



Electro-Miniatures Corp.

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Section 4.0

ELECTRO-MINIATURES CORP. QUALITY CLAUSES

Q001 Material Review Board (MRB) authority is not granted.

Q002 MRB Authority Allowed

Limited Material Review Authority - The Supplier is authorized to conduct limited Material Review and disposition nonconforming products identified by the Supplier using the following disposition alternatives:

- a) Rework to applicable requirements,
- b) Scrap, or
- c) RTV - return to (the Supplier's) sub-tier source for rework or replacement.

Nonconforming products are defined as any products that fail to meet the requirements of the Electro Miniatures Corp. engineering drawing, specification, Contract or other approved product description, including products (such as products under the Supplier's proprietary design control) which fail to meet requirements established and controlled by the Supplier or the Supplier's sub-tier sources. The Supplier may propose and formally request a "use-as-is" or repair (salvage) disposition from Electro Miniatures Corp. by submitting the appropriate request to the Electro Miniatures Corp. Buyer. The Supplier's Material Review and nonconforming product disposition records, as well as the Material Review records at the Supplier's sub-tier sources are subject to onsite verification by Electro Miniatures Corp. to ensure that the Supplier is in compliance with the requirements of this clause.

Q003 Full Material Review Authority - The Supplier is authorized to conduct Material Review and disposition all 'Minor' nonconformance's found on products that are under the Supplier's proprietary engineering design authority and control. 'Minor' nonconformance's are defined as nonconformance's which do not adversely affect product health or safety, performance, interchangeability, reliability, maintainability, effective use or operation, or weight or appearance when a factor. 'Major' nonconformance's are defined as nonconformance's other than. 'Minor' that cannot be completely eliminated by rework or reduced to a 'Minor' by repair. All Electro Miniatures Corp. specified requirements are defined as 'Major' and disposition of products with 'Major' nonconformance's is the sole prerogative of the Electro Miniatures Corp. Material Review Board (MRB). The Supplier's authority to disposition products with 'Minor' nonconformance's is contingent on the Supplier having an established and documented Material Review system, which provides for a technically competent Material Review Board (MRB) chaired by a responsible member of the Supplier's Quality organization. The Supplier's MRB System shall include:

- a) Feedback of product nonconformance information to the Supplier's product design function;
- b) Analysis to determine 'root cause' of individual product non-conformance's;
- c) Implementation of positive corrective action;
- d) Verification of corrective action to ensure effectiveness in eliminating recurrence of nonconforming products;
- e) Evaluation and reporting of nonconformance trends to management.

Q004 **Customer dimension. No MRB authority is allowed on this dimension.**

Q005 **First Article Inspection Required (FAIR) based on AS9100B**

Q006 **Change in manufacturing process or procedure is not allowed.**

Q007 **Certificate of Compliance shall be provided with all shipments.**

Certificate of Conformance (CoC) - With each delivery of products on this Contract. the Supplier shall include on the packing list or shipper or on a separate attached document, a written statement titled "Certificate of Conformance" which is worded substantially as follows:

"This is to certify that all products or services delivered on this Contract (number) and packing list/shipper (number) are in compliance with all requirements of the Contract. Objective evidence to support this certification will be made available for review upon request"

Company Name: _____

Address: _____

Printed Name of Authorized Individual: _____ Title: _____

Signature/Stamp: _____ Date: _____

Q008 **Material & Process Summary Report** - After 1st article approval, the Supplier may, in lieu of providing Electro Miniatures Corp. the originals or true copies of the original certifications and test reports, issued by the Supplier or the Supplier's sub-tier sources, instead, furnish a Material & Process Summary Report with each delivery of products on the Contract. Unless otherwise specified, the Summary Report format is optional, however, as a minimum; it shall contain the following information:

- a) Part number
- b) Drawing revision
- c) Contract Number and if applicable the Line & Release Number
- d) Packing list/shipper number
- e) Material and/or process description
- f) Material and/or process specification number and revision, including type, grade, class, etc.
- g) Material heat/lot or report number
- h) Name and location of the source that supplied the material
- i) Name of the Electro Miniatures Corp. approved source that performed the process;
- j) A statement of conformance attesting that the information on the Summary Report is accurate and true; and
- k) The Supplier's company name and the name and signature or stamp of the authorized individual who issued the Summary Report.

The Supplier shall maintain the original certifications and test reports in a manner so that upon Electro Miniatures Corp. request, they can be retrieved and furnished to Electro Miniatures Corp. within twenty-four (24) hours. In addition, the Supplier shall notify Electro Miniatures Corp. in writing prior to disposal or destruction of the original certifications and test reports listed on the Summary Report and give Electro Miniatures Corp. an opportunity to obtain possession of the original certifications and test reports.

