Cover Sheet and Revision Status. Approved Change Order on file in Document Control/ software QCBD.

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| Rev. Letter | Change order | REVISION DESCRIPTION | Date Released | Originator of ECN |
| - | 1200 | Initial issue of document. | 5/27/09 | Min Pan |
| A | 1358 | Update quality code to meet requirement per AS9100 Rev B 7.4.2 | 2/16/11 | Min Pan |
| B | 1412 | Added calibration system requirement. | 10/19/11 | Min Pan |
| C | 1519 | Added quality code of DFARS complaint requirement | 6/8/2012 | Min Pan |
| D | 1887 | Updated QA24 by adding “ensure where required that both the Elcon and all suppliers use customer –approved special process source.” | 2/19/2014 | Min Pan |
| E | 2181 | Periodic Review; no changes | 3/28/17 | Roy Yoshioka |
| F GH | 23862576 | Updated to reflect current AS9100D Flow Down requirements and changed MSDS to SDS compliant to Globally Harmonized system Added Quality Code QA28Replaced DFARS 252.225-7014 Alt1 with DFARS 252.225-7008 & 252.225-7009 | 2/8/185/11/2105/13/2025 | Gilbert Gardner Gilbert GardnerBhavik Vasha |
| Effective Date: 5/11/2021 | Prepared by: Gilbert Gardner | Checked By : Roy Yoshioka |
| Issued By: Gilbert Gardner | Date: 5/11/2021 |

**ELCON Supplier Purchase Order Quality Code Definition**

Questions regarding these Quality Codes should be directed to the responsible ELCON buyer.

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| **Quality Code** | **Applicability** | **Description** |
| QA1 | MFG | Supplier Quality Management System shall be compliant to and registered to ISO- 9001:2015. Material Review Authority IS NOT delegated to the supplier. All decisions to “Repair” or “Use –As-Is” and all “Standard Repair Procedures” utilized by the supplier in the performance of this order require ELCON approval prior to implementation. Supplier is required to “Flow Down” applicable purchasing document requirements including KeyCharacteristics and Ethical Behavior, Counterfeit Prevention, Product Safety and Product Service and Conformity to any and all SUB-TIER suppliers where required. |
|  QA2  |  MFG  |  Supplier Quality Management System shall be in accordance with ISO-9001:2015 although  registration is not required. Material Review Authority IS NOT delegated to the supplier.  All decisions to “Repair” or “Use –As-Is” and all “Standard Repair Procedures” utilized by  the supplier in the performance of this order require ELCON approval prior to  implementation. Supplier is required to “Flow Down” applicable purchasing document  requirements including Key Characteristics and Ethical Behavior, Counterfeit Prevention,  Product Safety and Product Service and Conformity to any and all SUB-TIER suppliers  where required.  |
| QA2A | MFG | Supplier Quality System shall meet the requirements of MIL-Q-9858. Material Review Authority IS NOT delegated to the supplier. All decisions to “Repair” or “Use –As-Is” and all “Standard Repair Procedures” utilized by the supplier in the performance of this order require ELCON approval prior to implementation. Supplier is required to “Flow Down” applicable purchasing document requirements including Key Characteristics and Ethical Behavior, Counterfeit Prevention, Product Safety and Product Service and Conformity toany and all SUB-TIER suppliers where required. |
|  QA3  |  DIST  MFG  |  Certificate of Conformance (C of C)  Shall include: 1. The identify of the Manufacturer and Manufacturer’s Production Lot Number /

 Work Number / Plating Batch Number or other manufacturer’s traceability  identification (as applicable). 1. ELCON Part Number and Revision Letter, PO Number and Quantity per

 traceability method as a minimum. 1. Identification of deviations or waivers or identifications of RMA / rework /

 repaired status (as applicable).  |
| 4) |  The signature of an authorized company representative.  |
| QA4 | MFG | Manufacturer shall provide a copy of a complete first article dimensional measurement data with delivery. 100% feature measurement required. First Article (F/A) is required for first time build, drawing revision changes. ELCON reserves the right of rejection of amanufacturer’s F/A based upon dimensional verification. First Article dimensional data with deliveries is required until such time that the manufacturer submits acceptable first article data. Upon approval of the manufacturer’s first article data, the manufacturer needonly provide a copy of the manufacturer’s internal final inspection results indicating the deliverable material lot is acceptable to the manufacturer for delivery to ELCON. |
| QA5 | MFG | 100% Visual Inspection in accordance with the purchase order/ drawing requirements. |
| QA6 | MFG | ELCON’s Final Source Verification –Products order under this purchase order/ contract are subject to source verification by ELCON’s quality representative at supplier’s facility.Verification shall be at “Final “which shall be considered prior to packaging for shipment or |

