	<b>SUPPLIER QUALITY CLAUSES</b>	
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**PURPOSE**

To establish the Supplier quality requirement(s) applicable to procured materials/products/services ordered under a contract/purchase order issued by MICOR Industries.

**DEFINITIONS AND ABBREVIATION**

- 1) *Supplier*- the person(s) and/or Company/Corporation providing goods/services to MICOR and the Supplier.
- 2) *Contract*- the Contract, Sub-contract, purchase Order or other written agreement between MICOR and the supplier.
- 3) *Product*- The result of activities or processes. A product shall include, but not be limited to:
  - Services,
  - Hardware / Software,
  - Processed material, or a combination thereof.
- 4) P.O. - Purchase Order issued by MICOR.
- 5) NIST- National Institute of Standards and Technology.
- 6) DOD- Department of Defense.

**GENERAL REQUIREMENTS**


Unless otherwise specified in the contract, all of the following general requirements apply to a contract issued to a supplier by MICOR.

**QC1 Supplier Quality system**

The Supplier shall establish and maintain a quality system to the requirements of ISO 9001, AS9100, or an equivalent MICOR approved quality system. The Supplier’s quality shall be approved by MICOR and is subject to review and approval at all times by MICOR. The Supplier retains full responsibility for ensuring that all products, lower-tier Suppliers, supplies used, and/or services furnished hereunder, comply with all applicable requirements of the ISO 9001, AS9100 or equivalent approved quality system. A copy of the Suppliers ISO 9001, AS9100 or equivalent registration shall be sufficient for compliance to this Supplier quality requirement and shall be supplied to MICOR when the registration is renewed.

**QC2 Purchase order Receipt and Verification:**

The supplier shall verify all purchase orders issued by MICOR upon receipt. Any Discrepancies in price, quantity, specifications, quality requirement, packaging, or delivery requirements shall be communicated to and resolved with MICOR purchasing before taking action on the purchase order. Upon acceptance and during the performance of the purchase order, all Supplier sub-tier suppliers shall have the Quality Clauses flowed down to them as issued on the purchase order these requirements are to include key characteristics as identified on the purchase order.

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**QC3 Delivery:**

MICOR expects 100% on time delivery. Deliveries are considered on time if the required product, as specified on the purchase order, is received on the due date or up to 30 days early. Delivery and Quality performance will affect the Suppliers rating. The supplier shall notify MICOR before the delivery date whenever a delivery date will not be met. Standard receiving hours are between 7:00 AM and 4:30 PM, (CST) Monday through Friday, announced holiday excluded, Deliveries will not be accepted outside of these hours unless specific arrangements have been made and approved by MICOR Purchasing Department. Applicable documents such as, packing lists, certification of conformance, certificates of analysis, material data safety sheets, etc., shall arrive with or prior to receipt of the shipment.

**QC4 Right of Entry**

MICOR, MICOR’s customer(s) and any regulatory agencies shall have “Right of Access” to the supplier facility and quality records for the purpose of audit, surveillance and /or verification of quality of work, documentation or material. The supplier shall flow-down this requirement to their supply chain.

**QC5 Source Inspection**

MICOR source inspection must be conducted at the supplier facility prior to shipment. When the PO items are ready for inspection, the supplier shall notify the MICOR purchasing agent three (3) working days prior to the date on which the parts will be ready for source inspection. All non-conforming material or parts shall be properly segregated from the acceptable material or parts presented for source inspection. Drawings and/or other pertinent data as required by PO must be available to the MICOR quality representative at the time the product is presented. Acceptance at source does not relieve the supplier from responsibility for the quality of delivered product.

**QC6 Government Source Inspection**


During the performance of this order, the suppliers Quality System and manufacturing processes are subject to review, verification, and analysis by authorized government representatives. Government inspection or release of product prior to shipment is not required unless you are otherwise notified.

**QC7 Retention of Records**

The supplier shall maintain records for review by MICOR, customer(s)/regulatory agency for minimum of (7) years (unless otherwise specified) and readily retrievable upon request. Records shall include material certification, special processing, work order/traveler, test reports, inspection reports, calibration records and first articles.

**QC8 Certification of Compliance**

Each shipment of material under this purchase order must be accompanied by a certification of conformance that verifies compliance with applicable specifications on drawing or purchase order for each lot/batch number for traceability. Certification shall be dated and signed by a responsible individual whose signature can be considered binding on your company. Failure to include the certification with your shipment may classify your product as non-conforming resulting in the return of the material at your expense.

