



F-Q-005

P & Q Clauses

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P02 Age Sensitive Product

(P02) Articles procured on this order are considered "age sensitive" (i.e. adhesives, paints, rubber products, etc.). You are required to mark the date of manufacture & expiration date on components and supply the most recently produced product.

NOTE: This Item has a Shelf Life: 75% or more of the shelf life must be remaining upon receipt to be accepted by Howmet Aerospace.

P03 Precision Parts

(P03) These are precision parts produced at substantial cost. They must be handled with care and repackaged in the original shipping container. No Nicks, Dents, or Abrasions will be tolerated.

P04 MSDS Sheet

(P04) Send a "Material Safety Data Sheet" that meets the OSHA hazard communication standard on all potentially hazardous chemicals or materials with your shipment. Mark to the attention of "Purchasing".

P09 Buyer Retains Title

(P09) Buyer retains title to all drawings, designs, specifications, and technical data furnished to seller for use with this order. All documents are to be treated as Buyer's confidential information, which shall be used by seller only to complete this order and shall be returned upon completion or termination of this order along with all copies or reproductions of the documents. All materials, including tools, special dies and patterns, or anything specifically paid for by the Buyer, shall be the property of the Buyer; shall be returned to the Buyer when no longer required; shall be segregated and clearly identified as property of the Buyer; and shall be used only to produce parts exclusively for the Buyer. Seller assumes all risk and liability for loss or damage, except for normal wear and agrees to permit inspection and supply detailed statement of inventory upon request from Buyer.

P17 Insurance Clause

(P17) **INSURANCE CLAUSE:** Contractor is to maintain all necessary liability insurance to protect themselves against claims for bodily injury or death of any person or persons whether or not employed by contractor, which may arise from any operation in connection with work covered by this order. Required insurance in all cases will be workers' compensation and employers' liability for the state involved. and public liability insurance. If you select any portion of this order, it will be necessary that you carry contractor's protective liability insurance. A copy of your "Certificate of Liability Insurance" must be forwarded to Howmet Aerospace prior to beginning work on this order. You must provide a safe work environment. Contractor will abide by Howmet Aerospace's safety policy of wearing safety glasses with side shields at all times in designated areas.

P19 Drop Shipments

(P19) **NOTE:** This is a drop shipment to another company. On the same day the shipment is made, a copy of either the packing slip, or a shipping document must be sent to the attention of the buyer on the purchase order.

P20 Acknowledgement

(P20) Send acknowledgement of purchase order with price and delivery within 48 hours.



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P26 CNC Program Suppliers

(P26) Supplier will use prints, drawings, processes and electronic data supplied by Howmet Aerospace to make CNC programs. The CNC programs, tool lists and processes will fulfill Howmet Aerospace specifications and workmanship. The supplier will verify CNC programs using Vericut and/or other acceptable methods. Suppliers will provide a comment line on the source program with the name of the CNC programmer, the date that the CNC program was certified, and the method that was used to certify the CNC program.

P32 Traceability & ID

(P32) Traceability & Identification- material requiring heat/ lot traceability will be individually identified and traceable to the purchase order. When plates are stacked on pallets, traceability/identification must be visible in either paint, ink, or label on the exterior plate so that unstacking is not necessary for receiving inspection.

P33 Unique Identification

(P33) Unique Identification (UID) - All items to be identified with the specific identification requirements per purchase order and drawings.

P34 Part Require Protection

(P34) Parts require protection from physical and mechanical damage. Parts must be protected by separation, wrapping, cushioning, or some other means to ensure no damage is caused to parts during handling and shipment.

P35 Specialty Metals/COTS FST

(P35) Specialty Metals/COTS Fasteners - A certificate of conformance is required which states: Material is in compliance with DFARS 252.225-7008, 252.225-7009 or 252.225-7010 as applicable.