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| **Quality Code** | **Applicability** | **Description** |
|  |  | as otherwise indicated on this purchase order/ contract. Supplier shall notify ELCON by email or FAX at least five (5) working days in advance of the required source activity. |
| QA7 | DIST MFG | Acceptance Test Results- Supplier shall include with each shipment a copy of the results of the lot or item acceptance test required by the applicable specification.The report shall include the principal specifications, including revision numbers or letters, which govern the production of the item. Where quantitative limits are established by the specification, the report shall indicate the actual values obtained during testing. Test reports shall include the control identity (e.g. lot, serial number) of the material or item tested. If Supplier is not the original manufacturer, Supplier shall furnish the manufacture’s test reportas described above. |
| QA8 | DIST MFG | Raw Material Test Results- Supplier shall include with each shipment the raw material manufacturer’s test report that states the lot of the material furnished has been tested, inspected, and found to be in compliance with the applicable material specifications.The test report will list the specification, including revision number or letters, to which the material has been tested and/or inspected and the identification of the material lot to which it applies. |
| QA9 | MFG | When DPA (DESTRUCTIVE PHYSICAL ANALYSIS) is required, samples shall be segregated and photographic report shall be supplied. |
| QA10 | MFG | Plating Thickness measurement data to be provided with delivery. Final and under plate data required including plating specification and revision. |
| QA11 | MFG | Manufacturer to provide electrical or mechanical test data, as applicable, in accordance with the drawing requirements. |
| QA12 | MFG | Government Source Inspection is required prior to shipment from your facility. Notify your respective government source inspector upon receipt of this purchase order to schedule inspection. |
| QA13 | MFG/DIST | Age Sensitive Material. Expiration Date and Storage Instructions shall be clearly identified on material packaging. Product with LESS THAN 60% of shelf life remaining shall not be delivered against this purchase order. |
| QA14 | Calibration / Repair | Supplier Quality Management System shall be in accordance with ANSI/ISO-17025 although registration is not required. All calibration and repair shall meet the requirements of ANSI/NCSL Z540-1 or ISO 10012 or as otherwise specified in this purchase order/ contract. |
|  QA15 |  MFG  |  Supplier shall implement a “Foreign Object Detection” Plan to detect and prevent foreign  object entrapment within cavity devices / assemblies.  |
|  QA16 |  MFG/DIST  |  Inspection and Test Record Retention – Supplier and supplier’s subcontractors shall  maintain verifiable objective evidence of all inspections and test performed, obtained results,  and dispositions of non-conforming articles. These records shall be identified to associated  articles, including heat and lot number of materials, unit or lot serialization when  applicable, and shall be made available for review to ELCON, authorized ELCON  representative(s) or ELCON’s customer upon request. Unless extended retention  requirements are specified elsewhere in the contract, records shall be retained by supplier  in a safe, accessible location for a period for five (5) years from the date of completion of  the purchase order.  |
| QA17 | MFG / DIST | Safety Data Sheet compliant to Globally Harmonized System to be provided with delivery. |

