

Supplier Requirements / Quality Clauses

In accordance with AS9100D section 8.4 All Clauses apply when flowed down the purchase order.

This document contains quality clauses that may form a part of Ames Rubber Manufacturing's Purchase Order Requirements. The applicable quality clauses may vary by part number. The quality clauses for each specific part number will be listed on the purchase order. All specifications referenced in this document shall be to the latest revision unless otherwise stated.

- Q-1 Quality Management System (QMS)** – Suppliers shall have a Quality Management System (QMS) in place in accordance to ISO9001 or AS9100, unless an alternate quality system has been instituted and approved by Ames Rubber Mfg.
- Q-2 Minimum Inspection System Requirements** – Suppliers are responsible for ensuring that all inspection and testing has been performed which are necessary to substantiate that the materials, compounds, supplies or services furnished under this Purchase Order conform to specification requirements for the manufacturer's parts.
- Q-3 Conformance to Requirements** – *All requirements in this clause shall be flowed down to all sub-tier suppliers.* Upon acceptance of this Purchase Order, the Supplier agrees to meet all stated requirements, (ie: materials, processes, specifications, or as otherwise indicated on the Purchase Order). Material shall be of new manufacture. Used or refurbished parts and materials shall not be supplied. Repair to out of specification conditions is not authorized without Ames Rubber Mfg.'s prior approval. Ames Rubber Mfg. reserves the right to deny requests to repair any out of specification material submitted for approval. The Supplier shall notify Ames Rubber Mfg. in the event that non-conformances are discovered after materials have been delivered.
- Q-4 Digital Product Definition (DPD) Control (D6-51991)** – The Supplier shall have a system in place to facilitate supplier deployment of (DPD) techniques to achieve technical coordination between Customer, Supplier, and Sub-tier Suppliers. The Supplier will have defined and reliable configuration management and QA processes in place reflecting its methods of operation. This includes but is not limited to safeguarding of design data flowed down by Ames Rubber Mfg. to its Suppliers. The Supplier shall have completed a current Supplier Evaluation or provided evidence of a quality management system Certification to ISO9001 or AS9100. A copy will be retained at Ames Rubber Mfg.
- Q-5 Traceability** - All items supplied under this Purchase Order shall be traceable to the raw materials used. If this information is not supplied with the material, the information shall be made available to Ames Rubber Mfg. upon request.
- Q-6 Supplier Controlled Parts** - Items purchased under this Purchase Order for which no Ames Rubber Mfg. drawing or Ames customer drawing exists (being proprietary with Supplier or under their design cognizance), will be accompanied on the initial shipment by a copy of the supplier's drawing, specifications, catalog page, etc., to facilitate Ames Rubber Mfg.'s Receiving Inspection. It is understood that data supplied is not expected to be of a sensitive proprietary type. Supplier shall notify Ames Rubber Mfg. in writing of any changes proposed in product design, fabrication, methods, materials, or processes of proprietary products, including those procured from secondary sources and/or included in assembled components as ordered, and shall obtain the Ames Rubber Mfg. buyer's approval prior to supplying such products under this order. In the event of approval, Supplier shall identify those articles on which the change is incorporated.
- Q-7 Right of Entry** – Ames Rubber Mfg. reserves the right of entry into a supplier's facility, or that of their subcontractors to conduct a supplier source inspection. Suppliers are required to provide all requisite quality systems documentation, records, and reports necessary to facilitate the work of the Ames Rubber Mfg. inspector, and to verify any physical or functional specifications as may be requested during the course of the inspection. Suppliers and subcontractors denying access to manufacturing facilities or refusing to provide required information or providing false information will not be approved source of supplies or services to Ames Rubber Mfg.