COTS Fasteners - "Commercially available Off-The-Shelf" (COTS) item is not applicable to this clause if the following apply:

(A) A commercial Item: "Commercial Item" means -

(1) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes; and,

(i) Has been sold, leased, or licensed to the general public; or,

(ii) Has been offered for sale, lease, or license to the general public;

(B) Sold 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 marketplace.

P37 Small Business Requirement

(P37) Utilization of Small Business Concerns: For contracts/orders in excess of \$750,000 supplier must submit a small business subcontracting plan that fully meets the requirements of FAR 52.219-9.

P38 Buy American Act

(P38) Buy American Act - DFAR 252.225-7001

P39 Physical Material ID

(P39) Physical Material Identification: Supplier is required to identify each piece of physical material being shipped with information from the purchase order. The information required is: (a) the part number; (b) the revision level of the part number; (c) the heat lot number, where applicable.

P40 Boeing Special Business Provision

(P40) Item number is applicable to Boeing Special Business Provision, Section 15.2, Non-US Procurement Offset for 747-8 Program



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P41 Boeing INCOTERMS 2000

(P41) The INCOTERMS 2000 for all orders from Buyer will be Free on Board (FOB) if by ocean and Delivery Duty Unpaid (DDU); otherwise, Boeing will pay for freight per Boeing's standard routing instructions. When Buyer's order requests delivery outside the United States of America, the Import of Record will be the Buyer placing the order. Title and risk of loss shall pass at place of shipment (i.e. for orders shipped directly from a mill, title and risk of loss shall pass when Boeing, or its designee, assume control of the Material; for orders shipped from Boeing, or Boeing's service provider, title and risk of loss shall pass at Boeing, or Boeing's service provider's, shipping dock and Buyer will maintain adequate insurance to cover shipments at the time title and risk of loss transfer to Buyer).

P42 ITAR Compliance

(P42) Seller shall control the disclosure of and access to technical data, information and other items received under this Purchase Order in accordance with U.S. export control laws and regulations, including but not limited to the ITAR. Seller agrees that no technical data, information or other items provided by the Buyer in connection with this Purchase Order shall be provided to any foreign persons or to a foreign entity, including without limitation, a foreign subsidiary of Seller, without the express written authorization of the Buyer and the Seller's obtaining of the appropriate export license, technical assistance agreement or other requisite documentation for the ITAR-controlled technical data or items. It shall be the sole responsibility of the Seller to determine whether the information provided by Buyer is technical data as outlined in the ITAR (22 CFR 120-130) prior to any release to a third party abiding by the terms outlined herein. Seller shall indemnify Buyer for all liabilities penalties, losses, damages, costs or expenses that may be imposed on or incurred by Buyer in connection with any violations of such laws and regulations by Seller.

P43 Testing of New Titanium Heat Lots

(P43) Refer to Work Instruction for Testing New Titanium Heat Lots, dated May 7, 2009.

P44 Latex Free Requirement

(P44) Howmet Aerospace products shall be manufactured, processed, and packaged in a "Latex Free" environment, and CANNOT be exposed to latex proteins. Products such as gloves, protective packaging, and adhesives used in manufacturing operations shall not contain latex.

P45 Prohibition of Hexavalent Chromium

(P45) Hexavalent Chromium is a known CARCINOGEN. Delivery of items containing more than 0.1 percent by weight of Hexavalent Chromium in any homogeneous material is prohibited under DOD contracts unless there is no acceptable alternative. This prohibition does not apply to Hexavalent Chromium produced as a by-product of manufacturing processes. A Certificate of Conformance is required which states: Material is in compliance with DFAR 252.223-7008.



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P46 Boeing (T88)–Ozone Depleting Chem

(P46) Definition: "Ozone-depleting substance," as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to hydrochlorofluorocarbons.

Seller shall label shipping or storage containers of ozone-depleting substance and products that contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as applicable:

Warning

Contains * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

Warning

Manufactured with * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

*Seller shall insert the name of the relevant substance(s).