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| **Quality Code** | **Applicability** | **Description** |
|  QA18 |  MFG/DIST  |  Material Chemical Composition (analysis of material make up) and C of C shall be provided  with delivery  |
|  QA19 |  MFG/DIST  |  Certification that the material was milled / final melted within the United States or a  Qualifying Country as indicated within QA27 shall be included with  the C of C.  |
| QA20 | MFG/DIST | Function Test Required.Thickness, adhesion, and quality are acceptance tests and shall be performed on parts, or samples representing parts on each lot. Method for adhesion tests shall be documentedPlating periodic tests may include corrosion resistance, solderability, internal stress, composition and hydrogen embrittlement results may be required. |
| QA21 | MFG | Select at random sample pieces in compliance with ANSI/ASQC Z1.4-2003 sampling plan |
|  QA22  |  MFG/DIST  |  Parts are free from defect, scratches, pits, no conducting inclusions and roll or die marks that  will adversely affect the appearance and the performance of coatings applied to the basis  material.  |
|  QA23  |  MFG  |  Certify as RoHS compliant or state exceptions.  |
| QA23A | MFG DIST | **Pure Tin Finish Prohibited**. Tin alloy component lead finish shall be no less than three percent (3%) lead (Pb) alloy; tin / lead alloy used as a final finish or as an undercoat shall be no less than three percent (3%) lead content by weight. Components with Tin alloys other than lead require the Tin (Sn) content be less than or equal to 97 percent and require the supplier to notify Cobham (REMEC) of the alloy and may require refinishing with a Tin / Lead (Sn/Pb) alloy prior to delivery. After supplier notification to the ELCON, the suppliershould expect written direction from ELCON. |
| QA23B | MFG | Use of components with PURE TIN termination or lead finishes is unacceptable. |
| QA24 | MFG | Without prior approval by ELCON in writing, supplier shall not make any changes in the following from end items accepted by ELCON under the Procurement Document and found to be satisfactory for ELCON’s intended purposes: changes in product design, composition, configuration (including form, fit, function, or interchangeability), material, fabrication, SUB-TIER supplier, place of manufacture, or outside processing. Supplier shall flow down this requirement to all SUB-TIER suppliers. Elcon shall ensure where required that both the Elcon and all suppliers use customer –approved special process source.For every proposed change, the supplier shall submit supporting data, which verifies that, it will not degrade the quality or reliability of the product. The supporting data shall include as a minimum (a) the reasons for the change, (b) considerations of the effect of the change upon performance, failure rate, traceability, reliability and storage life, and (c)analysis and/or test evidence which shows the effect of the proposed change. |
|  QA24A  |  MFG  |  Supplier shall notify ELCON of any changes in product design, fabrication methods,  materials or processes from those used by supplier at time of supplier’s quotation or  offer to ELCON which resulted in the Procurement Document.  |
|  QA25  |  MFG  DIST  |  ELCON, ELCON’s customer and regulatory authorities have right of access to  supplier’s all facilities involved in the order and to all applicable records.  |
|  QA26  |  MFG  |  Supplier shall provide and maintain calibration program that is conformance with  ISO10012 or ISO17025.  |