- Q009 Certificate of Traceability (CoT) - With each delivery of products on this Contract, the Supplier shall include on the packing list/shipper or on a separate attached document a written statement titled "Certificate of Traceability" which complies with the requirements of section 3.5 herein, and is worded substantially as follows:
"This is to certify that all products delivered on this Contract (number) and packing list/shipper (number) comply with all requirements of the Contract and: (a) were purchased directly from the manufacturer or an authorized distributor; (b) the attached certifications/test reports are true and correct copies of the originals issued by the manufacturer and cover all products delivered on this Contract: and (c) the products have not been altered, reworked, re-processed, or modified in any manner except as specified by the Contract. Objective evidence to support this certification will be made available for review upon request."

Company Name: _____

Address: _____

Authorized Individual: _____ Title: _____
Printed Name

Signature/Stamp: _____ Date: _____

- Q010 **No design changes or configuration changes allowed.**
- Q011 **100% inspection required on all dimensions.**
- Q012 **Non- Destructive Testing required.**
- Q013 **NADCAP Accreditation** - Special processes shall only be performed by sources that are accredited and approved by the National Aerospace and Defense Contractors Accreditation Program (NADCAP). This requirement applies whether the process is performed by the Supplier or by the Supplier's sub-tier sources. Use of sources not accredited by NADCAP shall result in return of products to the Supplier at the Supplier's expense.
- Q014 **Qualified Process Sources & Certifications**
CAUTION: All special processes must be performed by sources approved by Electro Miniatures Corp. Use of processes and/or process sources that have not been approved by Electro Miniatures Corp. may result in return of all products to the Supplier at the Supplier's expense. Unless otherwise directed by the Contract or the procuring Electro Miniatures Corp. Buyer the Supplier shall select process sources from the list of Electro Miniatures Corp. approved process sources. The requirements of Q014A apply.

Q014A Qualified Process Sources & Certifications

- A. SPECIAL PROCESS** - The application of chemical, metallurgical, nondestructive or any other special manufacturing, joining or inspection processes, controlled by Federal, Military, US Government, Industry (i.e. Parker, Boeing, General Electric, etc.), National, International, or other specifications. All special processes shall be performed only by those sources currently approved for the specific process by Electro Miniatures Corp. In addition, when required by an Electro Miniatures Corp. customer, the Supplier may be required to use

customer approved special process sources. Upon request, Electro Miniatures Corp. will provide the Supplier with a list of the approved process sources.

- B. PROPRIETARY PROCESS** - Prior to initial application of a process that is controlled by a proprietary specification developed by the Supplier or the Supplier's sub-tier source, the Supplier shall furnish a copy of the specification, or sufficient technical data to Electro Miniatures Corp. (subject to normal proprietary rights consideration and nondisclosure agreement) so that Electro Miniatures Corp. can determine whether adequate process controls exist to ensure that the proprietary process will yield products that meet all Electro Miniatures Corp. technical and quality requirements. In addition, the Supplier shall notify Electro Miniatures Corp. when any changes to the proprietary process are planned so that Electro Miniatures Corp. can evaluate the potential impact on product technical or quality requirements.
- C. PROCESS CERTIFICATIONS** - For all special processes required by the Contract or reference documents, the Supplier shall furnish to Electro Miniatures Corp., with the delivery of products, the certification/test report issued by company that actually performed the process. All certifications/test reports shall as a minimum include a complete description of the special process performed, including:
 - a) Process name, applicable specification and revision, type, class, grade, etc.,
 - b) When applicable, a statement that the process was performed by certified operator(s), and
 - c) in the case of priority process, that the process was performed in accordance with the Electro Miniatures Corp. approved process control document
- D. REWORK** - In those cases where products have been subjected to Electro Miniatures Corp. approved rework, repair and/or salvage processes, the certifications shall include a description of the process used and the quantity of parts subjected to the process.

- Q015 Quality Management System** - Stock List Distributors per SAE AS9120The Supplier shall establish and maintain a Quality Management System in compliance with the current requirements of SAE AS9120"Quality Management Systems - Aerospace - Requirements for Stock list Distributors." Supplier's Quality Management System is subject to audit, verification and approval and/or disapproval by Electro Miniatures Corp. designated representative(s).
- Q016 Variation Management Program per SAE AS9103** - The supplier shall establish and maintain a Variation Management Program in compliance with the current requirements of SAE AS9103 - "Variation Management of Key Characteristics." AS9103 requires the use of statistical methods to control manufacturing and processing operations. Supplier's variation management program is subject to audit, verification and approval and/or disapproval by Electro Miniatures Corp. designated representative(s).
- Q017 Inspection & Test System per SAE AS9003** - The Supplier shall establish and maintain an Inspection & Test System in compliance with the current requirements of SAE AS9003 - "Inspection and Test Quality System." Supplier's Inspection & Test System is subject to audit, verification and approval and/or disapproval by Electro Miniatures Corp. designated representative(s).