Boeing requires that the provisions/requirements set forth above be included in Seller's direct supply contracts as well as the obligation that they be flowed to the sub-tier supply chain.

P47 Northrop Grumman P351-F01

(P47) SPECIALTY METALS - Specialty metals incorporated in articles delivered to Buyer must comply with the requirements of this clause. The following articles are specifically exempt:

Circuit Card Assemblies (CCAs) and components designed or intended for use on CCAs or substrates, such as diodes, capacitors, resistors, transistors and integrated circuits; however, assemblies and components are not exempt if they incorporate high performance magnets (samarium cobalt).

Any other waivers, Domestic Non-Availability Determinations, deviations, or other forms of exemption from this requirement do not apply to this purchase order, unless otherwise stated in the Purchase Order Line Item Material Details text.

(a) Definitions. As used in this clause-

(1) "Qualifying country" means any country listed in subsection 225.003 of the Defense Federal Acquisition Regulation Supplement.

(2) "Specialty metals" 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, columbium, molybdenum, nickel, titanium, tungsten, or vanadium;

(ii) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) more than 10 percent;

(iii) Titanium and titanium alloys; or

(iv) Zirconium and zirconium base alloys.

(b) Any specialty metals incorporated in articles delivered under this contract shall be melted in the United States or its outlying areas.

(c) This clause does not apply to specialty metals melted in a qualifying country or incorporated in an article manufactured in a qualifying country.

(d) The Supplier shall insert the substance of this clause, including this paragraph (d), in all subcontracts, including commercial subcontracts, for items containing specialty metals.



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P48 Raytheon AEU Hazardous Materials

(P48) The subcontractor shall not use Class I and should not use Class II Ozone Depleting Substances (ODSs), as defined in Title IV of the Clean Air Act Amendments of 1990, in the manufacture, production, operation, maintenance, and/or disposal of the system or its components. The subcontractor as well as each of its subcontractors shall minimize or avoid the use of any hazardous materials, with special emphasis on the Environmental Protection Agency (EPA) list of 17 toxic chemicals as well as the Department of Defense (DoD) 'Top 10 Toxic Release Inventory (TRI) List of Hazardous Chemicals.' The subcontractor shall deliver a report of all hazardous materials and their respective Safety Data Sheets (SDS's) incorporated or used in the processing of product defined in the purchase order and related manufacturing documentation. If no hazardous materials are incorporated or used the subcontractor shall deliver a report stating this.

Q00 No Certs Required

(Q00) No Certifications of any type required.

Q01 Cert. of Conform.

(Q01) You are required to submit with each shipment a legible Certificate of Conformance (C of C) signed or stamped by an authorized Quality Representative or designate, which references Howmet Aerospace's Purchase Order Number (PO#), part number (as specified on the PO), revision, quantity and a unique manufacturing or Serial Number if applicable. The C of C must certify conformance to all Purchase Order requirements, specifications, drawings, approved written procedures, and special processes. Unless otherwise specified, materials or parts shall be manufactured and/or processed to the specification(s) revision in effect at the time of the start of the manufacturing and/or processing. In the event that the latest specification revision is in question, please contact Howmet Aerospace Engineering Purchasing for clarity. Revision levels of customer specifications will be confirmed and/or access to the documents provided to the supplier upon request. Revision levels of industry and military specifications will be confirmed, but acquisition of the specifications remains the responsibility of the supplier. Howmet Aerospace, its Customers, and Regulatory Agencies reserve the right of access to supplier's facilities and all applicable quality records pertaining to this purchase order. Quality records must be maintained by the supplier for a minimum of seven (7) years, or as specified by the Howmet Aerospace Purchase Order. Supplier shall ensure that employees are aware of their contribution to product conformity, product safety, and the importance of ethical behavior. Q29, Q33, Q45 also apply.