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- Q-8 Supplier Flowdown Requirements** – Ames Rubber Mfg. may have key characteristics, special quality, material, process, or other controls imposed on this Purchase Order. This information may be flowed down via drawings, customer specifications, or other pertinent information required fulfilling Purchase Order requirements. The Supplier shall flow down these requirements to any and all subcontractors.
- Q-9 Critical Materials** – This Purchase Order covers the procurement of materials, compounds or parts that have been designated as “critical”. As a result, the following special Quality Assurance Requirements must be strictly applied.
- ***Due to the critical application of this material, maximum confidence of material integrity and quality is necessary.***
 - ***Each shipment of material must be accompanied by a legible and reproducible copy of certifications containing total and complete data, traceable to heat, lot or batch number.***
 - ***Traceability shall be achieved by a positive means of identifying material to its certification documentation.***
- Q-10 Qualification of Parts** – Once items, materials or parts have been qualified and accepted by Ames Rubber Mfg.’s Quality Assurance, the Supplier shall not incorporate any changes in design, material, or processes without prior notification and approval from Ames Rubber Mfg.
- Q-11 Purchase Order Amendments** – Any changes to the Purchase Order requirements by the supplier must be communicated and approved by Ames Rubber Mfg. in writing. Any delays in shipment for any reason must be conveyed to Ames Rubber Mfg. as soon as the delay is known by the supplier.
- Q-12 Blanket Order** – The Supplier is authorized to produce the entire quantity of this Purchase Order in one lot. In consideration thereof, The Supplier agrees to hold this material at his facility and make shipments in accordance with the noted shipping schedule. Further, the Supplier agrees to invoice only for the quantities actually shipped and only at the time of actual shipment. Subject unit price represents that price which is applicable to the total quantity of the order.
- Q-13 Facility Relocation / Process Change Notification** – The Supplier shall not change any manufacturing processes, raw materials used, packaging, or relocate any Ames Rubber Mfg. approved production, manufacturing, and/or processing facilities during performance of the work specified in the Purchase Order. Ames Rubber Mfg. will be notified in writing of any such intended changes prior to performance against the Purchase Order and afforded an opportunity to examine and approve changes for compliance with quality requirements.
- Q-14 Ames Rubber Mfg. Supplied Components or Raw Materials** – When applicable or required, Ames Rubber Mfg. may furnish component parts or raw materials to a vendor for processing. The applicable Job Number and/or Purchase Order number must be referenced on the Ames Rubber Mfg. Purchase Order for traceability purposes. The Vendor shall acknowledge the Ames Rubber Mfg. furnished component parts or raw materials by referencing the applicable job number and/or Purchase Order on their packing slip and/or Certificate of Compliance (COC). This requirement shall be flowed-down by the Vendor to any and all sub-tier Suppliers or Processors utilized in the production, fabrication, or assembly involving this Purchase Order.
- Q-15 Production Tooling** – Acceptance of production tooling on this Purchase Order shall be contingent on inspection and acceptance by Ames Rubber Mfg. Representation of the applicable characteristics on each of the samples produced from this tooling must conform to the dimension and tolerances as specified on the applicable drawing and specifications. All hard tooling samples for first article inspection shall be accompanied by a first article inspection report and material certification if the vendor is supplying the material.

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- Q-16 Supplier Awareness** - As specified in AS9100 Rev.D section 8.4.3 (Information for External Providers” Section M), the supplier shall ensure that all personnel assigned to work on this Purchase Order are aware of:
- Their contribution to product or service conformity to Purchase Order requirements.
 - Their contribution to product safety.
 - And the importance of ethical behavior.
- Q-17 Standard First Article Inspection** – Items produced under this Purchase order are subject to the approval of a First Article sample at Ames Rubber Mfg. The Supplier should deliver one sample, (or more as requested), which represents in all aspects, the items to be delivered, and await approval before shipping the remainder of the order. First Article Data shall be provided to Ames Rubber Mfg. prior to the first shipment when one or more of the conditions noted below apply.
- The Supplier is a new vendor for the parts materials or compounds.
 - There has been a drawing revision since the last shipment to Ames Rubber Mfg. of the same parts or materials. (First Article Inspection shall include only dimensions and characteristics affected by the change).
 - It has been over three (3) years since the vendor last shipped the same part, material or compound to Ames Rubber Mfg.
 - There has been a major tooling or process change or modification in the manufacturing process of the parts, materials or compounds. (First Article Inspection shall include only dimensions and characteristic affected by the change).
- Manufacture of the remainder of the Purchase Order prior to the First Article Approval is at the risk of the Supplier.***
- Q-18 AS9102 Supplier First Article Inspection** – The Supplier shall create or select a first article inspection sample, and perform a complete AS9102 First Article Inspection Report to all drawing requirements. The AS9102 First Article Inspection Report shall be submitted and approved by an Ames Rubber Mfg. Quality Representative prior to acceptance of the Supplier’s product. ***Manufacture of the remainder of the Purchase Order prior to the First Article Approval is at the risk of the Supplier.***
- Q-19 Sampling Plan Requirements and/or Other SPC Programs** – If sampling inspection is used as a means of acceptance; those plans shall be in accordance with AANSI Z1.4, MIL-STD-105, MIL-STD-1916 or AS9138 for the sample size. Zero acceptance number sampling plans are utilized when sampling is required per SAE ARP9013. When drawing, specification, or Purchase Order includes “Key Characteristic” requirements, the Supplier shall employ a process Statistical Process Control (SPC) program compliant with AS9103 – Variation Management of Key Characteristics. SPC related records shall be retained at the Supplier’s facility and provided to Ames Rubber Mfg. upon request, for compliance review.
- Q-20 Discrepancies / Non-Conformance** – During the performance of the Purchase Order, any deviations noted from established drawing or specifications must be reported to Ames Rubber Mfg.’s Buyer immediately. Material Review Board (MRB) authority is not delegated to the Supplier. The Supplier may request a deviation, and/or clarification to a requirement. Any product in non-conforming condition must be agreed upon by Ames Rubber Mfg. prior to shipment through formal non-conformance documentation. This includes Product Deviation Approval, Product Waiver Approval, or Supplier Non-Conformance Report. Under no circumstances are repairs to be undertaken without prior written approval. A copy of the approval shall be supplied with the shipment.
- Q-21 Notification of Escape (NOE) & Disclosure** – The Supplier’s system shall provide for the timely reporting of non-conformities that may affect already delivered product. Notification to Ames Rubber Mfg. shall be submitted on the Supplier’s company letterhead and include a clear description of the discrepancy. This includes as necessary; parts affected, customer and or supplier part numbers, manufacturing dates, quantities and dates delivered, as well as any information relating to the Root Cause/Corrective Action steps initiated to address the defective condition and preventative measures taken to preclude recurrence of the process failure.