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**QC9 Chemical/Physical Material Test Reports**

A chemical/Physical test report is required for this Purchase Order. It shall reference chemical composition and/or physical properties, lot/batch number, list the parameters tested, the results obtained. It shall be signed by the Materials Suppliers Authorized Quality Representative, and indicate the Representative’s title. Failure to include these test reports with your shipment may classify your product as non-conforming resulting in the return of the material at your expense.

**QC10 Castings/Forgings Material Test Reports**

In addition to chemical/physical test reports as stated in QC9 (above), certification for magnetic particle inspection, fluorescent penetrate inspection, ultrasonic inspection, pressure test and grain flow shall be submitted with order. Radiographic inspection results including film for each casting shall be supplied. Failure to include these certifications with your shipment may classify your product as non-conforming resulting in the return of the material at your expense.

**QC11 Metrology System Requirements**


A calibration system in conformance with ANSI/NCSL Z540-1 must be maintained that is traceable to NIST and provides identification of calibration status. Adequate process controls, records, and certifications shall also be sufficiently maintained to satisfy purchase order requirements. A “Certificate of Calibration” traceable to each item furnished by MICOR for calibration is required with your return shipment to MICOR.

**QC12 Certified Inspection Reports**

The supplier shall include with each shipment a certified inspection report that contains drawing, revision, inspection results for 100% of characteristics identified in the engineering drawing for the entire lot of parts being shipped and serial numbers (where applicable). The inspection report shall list the actual ranges of measured characteristics for that lot of parts only. Inspection records adequate to assure the Quality level of production process shall be maintained by the supplier. Failure to include data with your shipment may classify your product as non-conforming, resulting in the return of the material at your expense.

**QC13 Sampling Inspection**

Sampling inspection is allowed per ANSI/ASQ Z1.4 Level II – AQL 1.0 may be used except C=0. (No defects allowed, reject on 1). Otherwise all parts shipped shall be one hundred percent (100%) inspected. Sampling plans shall be submitted for MICOR for its customer to approve prior to implementation.

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**QC14 First Article Inspections**

A detailed first article inspection report is required and shall be compliant to AS9102 requirements. The report must be furnished with first shipment of the product to MICOR for verification, unless otherwise specified. The first article report and the part used should be packaged separately, clearly identified, and shipped with production parts on the first delivery of a new product.

The FAI shall be updated (Delta FAIR) when changes occur to any of the following:

- Part number configuration, method of production, to include new process equipment,
- Tooling, measuring equipment, and/or process flows, and/or facility re-location,
- Change in location of machinery or applicable equipment (i.e. – unplug equipment and relocate to new area within the facility) a lapse in production for two years a natural disaster, such as fire, flood or earthquake.


**QC15 First Piece Inspection**

Supplier must perform mandatory first piece inspection for each line item article on this purchase order prior to producing the remaining balance of the line item.

**QC16 Special Processing**

All special processing required via a government, ASTM, or MICOR process specification shall be performed by MICOR approved suppliers only. It is the responsibility of the supplier to request and to insure 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 requirements of MICOR imposed on the prime shall be flowed down to the subcontractor by the prime. Each shipment must include a report/certification that includes the name and address of the processing source as well as a statement verifying that all required process certifications and chemical/physical test reports, directed on the PO, are on file at the supplier’s facility and/or have been provided with the shipment as required. This quality clause applies to (but is not limited to) NDE, NDI, Welding, Heat Treat, X-Ray, Precision Cleaning, and Applied finishes, etc. In addition, the supplier must reference the MICOR Purchase Order and part number on their certification.

Heat Treat – Provide a copy of your heat treat certification stipulating conformance that all purchase order and contractual requirements have been met. In addition, the supplier must reference the PO and part number on their certification. Supplier must provide evidence of hardness testing in accordance with applicable specifications.

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**C17 Control of Non-Destructive Testing**

Testing shall be in accordance with all purchase order and applicable specification requirements.

Unless otherwise specified:

- a.) Dye Penetrant inspection shall be performed in accordance with ASTM E1417. The Penetrant inspection report shall identify the procedure and method used the acceptance criteria, part number, PO number, and the result of the inspection. The report shall contain the name of the person performing the inspection and shall be signed and dated. When parts are serialized, serial numbers must appear on the report with the control number. Penetrant inspection shall only be performed by a level II or III technician as certified by NAS 410 or ASNT SNT- C-1A. The Penetrant inspection report shall be furnished with each shipment.
- b.) Radiographic inspection shall be performed in accordance with ASTM E1742. Individual radiographs shall be traceable to the corresponding product(s). When parts are serialized, serial numbers must appear on the report and film with the control number. The radiographic inspection report shall identify the procedure/method used, the acceptance criteria, part number, PO number, and the result of the inspection. The report shall contain the name of the person performing the inspection and shall be signed and dated. Radiographic inspection shall only be performed by a level II or III technician as certified by NAS 410 or ASNT SNT-TC-1A. The radiographic inspection report and X-ray films shall be furnished with each shipment.
- c.) Magnetic Particle inspection shall be performed in accordance with ASTM E1444. The magnetic particle inspection report shall identify the procedure/method used, the acceptance criteria, part number, PO number, and the result of the inspection. The report shall contain the name of the person performing the inspection and shall be signed and dated. When parts are serialized, serial numbers must appear on the report with the control number. Magnetic particle inspection shall only be performed by a level II or Level III technician as certified by NAS 410 or ASNR SNT-TC-1A. The magnetic particle inspection report shall be furnished with each shipment.
- d.) Ultrasonic inspection shall be performed in accordance with ASRM E2375 and/or ASRM B594. The ultrasonic inspection report shall identify the procedure/method used, the acceptance criteria, part number, PO number, and the result of the inspection. The report shall contain the name of the person performing the inspection and shall be signed and dated. When parts are serializes, serial numbers must appear on the report with the control number. Ultrasonic inspection shall only be performed by a level II or Level III technician as certified by NAS 410 or ASNR-TC-1A. The ultrasonic inspection report shall be furnished with each shipment.

**QC18 Coordinate Measuring Machine**


CMM reports shall be prepared and submitted with each part/tool as required. CMM reports shall include part number, date, serial number, drawing revision, and data set revision and inspection verification as a minimum.

**QC19 Specialty Metals**

All purchased specialty metals must be in compliance with DFARS 252.225-7014 Preference for Domestic Specialty Metals, Alternate 1 are imposed on this purchase order. Orders having a government priority rating shall be identified and scheduled in accordance with the defense priorities and allocations system (DPAS).

**QC20 Maintenance & Fracture Critical**

Items on this purchase order are either maintenance critical, fracture critical, or fracture critical traceable and require the supplier to control them through the governing specification on this purchase order.

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**QC21 Statistical Process Control**

This order has been selected for Statistical Process Control. The engineering drawing shall identify the Key Characteristics which must be reported on the first twenty (20) parts and an agreed upon frequency thereafter. Variable data for each part checked shall be identifiable to the part checked. The supplier is responsible for implementing a control plan, process control charts, and submitting the data to MICOR. Failure to supply accurate variable data on the Key Characteristics shall be considered cause for rejection and may result in the return of Product at your expense.

**QC22 Shelf Life of Materials**

The supplier shall identify each container of material with the date of manufacture and shelf life, type of material, lot or batch number and other pertinent information. Material which does not show at least ¾ (75%) of the indicated shelf life will not be accepted. If a manufacturer/ distributor cannot provide material in compliance with this policy, two requirements are mandatory for acceptance: 1) a pricing concession will be made to MICOR for the expired shelf life. 2) The supplier must obtain written approval from MICOR's Purchasing and Quality departments prior to shipment of aged materials. MICOR's Material, Quality and Engineering Managers all must approve any exceptions to this clause. Material Safety Data Sheets must be provided where there is danger to health from material being purchased.

**QC23 Non-Conforming Product/Material**

All reference requirements including specifications and drawings shall be the latest revision in effect at the date of the purchase order. Supplier is not delegated Material Review Board (MRB). All Non-conforming products must be submitted and returned to MICOR. Suppliers are required to notify MICOR on all known non-conformances which have already shipped to MICOR and/or MICOR's customers. Notification shall be timely and in writing. If a MICOR customer contacts the supplier directly on a non-conformance issue, the supplier shall notify MICOR in a timely manner and supply MICOR with all the same information supplied to MICOR customer. Documented cause and corrective action may be required.

**QC24 Workmanship**


Workmanship shall be in accordance with the drawing requirements, specifications and any requirements of the detail equipment specification applicable to manufacturing, processing, marking of parts and assemblies, wiring, soldering, welding and brazing, plating, riveting, finishing, machine operations and shall be reviewed for the detection and removal of foreign objects to include product to free from burrs, sharp edges, tooling marks, mismatch conditions, warped and/or bowed conditions, or any other damage or defect that could make the product or equipment unsatisfactory for the intended purpose.

**QC25 Handling, Packaging, Preservation and Delivery**

The supplier shall use appropriate methods of handling, packaging, and preservation to prevent damage of product in process and during delivery.

**QC26 Change Notification**

Suppliers are required to notify MICOR in writing prior to any proposed process or product changes. Facility locations and ownership changes must also be reported to MICOR Industries in a timely manner.

