory Quality Approvals that are either gained or withdrawn. The supplier's loss of certification or failure to notify Tico Electronics of their loss of certification could result in being disapproved as a Tico Electronics supplier.	X	X
02	Special Processing	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 Tico Electronics process specification shall be performed by NADCAP and/or Tico Electronics approved suppliers only. This QA clause applies to (but is not limited to) soldering, welding, brazing, heat treating, magnetron/awing, plating/roasting, 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/Fluor inspection, Plating operations, Chemical processing, Chemical cleaning, Nondestructive Testing, Welding/Brazing, Shot Peening, Ion Vapor Deposition (IVD), High Velocity Oxygen Fuel (HVOF), other specialty coatings. 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 Tico Electronics 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.	X	
03	Flow Down of Requirements	Tico Electronics suppliers shall pass on to their sub-suppliers all applicable Quality assurance requirements stipulated in the Purchase Order including, customer requirements.	X	X
04	Right of Entry	Representatives of Tico Electronics Electronics, Tico Electronics's customer, and other regulatory authorities shall have access to supplier's facility and all other facilities involved in the fulfillment of the Purchase Order, where they shall have access to all procedures, practices, processes, associated documents, and records related to quality assurance, quality control, and configuration control. The supplier shall notify the Tico Electronics Buyer in writing to any significant facility or organizational changes such as company name, location, or senior quality management. Any change of location by the supplier shall require a full first article inspection on these parts. Tico Electronics reserves the right to determine and verify quality of work, records, and material. Such visits shall not preclude subsequent rejection of product and do not absolve the supplier of its product integrity responsibilities. Tico Electronics reserves the right to audit for compliance to all requirements.	X	X
05	Record Retention	Suppliers shall retain quality records for minimum of (10) years from the date of shipment, unless a longer period is otherwise specified. If original records are not maintained, the method of transferring original records to electronic images, shall comply with FAR 21, subpart 4.7. Quality records include the following but not exhaustive list: Approved Certificates of Conformity, Test Reports, Raw Material Certifications, Special Process Certifications, First Article Inspection Reports (FAIR), Route Cards/Travelers, and Calibration Records. This data shall be made available to Tico Electronics upon request, at no extra charge. Records shall be appropriately identified in accordance with customer, regulatory and company defined requirements. Storage facilities shall provide environmental conditions to prevent deterioration or damage and to prevent loss. Records in storage shall be protected from unauthorized access. The nature of the information in the records, as well as its format, dictates the method by which they shall be destroyed. When records contain sensitive information (such as design detail, proprietary info,ITAR restricted info, etc.), they shall be disposed by irreversible destruction methods such as shredding, or 'erasure'/reformatting for electronic/magnetic media.	X	X
06	Key Characteristics / Inspection Personnel	The Supplier shall create a process control plan that documents the product and process key characteristics that must be monitored during the manufacturing process, including measurement methods and necessary reaction plans for possible non-conforming conditions. The Supplier shall provide a copy to the Buyer's Quality representative for review. Key Characteristics are identified, the supplier must confirm statistical controls to apply to Tico Electronics Electronics. If Gauge R&R is a requirement, suppliers must notify any change.	X	X
07	First Article Inspection	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 must be packaged separately, clearly identified, and shipped with the production parts on the first delivery of a new lot. Suppliers who are not familiar with preparing an FAI can request assistance, and Tico Electronics Electronics will provide the necessary support. Suppliers must meet the following requirements: 1. The supplier report must list Tico Electronics 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. Tico Electronics 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.	X	X
08	Non-conforming product	Suppliers shall ensure that non-conforming products are identified, segregated, and properly dispositioned as required per supplier's procedures. Only product that conforms to specified requirements shall be shipped to Tico Electronics. Dispositions of Use As Is or Repair for products under Tico Electronics design control shall require written authorization prior to shipment. Tico Electronics does not grant Material Review Board (MRB) Authority to suppliers, unless granted in writing by Tico Electronics Electronics Quality Engineering. Tico Electronics Electronics reserves the right to audit for compliance. Any reworked parts shall be re-inspected and/or tested prior to shipment to Tico Electronics.	X	X