- Q-22 Corrective Action** – The Supplier shall take action to eliminate the Root Cause of non-conformities in order to prevent recurrence of the discrepancy. Corrective actions shall be appropriate to the effects of the non-conformities encountered, and Lean Tools (ie: 5-why, Flowcharts, etc.) shall be used to determine the Root Cause. A documented process shall be established to accomplish the following:
- Containment Actions shall be communicated to Ames Rubber Mfg. as soon as the non-conformity is determined.
 - Determine the Root Cause of non-conformances and implement a Corrective Action Plan.
 - Evaluate the need and implement preventative actions.
 - Communicate to Ames Rubber Mfg. the Root Cause Corrective Action.
 - Review corrective action for effectiveness.
 - When applicable, request for Return Material Authorization (RMA) shall be responded to within 48 hours of request.
- Q-23 Certificate of Conformance (COC)** – The Supplier shall provide with each shipment, a certificate by the Supplier's Quality Representative that the materials furnished to Ames Rubber Mfg. are in conformance with applicable requirements of the Purchase Order. These requirements include:
- Supplier Name and manufacturing address.
 - Ames Rubber Mfg. Purchase Order and Line Item Number.
 - Part Number, Compound Number or other material designation including revision (if applicable).
 - Part Name or description (as applicable).
 - Quantity of Parts or Material shipped.
 - Serial, Lot, and Batch Numbers (as applicable).
 - Date of Manufacture – Cure Date
 - Shelf Life (if applicable).
 - Material Specification (if applicable).
 - A statement that the materials conform to the applicable specifications.
 - Mercury Free compliance, RoHS3 compliance, REACH compliance, DFARs compliance (as applicable).
 - Country of Origin
 - Signature and Title of authorized Supplier Quality representative.
 - Date of Certification
- Q-24 Shelf Life** – Suppliers shall be responsible for labeling items that have a limited shelf life. Each unit package shall be identified with the part, item, or compound number and date of manufacture. At least 75% of the item's shelf life must remain at the time of receipt by Ames Rubber Mfg.
- Q-25 Test Reports** – Test reports shall contain the results of tests which indicate conformance to the requirements detailed in specified Purchase Order Requirements, Drawings, or Material Specifications. These reports must be identifiable with the part, materials or compounds furnished to the Purchase Order. Copies of test reports shall be available upon request by Ames Rubber Mfg.
- Q-26 Test Specimens** – Test specimens representative of the product being procured and traceable to materials on this Purchase Order shall be supplied with this order. This includes items such as test slabs and buttons per ASTM D412 and D2240, or other requirement as specified on drawings or Ames Rubber Mfg. Purchase Order requirements.