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**QC27 Foreign Object and Debris/Damage (FOD) Prevention**

The Supplier shall establish and maintain an effective FOD prevention program to control and eliminate FOD and/or contamination assuring work is accomplished in a manner preventing foreign objects or material from entering and remaining in deliverable products. The Supplier’s program shall utilize effective FOD prevention practices. MIL-STD-980 may be used as a guide to establish and implement the Supplier’s FOD program. Maintenance of the work control of tools, parts, and materials shall preclude the risk of FOD incidents. Prior to closing inaccessible or obscured areas and compartments during assembly, the Supplier shall inspect for foreign objects/materials. The written procedures or policies developed by the Supplier shall be subject to review and audit by MICOR Industries Quality Assurance and approves or disapproved when the Supplier’s procedures or polices do not accomplish their objectives.

**QC28 Material Samples**

A material sample must be furnished to MICOR with the first shipment of the product, unless otherwise specified. The size of the sample shall be determined by MICOR 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, part number, Lot number (if applicable), Serial Number (if applicable) on their certification. If a 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.

**QC29 Personnel Requirements**


This contract requires special skills or training contact MICOR Industries for required skills and documentation.

**QC30 Demil and Trade Security Controls (TSCs):**

This procurement action has a Demil and/or TSC consideration requirement. The Demil and trade security control provisions in this solicitation implement the policy and requirements of the “Arms Export Control Act,” 22 United States Code (U.S.C.), Section 2778, the “International Traffic in Arms Regulations (ITAR)” at 22 Code of Federal Regulations (CFR), Parts 120-130, the “Export Administration Regulations (EAR)”, at 15 CFR 730-774 and the “Export Administration Act”. Regulatory requirements and guidance are contained in Federal Acquisition Regulation (FAR) 45.6, “Reporting, Redistribution, and Disposal of Contractor Inventory” and Defense Federal Acquisition Regulation (DFAR) 245.604, “Restrictions on Purchase or Retention of Contractor Inventory.”

More Demil guidelines can be found here:

[https://aais.ria.army.mil/AAIS/Solinfo/MARKET\\_SURVEYS/4369/att1demil.pdf](https://aais.ria.army.mil/AAIS/Solinfo/MARKET_SURVEYS/4369/att1demil.pdf)

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**QC31 BOEING Approved Source**

Any/All processes must be performed by Boeing Approved Sources per D1-4426. Accessing D1-4426 via the web is the only acceptable method to maintain compliance to Boeing requirements.

Processing shall be performed to the latest revision as defined in the PSDS.

URL: <http://boeing.com/companyoffices/doingbiz/d14426/>

The PSDS accountability pages site can be found at the following URL:

URL: <http://boeing.com/companyoffices/doingbiz/bps/>

This clause shall be included in the seller’s subcontracts for work performed under this purchase contract that involves D1-4426 processes. A certificate of conformance and/or equivalent process certificate, signed by an authorized agent of the processor/seller shall be maintained. The certificate shall include contract number, part number(s), Trace number (as applicable), Process specification number w/ revision, processing date(s), and name and address of the processor(s) performing each of the D1-4426 processes. Buyer approval of any processor shall not relieve seller of seller’s requirement to comply with the terms of this contract.

**QC32 Process and Vendor Control**

Vendor is responsible for maintaining a system to control processes under this Order at their facilities and the processes performed at their subcontractor and lower-tiers subcontractor facilities.

Vendor shall perform systematic, periodic evaluation of personnel, equipment, methods, and material required in the performance of the processes to assure positive control. Vendor shall perform onsite surveys of their subcontractor and lower-tier subcontractors prior to initial performance of process activity unless otherwise specified in this Order.

Critical processes designated on this Order shall have a written process implementing procedure approved by qualified vendor personnel to revision level or date. Procedures shall incorporate the governing specification requirements for training and personnel certification, equipment, processing, testing and inspection. For critical processes performed at Vendor’s plant, the buyer shall approve all critical processes implementing procedures prior to processing hardware, as well as any changes thereto. Critical processes performed at Vendor’s subcontractor and lower-tier subcontractors shall be approved and controlled by Vendor prior to processing hardware as well as changes thereto. Vendor shall maintain objective evidence on file to verify approval of process procedure by revision level or date. Objective evidence shall be in the form of a letter, Approved Vendor List, survey result or equivalent documentation that is specific to the process being approved. Each component and/or piece part which has a critical process performed by the subcontractor or lower-tier subcontractor shall include a process certification that demonstrates completion of the process and identifies the applicable process specification, implementing procedure with revision level or date, and last on-site survey date. The process certification may be in the vendor’s format as long as all required information is contained therein and shall be presented to buyer for final acceptance.