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| **Quality Code** | **Applicability** | **Description** |
| QA27 | MFG DIST | 252.225-7008, Restriction on Acquisition of Specialty Metals has the following basic requirements:As prescribed in 225.7003-5 (a)(1), use the following clause:RESTRICTION ON ACQUISITION OF SPECIALTY METALS (MAR 2013)(a) Definitions. As used in this clause—“Alloy” means a metal consisting of a mixture of a basic metallic element and one or more metallic, or non-metallic, alloying elements.(i) For alloys named by a single metallic element (e.g., titanium alloy), it means that the alloy contains 50 percent or more of the named metal (by mass).(ii) If two metals are specified in the name (e.g., nickel-iron alloy), those metals are the two predominant elements in the alloy, and together they constitute 50 percent or more of the alloy (by mass).“Produce” means—(i) Atomization;(ii) Sputtering; or(iii) Final consolidation of non-melt derived metal powders.“Specialty metal” means—(i) Steel—(A) 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(B) Containing more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, molybdenum, nickel, niobium (columbium), titanium, tungsten, or vanadium;(ii) Metal alloys consisting of—(A) Nickel or iron-nickel alloys that contain a total of alloying metals other than nickel and iron in excess of 10 percent; or(B) Cobalt alloys that contain a total of alloying metals other than cobalt and iron in excess of 10 percent;(iii) Titanium and titanium alloys; or(iv) Zirconium and zirconium alloys.“Steel” means an iron alloy that includes between .02 and 2 percent carbon and may include other elements.(b) Any specialty metal delivered under this contract shall be melted or produced in the United States or its outlying areas.(End of clause)252.225-7009, Restriction on Acquisition of Certain Articles Containing Specialty Metals has the following basic requirements:As prescribed in 225.7003-5(a)(2), use the following clause:Restriction on Acquisition of Certain Articles Containing Specialty Metals (JAN 2023)(a) Definitions. As used in this clause -“Alloy” means a metal consisting of a mixture of a basic metallic element and one or more metallic, or non-metallic, alloying elements.(i) For alloys named by a single metallic element (e.g., titanium alloy), it means that the alloy contains 50 percent or more of the named metal (by mass).(ii) If two metals are specified in the name (e.g., nickel-iron alloy), those metals are the two predominant elements in the alloy, and together they constitute 50 percent or more of the alloy (by mass).“Assembly” means an item forming a portion of a system or subsystem that—(i) Can be provisioned and replaced as an entity; and(ii) Incorporates multiple, replaceable parts.“Commercial derivative military article” means an item acquired by the Department of Defense that is or will be produced using the same production facilities, a common supply chain, and the same or similar production processes that are used for the production of articles predominantly used by the general public or by nongovernmental entities for purposes other than governmental purposes.“Commercially available off-the-shelf item”—(i) Means any item of supply that is -(A) A commercial product (as defined in paragraph (1) of the definition of “commercial product” in section 2.101 of the Federal Acquisition Regulation);(B) Sold in substantial quantities in the commercial marketplace; and(C) Offered to the Government, under this contract or a subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and(ii) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4), such as agricultural products and petroleum products.“Component” means any item supplied to the Government as part of an end item or of another component.“Electronic component” means an item that operates by controlling the flow of electrons or other electrically charged particles in circuits, using interconnections of electrical devices such as resistors, inductors, capacitors, diodes, switches, transistors, or integrated circuits. The term does not include structural or mechanical parts of an assembly containing an electronic component, and does not include any high performance magnets that may be used in the electronic component.“End item” means the final production product when assembled or completed and ready for delivery under a line item of this contract.“High performance magnet” means a permanent magnet that obtains a majority of its magnetic properties from rare earth metals (such as samarium).“Produce” means—(i) Atomization;(ii) Sputtering; or(iii) Final consolidation of non-melt derived metal powders.“Qualifying country” means any country listed in the definition of “Qualifying country” at 225.003 of the Defense Federal Acquisition Regulation Supplement (DFARS).“Specialty metal” means—(i) Steel—(A) 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(B) Containing more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, molybdenum, nickel, niobium (columbium), titanium, tungsten, or vanadium;(ii) Metal alloys consisting of—(A) Nickel or iron-nickel alloys that contain a total of alloying metals other than nickel and iron in excess of 10 percent; or(B) Cobalt alloys that contain a total of alloying metals other than cobalt and iron in excess of 10 percent;(iii) Titanium and titanium alloys; or(iv) Zirconium and zirconium alloys.“Steel” means an iron alloy that includes between .02 and 2 percent carbon and may include other elements.“Subsystem” means a functional grouping of items that combine to perform a major function within an end item, such as electrical power, attitude control, and propulsion.(b) Restriction.Except as provided in paragraph (c) of this clause, any specialty metals incorporated in items delivered under this contract shall be melted or produced in the United States, its outlying areas, or a qualifying country.(c) Exceptions.The restriction in paragraph (b) of this clause does not apply to—(1) Electronic components.(2)(i) Commercially available off-the-shelf (COTS) items, other than—(A) Specialty metal mill products, such as bar, billet, slab, wire, plate, or sheet, that have not been incorporated into COTS end items, subsystems, assemblies, or components;(B) Forgings or castings of specialty metals, unless the forgings or castings are incorporated into COTS end items, subsystems, or assemblies;(C) Commercially available high performance magnets that contain specialty metal, unless such high performance magnets are incorporated into COTS end items or subsystems; and(D) COTS fasteners, unless—(1) The fasteners are incorporated into COTS end items, subsystems, assemblies, or components; or(2) The fasteners qualify for the commercial item exception in paragraph (c)(3) of this clause.(ii) A COTS item is considered to be “without modification” if it is not modified prior to contractual acceptance by the next higher tier in the supply chain.(A) Specialty metals in a COTS item that was accepted without modification by the next higher tier are excepted from the restriction in paragraph (b) of this clause, and remain excepted, even if a piece of the COTS item subsequently is removed (e.g., the end is removed from a COTS screw or an extra hole is drilled in a COTS bracket).