



**Terms & Conditions**  
**Quality Requirements of**  
**Purchased Product and Services**

<p><b>Q1</b></p>	<p><b>General Requirements:</b>          These requirements shall apply to suppliers and sub-tiers of purchased products or processing services furnished to Micro-Tronics, Inc. Supplied products or processes shall conform to the latest revision level of the applicable specification unless otherwise noted on the flow-down documents.          Suppliers shall flow-down to their sub-tier(s) the applicable requirements in their purchasing documents, including, where required, key characteristics. Flow-down information shall be maintained and considered proprietary in nature.          The purchase order shall take precedence, should a conflict occur, over requirements stated herein. Questions regarding requirements stated herein or other quality issues may be directed to Micro-Tronics' Quality Manager.          Micro-Tronics shall reserve the right to make changes to the purchase order via a written change order, and/or an updated purchase order. The supplier shall in a timely manner, notify Micro-Tronics in writing if, and by how much, the changes will affect price and delivery.          The supplier must immediately notify Micro-Tronics' Quality Manager in writing of changes that could affect product quality, including, but not limited to changes in personnel, equipment, and/or procedures.          Subcontracting is not allowed without prior notification and a Micro-Tronics written approval.          Micro-Tronics, its customers, and/or regulatory authorities, reserves the right of entry, with prior notice, to all facilities and to all applicable records and materials involved in the execution of this order for the purpose of quality evaluation.</p>	<p><b>Q2</b></p> <p><b>Special Processes:</b>          Processes such as, but not limited to, welding, heat treat, plating, painting, NDT testing, EDM, elastomeric, and cleaning shall be solely performed by Nadcap approved processors. Certifications for special process services must accompany each shipment.          Certifications must identify the material delivered, and/or the processes performed. Reports shall include the following:</p> <ul style="list-style-type: none"> <li>a) Process performed.</li> <li>b) Specification/drawing and revision level.</li> <li>c) Purchase order number.</li> <li>d) Part number.</li> <li>e) Compliance to acceptance criteria.</li> <li>f) Ultrasonic scan plans. (if applicable)</li> <li>g) Radiographic x rays. (if applicable)</li> <li>h) Revision and date.</li> </ul> <p>Processed materials must be certified in accordance with the applicable specification. Suppliers shall flow-down sufficient information to ensure sub-tier processors are able to correctly process all parts.</p> <p><b>Material/Process Samples:</b>          A representative material test sample for heat treat, weld and recast processes shall be maintained and made available upon request.</p> <p><b>Unique Heat Lot Control:</b>          Only one heat lot of material is to be used in the production of any individual detail or part. Materials shall be segregated by heat lot, packaged separately and not commingled.</p> <p><b>Brazing/Welding Approvals:</b>          The procedure used and a representative sample of actual joint configuration shall be submitted for approval prior to production.</p>																					
<p><b>Q3</b></p>	<p><b>Supplier Quality System:</b>          Suppliers shall maintain a Quality System which assures compliance with supplied documentation, including the purchase order, drawings, MOT, and specifications, and complies with ISO 9001:2000, AS9100, and/or Nadcap.          Micro-Tronics shall validate the supplier Quality System status by confirming the sustained certification approval, quality surveys, and/or on-site surveillance audits.          Suppliers shall maintain an approved calibration system (where applicable) which ensures valid measurements within the appropriate accuracy and is traceable to the NIST. The calibration system should comply with ISO 9001:2000, or As9100 per ISO 10012-1.</p> <p><b>Supplier Performance:</b>          Micro-Tronics shall evaluate and record the supplier(s) ability to meet contractual requirements, including product characteristics, specifications, on-time delivery, completion of documentation, and responsiveness to corrective actions.          Micro-Tronics reserves the right, at our discretion, to approve and/or disapprove a supplier for lack of performance.</p>	<p><b>Q4</b></p> <p><b>Domestic Materials: DFAR 252.225-7014</b>          Specialty metals used in deliverable product must be melted in the <b>United States</b> or a <b>qualifying country</b> as indicated in subsection 225.872-1 of the DFAR supplement.          