Q018 **Quality Management System per SAE AS9100:1994** - The Supplier shall establish and maintain a Quality Management System that is in compliance with all of the requirements of SAE AS9100:1994 revisions. The Supplier's Quality Management System is subject to audit, verification and approval and/or disapproval by Electro Miniatures Corp. designated representative(s).

Q019 **Raw Material Verification Program** - The Supplier shall develop, document and implement a raw material (sheet, plate, bar, rod, etc.) verification program that will ensure that material received from the Supplier's sub-tier sources meets all applicable technical and quality requirements. The Supplier's verification program shall include provisions for monitoring and periodic testing of raw material upon receipt to ensure that such material meets all applicable requirements, and implement appropriate storage and controls to preclude commingling of different lots or batches of material. Raw material testing shall be in accordance with specification requirements and may be performed by the Supplier or a recognized testing laboratory. Supplier's verification program shall document the frequency of such tests and the test results. Records showing the results of the Supplier's material verification program and its effectiveness shall be available to Electro Miniatures Corp. for review upon request.

Q020 **DFAR Compliant** - Must use materials that are made in America.

Q021 **Your Supplier Quality Management system is subject to audit and approval / disapproval by Electro Miniatures Corp.**

Q022 **Age Limits for Elastomers** - Unless otherwise specified by the Contract, the age limit or maximum time between the date of manufacture of elastomers (i.e. rubber goods such as o-rings, seals, gaskets, etc.) to the date of delivery to Electro Miniatures Corp. is a maximum of forty (40) quarters or ten (10) years. The Supplier shall establish and maintain an effective system of age control of elastomers to ensure that the age limits are met. Individual or bulk elastomers delivered to Electro Miniatures Corp. shall be properly identified in accordance with the applicable specification and include the cure date (quarter & year, Le. 2Q03) either on the individual packages or on the bulk containers. With each delivery of products on this Contract, the Supplier shall include on the packing list/shipper or on a separate attached document, a written statement which is worded substantially as follows: "This is to certify that all elastomers delivered on this Contract (number) and packing list/shipper (number) have been manufactured and controlled in accordance with the age control requirements, have not been commingled with elastomers from other manufacturers, or other lots or batches and comply with all of the requirements of the Contract. Objective evidence to support this certification will be made available for review upon request."

Cure Date(s): _____

Company Name: _____

Address: _____

Authorized Individual _____ Title: _____

Signature/Stamp: _____ Date: _____

- Q023 **Limited Shelf Life Materials** - With each delivery of materials on this Contract, that have a limited or specified shelf life, the Supplier shall furnish the following data:
- a) Cure or manufacture date;
 - b) Expiration date or shelf life;
 - c) Lot or batch number, and
- when applicable, any special storage requirements/handling procedures to be followed. The above information shall be marked on each container or certification and shall be in addition to normal identification requirements such as material name, part or code number, drawing, specification number and revision, type, size and quantity and other markings as applicable. For each delivery of limited shelf life materials on the Contract the time lapse between the cure or manufacturing date of such materials, and the date of scheduled receipt by Electro Miniatures Corp., shall not exceed one fourth (1/4) of the total shelf life of the material without prior written waiver from Electro Miniatures Corp.
- Q024 **FOD Control Program** - The Supplier shall establish, document and maintain a program to control and eliminate Foreign Object Damage (FOD) and/or contamination during the Supplier's manufacturing, assembly, test and inspection operations. When applicable, the Supplier's FOD control program shall include controls to preclude FOD or contamination at the Supplier's sub-tier sources. MIL-STD-980 may be used as a guide to establish and implement the Supplier's FOD program. The Supplier's FOD program is subject to on-site review and approval by Electro Miniatures Corp.
- Q025 **Product Serialization Requirements** - Serial numbers for all products on this Contract have been assigned by Electro Miniatures Corp. and are defined in the Contract or reference documents. The Supplier shall apply the specified serial numbers on all products and record the serial numbers on all applicable documentation. The assigned serial numbers may not be altered or replaced without written authorization from Electro Miniatures Corp.
- Q026 **Functional Test Data Sheets** - With each delivery of products on this Contract. the Supplier shall furnish to Electro Miniatures Corp. a functional test data sheet, which shows the actual results (values) obtained during the functional tests performed on each unit of product versus the requirements specified in the Electro Miniatures Corp. approved Acceptance Test Procedure (ATP) or specification. The test data sheets shall identify the part number and drawing revision, individual products by serial number and be signed or stamped (inspection or functional test/acceptance stamp) by the Suppliers authorized representative.
- Q027 **Ship to Stock (STS)** - Products on this Contract have been approved and designated for STS processing. The Supplier shall identify all containers, packages and shipping documents with the words "STS".
- Q 028 **Certified RoHS Compliant** - All materials shall be certified RoHS compliant.