- Q-27 Uncured Rubber Compound Testing** – Suppliers for uncured rubber compounds must provide basic compound testing with each shipment to comply with stated Purchase Order requirements. Minimum standard testing requirements for purchased compounds are:
- Durometer (Hardness)
 - Tensile Strength
 - Elongation
 - Tear Strength
 - Specific Gravity
 - Rheometer report (if applicable)
- Q-28 Identification & Packaging** – Unless otherwise specified, all purchased items and materials, shall be packaged and preserved in accordance with the drawing, applicable specification, and/or Purchase Order requirements. If there is no drawing or specification requirement, items and materials should be packaged and identified in accordance with: the Defense Logistics Agency Packaging and Marking Guide (ASTM-D3951-98), or Department of Defense Standard Practice for Military Packaging (Mil-STD 2073).
- As a minimum, all markings shall be legible and in accordance with listed drawing or specification requirements.***
- **Part Identification** – If the Purchase Order, drawing or specification requires the part number and revision to be marked on the actual parts, the supplier shall mark the parts as noted. Exceptions include:
 - Raw materials
 - Chemicals
 - Products that cannot be readily marked due to size or configuration.
 - **Package Identification** – The Supplier shall mark all packages with the following:
 - Purchase Order Number
 - Part Number with revision letter (if applicable)
 - Suitable Supplier identification to ensure traceability to the Purchase Order.
 - **Special Bar Code Labels** – If possible, the Supplier shall print and apply labels with bar coded data to the intermediate and final shipping containers for all items supplied to Ames Rubber Mfg. The bar codes shall conform to ANSI/AIM-BC1 and be of the 3of9 type (code 39 full ASCII Extension), for defense related procurement and contain the following information:
 - Purchase Order Number.
 - Item or Part Number with Revision (if applicable).
 - Shipping Quantity.
 - Optional Information (as specified on the Purchase Order).
- Q-29 Serial Numbers** – The Supplier shall assign permanent, individual serial numbers to all items shipped under this Purchase Order. If Ames Rubber Mfg. elects to supply these numbers, they will be listed in the Purchase Order or other procurement documentation. The manner of affixing the serial numbers will be specified on the drawing or in the Purchase Order. Material Certifications, analysis, test samples etc., shall be correlated with each serialized item.
- Q-30 Lot Control** – The Supplier shall assign a common lot control number to all items in a particular manufactured lot. For this clause, a lot is defined as a quantity that has been manufactured during an uninterrupted period of time by essentially the same personnel, following a standard process and using the same equipment.
- Q-31 Material Safety Data Sheets (MSDS) or (SDS)** – Safety Data Sheets shall be included with each shipment of materials or chemicals that contain hazardous materials or require special attention for safe handling.

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Q-32 Control of Documents and Records (Record Retention and Disposal) - The Supplier shall maintain documentation (ie: quality records, inspection records, test reports, travelers, etc.) as objective evidence of conformance to Purchase Order requirements. If no time period is specified, records shall be maintained for a minimum of seven (7) years. Documentation on file with the supplier should be disposed of in accordance with supplier disposal procedures once the minimum retention requirement has been satisfied.

Q-33 Calibration System / Services – The Supplier shall maintain a calibration system that complies with the applicable requirements and latest revision of ISO 10012:2003, MIL-STD-790, ISO 17025, or ANSI/NCSL Z540 or equivalent. If ANSI/NCSL Z540 is applicable, the Handbook shall be used as the interpretive guide. This system shall be subject to review by Ames Rubber Mfg.'s Quality Assurance Representative. The Supplier of calibration services shall provide certification that such services were accomplished utilizing standards traceable to the National Institute of Standards and Technology (NIST).

Q-34 Foreign Object Damage / Debris (FOD) Prevention – The Supplier shall maintain a (FOD) control program, assuring work is accomplished in a manner preventing foreign objects or debris from entering and remaining in deliverable items. Maintenance of the work area and control of tools, parts and materials shall preclude the risk of (FOD) incidents. The Supplier shall document and investigate all (FOD) incidents assuring elimination of the root cause. This program should be designed to address the concerns outlined in the following documents as related to product/process integrity:

- AS9146, Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space, and Defense Organizations.
- NAS 412, Foreign Object Damage / Foreign Object Debris (FOD) Prevention.
- NASA-STD-6016, Standard Materials and Process Requirements for Spacecraft.
- ISO9000 / ISO9001 / AS9100 Quality Management Standards.

Q-35 Counterfeit Part Prevention – The Supplier shall implement an appropriate control plan to ensure that materials and items furnished to Ames Rubber Mfg. under this Purchase Order are not Counterfeit items. The Supplier's plan shall include but is not limited to:

- Direct procurement of items and materials from authorized suppliers.
- Conducting sufficient inspection and/or testing to ensure the authenticity of items to be covered on this Purchase Order.
- Obtaining appropriate Certificates of Conformance (COC) from sub-tier suppliers.