Approved Countries include:</p> <table border="0"> <tr> <td>Australia</td> <td>Belgium</td> <td>Canada</td> </tr> <tr> <td>Denmark</td> <td>France</td> <td>Ireland</td> </tr> <tr> <td>Greece</td> <td>Israel</td> <td>Italy</td> </tr> <tr> <td>Norway</td> <td>Portugal</td> <td>Spain</td> </tr> <tr> <td>Turkey</td> <td>UK</td> <td>Switzerland</td> </tr> <tr> <td>Federal Republic of Germany</td> <td></td> <td>Sweden</td> </tr> <tr> <td>Luxembourg</td> <td></td> <td></td> </tr> </table> <p><b>Definition: "specialty metals"</b> Steel with a maximum alloy content exceeding one or more of the following limits: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent; or containing more than 0.25 percent of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium (this includes stainless steel.) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10 percent.          Titanium and titanium alloys, or zirconium and zirconium alloys.</p>	Australia	Belgium	Canada	Denmark	France	Ireland	Greece	Israel	Italy	Norway	Portugal	Spain	Turkey	UK	Switzerland	Federal Republic of Germany		Sweden	Luxembourg		
Australia	Belgium	Canada																					
Denmark	France	Ireland																					
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<p><b>Q5</b></p>	<p><b>Certification of Conformance (C of C):</b>          Suppliers shall submit with each shipment a legible, typed or printed, reproducible Certified statement (C of C) that items listed thereon comply fully with all purchase order requirements. The C of C shall bear: the supplier name, authorizing signature with title, date, purchase order number, line item number, part number, revision, and quantity. Additionally, the supplier must specify whether parts involved in a nonconformance were reworked or replaced, and subsequently re-inspected.</p> <p><b>Functional Test Reports:</b>          The supplier shall submit, with each shipment, a report listing actual test results, identifiable to the respective parts or products.</p> <p><b>Material Certification (Non-Metals, Commercial, Proprietary):</b>          Material certifications shall be submitted with each shipment. The certification shall bear description of the material, trade name, manufacture's name; specification number (type, grade etc.) manufactures part number, batch and heat lot number if applicable.</p> <p><b>Chemical and Physical Test Reports (Raw Material):</b>          Chemical and physical test reports shall be submitted for each shipment and include:</p> <ul style="list-style-type: none"> <li>a) Batch, heat or lot, number.</li> <li>b) The material specification and revision.</li> <li>c) Certification of the composition to within acceptable limits where MIL reports are not available. (Metals require specific values of composition.)</li> </ul>	<p><b>Q6</b> <b>Nondestructive Testing (NDT):</b>          Nondestructive testing shall be performed in accordance with Nadcap approved procedures. The supplier's facility and test personnel shall have approval from Nadcap prior to performing the required tests. A copy of approved procedures shall be kept on file at all times. Suppliers are responsible to ensure revisions to these procedures are approved per the internal quality system requirements. Each shipment of materials must be accompanied by a certified test report for each test performed. The reports shall specify the test performed, the specification, specification revision, test method(s) used, approved test procedure with number and revision, and the acceptance criteria utilized. Operators performing NDT shall be properly qualified and certified. Their certification shall include:</p> <ul style="list-style-type: none"> <li>a) Their name typed or printed.</li> <li>b) Organizational title.</li> <li>c) Signature of the authorized representative.</li> <li>d) Part number.</li> <li>e) Heat and purchase order number.</li> <li>f) Identification of the material.</li> <li>g) Revision and date.</li> </ul> <p><b>Q6a</b> <b>Approved Sources:</b>          Micro-Tronics' customers require all process to be performed by approved sources. Micro-Tronics' purchase order shall specify the customer for the product being manufactured to identify approved sub-tier sources. The supplier may contact the Micro-Tronics buyer for questions regarding approved sources.</p>
<p><b>Q7</b></p>	<p><b>First Piece Inspection:</b>          First piece inspection shall be approved by Micro-Tronics on any new production run.</p> <p><b>First Article Inspection Reports:</b>          A First Article part shall be inspected for a first production run, or when the manufacturing method has changed, or when the print revision has changed. The first article part shall be clearly identified and the report shall list all characteristics including notes, tolerance limits, dimensions, and material requirements. This report and the ballooned print shall remain on file for audit or submittal when requested.</p>	<p><b>Q8</b> <b>Government Source Inspection:</b>          Items covered by this purchase order are required to have inspection at the supplier's, or sub-supplier's facility, by a Government Representative. The supplier shall furnish at no cost, a copy of the purchase order, and the necessary facilities, equipment, and assistance to accomplish any required inspection. Evidence of Government Source Inspection shall accompany each shipment as applicable. Government source inspectors and customers have the right of entry with given prior notification.</p>