09	Counterfeit - Traceability	All parts, materials, and assemblies (electrical, mechanical, raw material) included in the hardware delivered to Tico Electronics shall be procured directly from the Original Component Manufacturer (OCM) / Original Equipment Manufacturer (OEMs), or from the OCM/OEM authorized distributor. If it is determined in a specific instance that this is not possible, a deviation/concession request shall be submitted to Tico Electronics (Quality Department). The CoCAs shall reflect this traceability.	X	X
10	Product Conformity and Product Safety	Suppliers shall ensure that non-conforming products are identified, segregated, and properly dispositioned as required per supplier's procedures. Only product that conforms to specified requirements shall be shipped to Tico Electronics Electronics. Dispositions of Use As Is or Repair for products under Tico Electronics design control shall require written authorization prior to shipment. Tico Electronics does not grant Material Review Board (MRB) Authority to suppliers, unless granted in writing by Tico Electronics Quality Engineering. Tico Electronics reserves the right to audit for compliance. Any reworked parts shall be re-inspected and/or tested prior to shipment to Tico Electronics.	X	
11	Ethical Behavior	Contributions to Product and Service Conformity, Safety and Ethical Behavior - Products and services provided to Tico Electronics are typically used in mission critical applications where supplier product conformity can have an impact on the safety and well-being of people. It is incumbent upon Tico Electronics suppliers to communicate this to their employees, and to their sub suppliers to ensure the appropriate level of action and control. 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.	X	X
12	FOD	The Supplier shall maintain a 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. -Boling, 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. Tico Electronics 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.	X	X

13	Certificate of Conformance	The Certificate of Compliance (CoC) shall be shipped with the product to Tico Electronics. The Certificate of Compliance is a quality record that shall include the information below as a minimum: - Tico Electronics Electronics PO - Supplier Name and Address. It is mandatory to specify the exact address from where the material has been acquired. - Quantity (quantity in the C of C must match with the quantity shipped to Tico Electronics Electronics). - Tico Electronics Electronics Part Number specified in the PO. - Manufacturer Part Number and Drawing Revision (when applicable). - Material description as show the PO. - Batch number or lot number is mandatory for the articles that require it. - All chemicals and shelf life items have this need. - Serial number (when applicable). - Manufacture date (when applicable). - Shelf life or expiration date (when applicable). - If a specific standard is required by PO or the engineering drawing, the standard and its revision should be reflected in the C of C. - The person who sign the C of C must indicate the name along with the signature. - Address (applies only to custom made products)	X	X
14	Traceability to Material Manufacturer	If a material distributor is used within the supply chain, full traceability to the manufacturer is required. If a chain a distributors is used for a product, full traceability is required until original manufacturer.	X	X
15	Shelf Life Items	Tico Electronics Electronics reserves the right to accept only products with over 75% of shelf life on receipt of material consider minimum 15 days in transit to destination. This requirement can be bypassed only with the written authorization of Tico Electronics Electronics Incoming/receiving department.	X	X
16	Special Handling	It is the responsibility of the supplier to ensure that the packaging is adequate to protect the components during transportation, handling, and storage. Packaging containers shall be appropriate for the size, weight, and fragility of the components being packed. For ESD sensitive items and for etched materials handling precautions should be maintained to assure product conformity	X	X
17	Fluxes and Solder bars, strands or solder paste requirements	When purchasing fluxes, compliance to J-STD-004 must be explicit in the C of C. For strand and/or solder bars, reference to J-STD-006 is required in the C of C. If solder paste is required, a reference to J-STD-005 is required.	X	X
18	Chemicals	MSDS and TDS for chemical must be provided in each shipment	X	X
19	Compliance to Trinity / Bombardier requirements	End user for this product is Trinity Aerospace and they require that all suppliers and manufacturers for their products are approved in the Bombardier List. Find the list in the link detail: https://bombardierquality.service-now.com/sp?id=vendors	X	
20	Compliance to Moog Requirements	For Moog Aircraft, compliance to SQR-1 must be confirmed. If PCBs of CCAs are produced compliance to S310 and S510 must be confirmed.	X	