If Suspect/Counterfeit items are furnished under this Purchase Order and are found in any of the items delivered hereunder, such items will be impounded at Ames Rubber Mfg. The Supplier shall promptly replace such Suspect/Counterfeit items with items acceptable to Ames Rubber Mfg. and the Supplier shall be liable for all costs relating to the removal and replacement of said items. A Suspect/Counterfeit item means an item for which credible evidence (including but not limited to, visual inspection or testing), provides reasonable doubt that the item is authentic. Ames Rubber Mfg. reserves all contractual rights and remedies to address grievances and detrimental impacts caused by Suspect/Counterfeit items.

Q-36 International Traffic in Arms Regulation (ITAR) – When stated by the Purchase Order, all vendors are required to comply with (ITAR) regulations and are subject to the following Domestic (ITAR) Destination Control Statement.

“These articles or technical data are controlled by the International Traffic in Arms Regulations (ITAR). They are subject to the export control laws of the U.S. government. They are not to be placed in the public domain, exported from the U.S., or given to any foreign person in the U.S., without the prior, specific written authorization of Ames Rubber Mfg., and the U.S. Department of State.”

For further assistance, visit www.pmdetc.state.gov

- Q-37 UTAS ASQR-01 Aerospace Supplier Quality Requirements** – In addition to the requirements defined in Q-1 Quality Management System, the Supplier shall comply with the issue in effect on the date of the Purchase Order that the ASQR-01 quality requirements as they would apply to the product, process or service provided to Ames Rubber Mfg. A copy of the ASQR-01 document may be downloaded from the following website: <https://sss.rtx.com/suppliers/United-Technologies-Suppliers/United-Technologies-ASQRD>. The Supplier is responsible for compliance to this quality standard and shall flow-down this requirement to any and all subcontractors.
- Q-38 REACH Compliance** – If work delivered by the Supplier under this Purchase Order will be incorporated into deliverable goods for use in the European Economic Area, the Supplier may be required to provide information regarding REACH compliance. Ames Rubber Mfg. at its discretion may request more information to confirm part compliance, process compatibility, and traceability. The REACH list of restricted chemicals is updated semiannually and can be found on the ECHA website.
- Q-39 RoHS3 Compliance** – If required by Ames Rubber Mfg., the Supplier shall provide information regarding RoHS compliance. The Restriction of the Use of Certain Hazardous Substances (RoHS) Directive restricts the use of certain substances above specified amounts in electrical and electronic products.
- Q-40 Mercury Exclusion** – Each shipment made against this Purchase Order must contain a statement certifying that the item supplied contain no metallic mercury or mercury compounds, and that the Supplier has taken responsible steps to ensure that the items are not contaminated with metallic mercury or mercury compounds. This certification shall reference the Order number, Item number, description and quantity shipped.
- Q-41 Dodd-Frank Compliance (Conflict Minerals)** – The term “Conflict Minerals” is defined as minerals derived from ores mined in the Democratic Republic of the Congo (DRC), or adjoining countries and which directly or indirectly benefit armed groups in that region. The Supplier shall perform due diligence and will retain information relating to the presence or non-presence of DRC Conflict Minerals in the product being provided on this Purchase Order. This declaration shall be retained at the Supplier’s facility and available on request.
- Q-42 Acceptance Authority Media (AAM)** - As specified in AS9100 Rev.D section 8.5.2 (Identification and Traceability. (AAM) is a way of indicating the identity of outputs in order to ensure the conformity of products in the production cycle. (ie: Stamps, electronic signature, Initials with Employee Number, etc.). The Supplier shall, upon Ames Rubber Mfg.’s request, be able to demonstrate evidence of communication to its employees and to its supply chain regarding maintaining compliance to the (AAM) requirements by assessing its process as part of its internal audit activities. The area of focus of this assessment shall include but not be limited to:
- **Authority Media Application Errors** - (ie: Omission, Typos, Legibility, etc.).
 - **Authority Media Application Untimely Use** - (ie: Documentation is not completed as planned during processing.)
 - **Authority Media Application Misrepresentation** - (ie: Uncertified Personnel, Falsification of documentation, work not performed as planned, etc.)
 - **Authority Media Application Training Deficiencies** – (ie: Proper Use of Authority Media, Stamp Control, Electronic signatures, Initial with employee Number, or other recognizable and repeatable media.).