(B) Specialty metals that were not contained in a COTS item upon acceptance, but are added to the COTS item after acceptance, are subject to the restriction in paragraph (b) of this clause (e.g., a special reinforced handle made of specialty metal is added to a COTS item).(C) If two or more COTS items are combined in such a way that the resultant item is not a COTS item, only the specialty metals involved in joining the COTS items together are subject to the restriction in paragraph (b) of this clause (e.g., a COTS aircraft is outfitted with a COTS engine that is not the COTS engine normally provided with the aircraft).(D) For COTS items that are normally sold in the commercial marketplace with various options, items that include such options are also COTS items. However, if a COTS item is offered to the Government with an option that is not normally offered in the commercial marketplace, that option is subject to the restriction in paragraph (b) of this clause (e.g. - An aircraft is normally sold to the public with an option for installation kits. The Department of Defense requests a military-unique kit. The aircraft is still a COTS item, but the military-unique kit is not a COTS item and must comply with the restriction in paragraph (b) of this clause unless another exception applies).(3) Fasteners that are commercial products, if the manufacturer of the fasteners certifies it will purchase, during the relevant calendar year, an amount of domestically melted or produced specialty metal, in the required form, for use in the production of fasteners for sale to the Department of Defense and other customers, that is not less than 50 percent of the total amount of the specialty metal that it will purchase to carry out the production of such fasteners for all customers.(4) Items manufactured in a qualifying country.(5) Specialty metals for which the Government has determined in accordance with DFARS 225.7003-3 that specialty metal melted or produced in the United States, its outlying areas, or a qualifying country cannot be acquired as and when needed in—(i) A satisfactory quality;(ii) A sufficient quantity; and(iii) The required form. In accordance with 10 U.S.C. 4863(m)(4), the term “required form” in this clause refers to the form of the mill product, such as bar, billet, wire, slab, plate, or sheet, in the grade appropriate for the production of a finished end item to be delivered to the Government under this contract; or a finished component assembled into an end item to be delivered to the Government under this contract.(6) End items containing a minimal amount of otherwise noncompliant specialty metals (i.e., specialty metals not melted or produced in the United States, an outlying area, or a qualifying country, that are not covered by one of the other exceptions in this paragraph (c)), if the total weight of such noncompliant metals does not exceed 2 percent of the total weight of all specialty metals in the end item, as estimated in good faith by the Contractor. This exception does not apply to high performance magnets containing specialty metals.(d) Compliance for commercial derivative military articles.(1) As an alternative to the compliance required in paragraph (b) of this clause, the Contractor may purchase an amount of domestically melted or produced specialty metals in the required form, for use during the period of contract performance in the production of the commercial derivative military article and the related commercial article, if—(i) The Contracting Officer has notified the Contractor of the items to be delivered under this contract that have been determined by the Government to meet the definition of “commercial derivative military article”; and(ii) For each item that has been determined by the Government to meet the definition of “commercial derivative military article,” the Contractor has certified, as specified in the provision of the solicitation entitled “Commercial Derivative Military Article—Specialty Metals Compliance Certificate” (DFARS 252.225-7010 ), that the Contractor and its subcontractor(s) will enter into a contractual agreement or agreements to purchase an amount of domestically melted or produced specialty metal in the required form, for use during the period of contract performance in the production of each commercial derivative military article and the related commercial article, that is not less than the Contractor’s good faith estimate of the greater of—(A) An amount equivalent to 120 percent of the amount of specialty metal that is required to carry out the production of the commercial derivative military article (including the work performed under each subcontract); or(B) An amount equivalent to 50 percent of the amount of specialty metal that will be purchased by the Contractor and its subcontractors for use during such period in the production of the commercial derivative military article and the related commercial article.(2) For the purposes of this alternative, the amount of specialty metal that is required to carry out production of the commercial derivative military article includes specialty metal contained in any item, including COTS items.(e) Subcontracts.(1) The Contractor shall exclude and reserve paragraph (d) and this paragraph (e)(1) when flowing down this clause to subcontracts.(2) The Contractor shall insert paragraphs (a) through (c) and this paragraph (e)(2) of this clause in subcontracts, including subcontracts for commercial products, that are for items containing specialty metals to ensure compliance of the end products that the Contractor will deliver to the Government. When inserting this clause in subcontracts, the Contractor shall—(i) Modify paragraph (c)(6) of this clause only as necessary to facilitate management of the minimal content exception at the prime contract level. The minimal content exception does not apply to specialty metals contained in high-performance magnets; and(ii) Not further alter the clause other than to identify the appropriate parties.(End of clause)252.225-7012, Preference for Certain Domestic Commodities has the following basic requirements:As prescribed in 225.7002-3 (a), use the following clause:PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (APR 2022)(a) Definitions. As used in this clause—“Component” means any item supplied to the Government as part of an end product or of another component.“End product” means supplies delivered under a line item of this contract."Qualifying country" means a country with a reciprocal defense procurement memorandum of understanding or international agreement with the United States in which both countries agree to remove barriers to purchases of supplies produced in the other country or services performed by sources of the other country, and the memorandum or agreement complies, where applicable, with the requirements of section 36 of the Arms Export Control Act (22 U.S.C. 2776) and with 10 U.S.C. 2457. Accordingly, refer the DFAR 252.225-7012 to check the list of qualifying countries. |
| QA28 | MFG / DIST | When added to Purchase Order access to the facility must be granted to the NSA and its contractors to perform quality surveys and inspections wherever materials and/or services are rendered. |