21	Compliance to RoHS & REACH	Supplier shall be in compliance with the Restriction of Hazardous Substances and RoHS / REACH this requirement applies when the end-user is Celera, or if it is specified in the PO or engineering drawing. All Celera Motion materials (including packaging materials) must be RoHS and REACH End user to apply RoHS: Aerotech - Celera - Curtiss Wright - Lensar - Lisk - Ametek - Honeywell End user to apply Reach: Aerotech - AvtechTyee - Celera - Curtiss Wright - Lisk - Ametek - Honeywell Restriction of Hazardous Substances (RoHS) All product delivered on this Purchase Order shall be compliant with European Union Directive 2011/65/EU. This regulation details the Restriction of Hazardous Substances (RoHS) directive on the restriction of the use of the below Hazardous Substances in electronic equipment: RoHS compliance to be certified for in a suitable form by the supplier (e.g., detailed on the Certificate of Conformity for each delivery or an overriding certification covering all deliveries). Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) is a European Union Regulation of 18 December 2006. REACH addresses the production and use of chemical substances (i.e., everything made of atoms), and their potential impacts on both human health and the environment. Its 840 pages took seven years to pass, and it has been described as the most complex legislation in the Union's history and the most important in 20 years. It is the strictest law to date regulating chemical substances and will affect industries.	X	X
22	Traceability of DFARS required	Material certifications and associated test reports must be furnished to Tico Electronics 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)	X	
23	Fraudulent activity	Fraudulent activity: Is defined but not limited to the following: deceit, trickery, dishonest practice, or breach of confidence, intentionally perpetrated for profit or to gain some unfair or dishonest advantage. This includes but is not limited to falsification of information, intentional omission, false pretenses, and deliberate misuse of qualified resources or certification/qualification/authorization. If a supplier commits fraudulent activities will have a direct affection on the business relationship with Tico Electronics. If a fraudulent activity is detected, Tico Electronics must launch an investigation, and inform supplier upper management. There could be legal ramifications depending on the seriousness and impact of the fraudulent activity. Companies/individuals could face criminal or civil penalties	X	X
24	Proprietary Information	All specifications, blueprints, digital design data, and other material provided by Tico Electronics, are considered proprietary information. Copies of Tico Electronics's customer drawings, specifications and/or procedures supplied by Tico Electronics shall not be reproduced except for internal use. Such proprietary terms shall be controlled to preclude their use for other than Tico Electronics contracted work and shall be returned or destroyed upon completion of the contracted work	X	X
25	Prohibited Material	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 Tico Electronics'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. Tico Electronics 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 Tico Electronics in any manner: Gold, Cassiterite, Wolframite, Columbite-tantalite, Tin, Tungsten, Tantalum	X	X
26	Calibration System	Calibration of measuring and test equipment used for product acceptance shall be traceable to established international or national measurement standards (e.g., BSI, NIST, etc.). Procedures for periodic calibration, certification, maintenance of tools and equipment, and an action plan, should measuring and/or test equipment be found to be out of calibration, shall be established and followed. The action plan shall contain, as a minimum, item identification (model, manufacturer, and serial number), found condition (including span/range and accuracy), date condition found, date of previous calibration, notification details, and any other pertinent measurement details.	X	X
27	Sub-Contracting/Outsourcing	Suppliers will not sub-contract or outsource any Tico 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 Tico Electronics buyer identified on the Purchase Order and Supplier quality engineer. If Tico Electronics 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. Tico reserves the right to re-call any Purchase Order and associated material a supplier is unable to effectively process within the purchase order body at any time.	X	X
Additional Comments				
For fixtures and tooling NT -COM -05 section 7.7 must be complied				
Tico Electronics Customer Tico Electronics Customer Special Requirements (Please review carefully and advise Tico Electronics if unable to meet as required)				
Moog Components Group N/A				
Moog Aircraft Supplier shall meet the Moog Clauses and Conditions listed in SQR-1, S310 (Apply for PCB's), S510 (Apply for PCB's) y S384 https://www.moog.com/content/dam/moog/literature/Corporate/Suppliers/SQR_1.pdf https://www.moog.com/suppliers/ssqr.html				
Moog Space and Defense Supplier shall meet the Moog Clauses and Conditions listed the following link https://www.moog.com/suppliers/clsms.html				
Moog Industrial Supplier shall meet the Moog Clauses and Conditions listed in SQR-1 and S377 http://https://www.moog.com/content/dam/moog/literature/Corporate/Suppliers/SQR_1.pdf				
L3 Harris Special Process Suppliers List https://www2.l3.com/csw/suppliers/quality/special-process-suppliers.htm				

Note: All the points added in this version are in blue. If a point is eliminated needs to be specified in the following box.

Point(s) eliminated The structure of each clause was modified to include more detailed information, and three additional clauses were added.