<p><b>Q9</b></p>	<p><b>Tensile Coupons:</b>          Representative samples of materials used to produce hardware, in final heat-treated condition, shall remain on file and a certification sent with each shipment identifying the heat lot of the sample. Samples shall be in-accordance with ASTM-E-8 unless otherwise specified.</p>	<p><b>Q10</b> <b>Key Characteristics:</b>          When applicable, Key Characteristics are specified on the purchase order or the drawing. Data on Key Characteristics shall be collected by the supplier and supplied to Micro-Tronics with each shipment. When using a sub-tier supplier this clause shall be flowed down on the suppliers purchase order.</p>



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<b>Q11 Hydrogen Embrittlement Test Report:</b> A hydrogen embrittlement test report is required. Report must comply with AMS-QQ-P-416. Fasteners shall pass the stress durability test in accordance with MIL-Std-1312-5, using the external load method. Sufficient external load shall be applied to the fastener to develop an induced load of 75-80% of the minimum tensile strength specified for duration of not less the 72 hours (MIL Std 783 bolts require the same load, however the duration period is reduced to 24 hours of test time). Sampling shall be per FF-S-86 Rev. E (1) Para. 4.2.3. Fasteners selected for test shall not be submitted for acceptance. Test reports shall be identifiable to the materials submitted and shall include batch, heat and lot number.	<b>Q12 Personnel and Training:</b> Supplier shall ensure that the personnel involved in the manufacture and inspection of the materials or components are qualified to perform their tasks. Training records shall be made available upon request. Eye exams every 12 months for near vision to Snellen 14/18 or better and Jaeger Type 1 20/25, and color vision using the required pseudo-chromatic plates or similar <i>is required for personnel performing acceptance inspection of the product.</i>
	<b>Q13 Foreign Object Damage (FOD):</b> Suppliers shall ensure that foreign objects are eliminated from parts prior to shipment. Suppliers shall maintain a FOD free environment during machining, manufacturing, assembly, inspection, storage, packaging and shipment.
<b>Q14 Mercury Free Certification:</b> Product furnished shall be free from contamination by the presence of mercury. Compliance with this requirement shall be certified by the supplier.	<b>Q15 Statistical Process Control (SPC):</b> When SPC is required, a Micro-Tronics approved SPC program shall be used. Control charts on key dimensional characteristics are required with each shipment.
<b>Q16 Traceability of Furnished Materials:</b> Only the material furnished shall be used to satisfy the order. Material substitution is not allowed. Assigned lot numbers and/or serial number shall be maintained and referenced on all documentation as applicable. Drop-shipped materials shall be verified by certification prior to use.	<b>Q17 Manned Space Flight :</b> Materials, manufacturing, and workmanship are to be of the highest standards to ensure astronaut safety. Notify the buyer if the product may be produced of a higher quality than specified.
<b>Q18 Age Controlled Materials:</b> Age controlled materials shall conform to applicable specifications and each container shall identify: the manufacture name, the batch number, storage temperature, compound number, date of manufacture, and the shelf life requirement. Certifications to the applicable specification and revision, and/or amendments must accompany material. A minimum of 75 percent of the useful shelf life must remain upon receipt to Mirco-Tronics or material shall be subject to rejection.	<b>Q19 Inspection Sampling:</b> Micro-Tronics may select to sample inspect the product covered by this order. Micro-Tronics will reject any lot on the first nonconformity detected (C=0). If sampling inspection is used as means to acceptance, the plan shall be statistically valid, and appropriate for use. The plan shall preclude the acceptance of know defectives in the lot. The supplier shall submit their sampling plan for approval when required. When statistical process control is used for either in-process and/or final inspection it must satisfy AS9101.
<b>Q20 Dimensional Inspection Reports:</b> A dimensional report is required to ANSI/ASQC Z 1.4 AQL for all characteristics of .005 or less total drawing tolerance. Material hardness readings are required. Actual reading as specified on the drawing or purchase order shall be taken and recorded.	<b>Q21 Shipments:</b> Complete packing list shall be enclosed with all shipments. Supplier shall mark containers or packages with applicable lifting, loading, shipping information, purchase order number, item number, dates of shipments, the names and address of the consignor and consignee. Bill of Lading shall include the purchase order number.
<b>Q22 Right of Inspection:</b> Micro-Tronics reserves the right to perform any inspection and test deemed necessary to assure product conformance at the supplier's facility.	<b>Q23 MRB Authority:</b> Supplier is expressly denied MRB authority. Material found out of specification may be scrapped or reworked but not repaired. MRB requests shall be in writing to Micro-Tronics' Quality Manager.



<p><b>Q24</b></p>	<p><b>Calibration System:</b>          The supplier's calibration system shall conform to the requirements of MIL-I-45662, ISO-10012-1, ANSI/NCSL Z540-1 or equivalent as approved by Micro-Tronics. Calibration systems shall be subject to inspection and approval by Micro-Tronics Quality Department.</p>	<p><b>Q25</b></p>	<p><b>Use of Supplier Devices:</b>          Gauges, measuring and test devices shall be made available for reasonable use by Micro-Tronics when required to determine quality of product. As conditions warrant, supplier's personnel shall be made available for operation of such devices and for product verifications.</p>
<p><b>Q26</b></p>	<p><b>Nonconforming Material:</b>          Micro-Tronics shall immediately be notified at the discovery of a discrepancy, regardless of when the discrepancy was discovered, either during the processing of the product or after delivery. Nonconforming material shall initially be reported verbally to Micro-Tronics' Quality Manager and a written nonconformance report to follow in a timely manner. Further corrective action may be required. Nonconforming material shall be tagged and held until material disposition has been received.</p>	<p><b>Q27</b></p>	<p><b>MSDS Sheets:</b>          Material safety data sheets are required.</p>
<p><b>Q28</b></p>	<p><b>Record Retention:</b>          Suppliers shall retain quality records of services provided for a minimum of 10 years, or life of contract, whichever is greater. Suppliers shall be able to provide reproducible copies of any requested record within 48 hours of a written request from Micro-Tronics, Inc.</p>	<p><b>Q29</b></p>	<p><b>Testing Acceptance:</b>          Suppliers using acceptance testing as a requirement, shall define and submit for approval the test procedure, test characteristics, and test set-up to comply with the test requirements</p>
<p><b>Q30</b></p>	<p><b>Handling, Packaging and Delivery:</b>          Supplier shall handle and package product to preclude damage during processing. If material is received in a damaged condition it shall be handled as nonconforming material. Supplier shall provide sufficient shipping to meet contracted delivery requirements. Supplier shall package product sufficiently to preclude damage from shipping.</p>		

## Supplier Quality Clause Matrix

<p><b>Distributor</b></p>	<p>Q1, Q3, Q4, Q5, Q6a, Q8, Q10, Q12, Q13, Q14, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q25, Q26, Q27, Q28 Q30</p>
<p><b>Manufacture Source Control</b></p>	<p>Q1, Q3, Q4, Q5, Q6, Q6a, Q7, Q8, Q10, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30</p>
<p><b>Manufacture to Print</b></p>	<p>Q1, Q3, Q4, Q5, Q6, Q6a, Q7, Q8, Q10, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30</p>
<p><b>Special Process (Outside Process)</b></p>	<p>Q1, Q2, Q3, Q5, Q6, Q6a, Q7, Q8, Q9 Q10, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30</p>
<p><b>Raw Material (Rubber, Metal)</b></p>	<p>Q1, Q2, Q3, Q4, Q5, Q6, Q6a, Q7, Q8, Q9 Q10, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30</p>