Q02 Test Certs

(Q02) One copy of the actual test reports referencing Howmet Aerospace's purchase order, supplier name and address, and/or independent laboratories name and address, part number(s), part name, serial number if applicable, lot/batch, list of parameters tested, and test date, must accompany each shipment. These reports shall be validated by an authorized quality representative of your company by signature or inspection stamp. Howmet Aerospace, its Customers and Regulatory Agencies reserve the right of access to supplier's facilities and all applicable quality records pertaining to this purchase order.

Q03 Material Certs

(Q03) One copy of the actual chemical composition and actual mechanical properties for each lot, batch, or heat, shall accompany each shipment and must reference Howmet Aerospace's Purchase Order #. Either Howmet Aerospace's Purchase Order # shall be referenced on the cert.; or a packing list referencing the Howmet Aerospace Purchase Order # and mill cert. Heat Lot # shall accompany the cert. Howmet Aerospace, its Customers and Regulatory Agencies reserve the right of access to supplier's facilities and all applicable quality records pertaining to this purchase order.

Q05 Test Samples

(Q05) Test sample(s) shall be submitted with each shipment to conduct tests in accordance with the purchase order requirements and/or referenced specification. Each sample shall be clearly marked to provide traceability to shipped materials.



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Q06 Source Inspection

(Q06) Source inspection is required prior to shipment from your facility. Notify Howmet Aerospace Quality Assurance when articles are ready for inspection.

Q08 Process Approval

(Q08) Your process(s) must be approved by our customer before performing any specialized processing to this purchase order. You are required to notify Howmet Aerospace Quality Assurance of any changes which may negate any previous qualifications, certifications, and approval status, as related to this order.

Q10 Control Changes

(Q10) The supplier is responsible for controlling changes to articles manufactured or processed to drawings or specifications. The supplier shall notify Howmet Aerospace of any proposed changes to approved designs, processes, fabrication methods, or nonconforming material, and to obtain Howmet Aerospace's approval prior to change incorporation and material delivery.

Q11 Critical Parts

(Q11) Articles covered by this order have been identified as critical. You are required to ensure that affected employees are aware of the critical nature of these articles and that appropriate steps are taken to safe-guard product quality.

Q12 Packaging

(Q12) Supplier shall provide all necessary care in packaging to ensure Howmet Aerospace parts or materials are not damaged. Stacking of plates, bars, sheets, coils, castings, or parts, shall not cause warping, distortion, nicks, dents, gouges, scratches or other damage. Inadequate use of pallets, cardboard, bags, boxes, containers, bubble wrap, Styrofoam chips, foam, paper media, etc., meant to protect parts or material delivered to Howmet Aerospace or to another destination on Howmet Aerospace's behalf, shall not be the cause of material or part damage.

Q14 Govt Inspection

(Q14) During performance on this order, your quality control or inspection 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 required unless you are otherwise notified.

Q16 DO Defense Rated

(Q16) This is a DO Defense Rated order. The material is needed at the "ship to" location on the specified "delivery required" date. Seller is required to give this order priority over unrated orders and orders with lower priority ratings. Seller is required to make every effort to deliver this material by this need date. FAR 52.211-15

Q20 No Mercury

(Q20) Supplies furnished under this order shall contain no mercury and shall be free from mercury contamination. Mercury-bearing instruments and/or equipment which may cause contamination shall not be used in the manufacture, fabrication, assembly, or testing of materials furnished under this order. Contact the buyer if there is suspicion of contamination or questions regarding acceptable practices. The seller shall flow-down this requirement to applicable lower tier suppliers associated with this order. Seller shall provide a "mercury free" certificate of conformance with the furnished supplies.

Q21 DX Rated Order

(Q21) This is a DX Defense Priority Rated order. The material is needed at the "ship to" location on the specified "delivery required" date. Seller is required to give this order priority over unrated orders and orders with lower priority ratings. Seller is required to make every effort to delivery this material by this need date. FAR 52.211-15.



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Q22 ISO Requirement

(Q22) Supplier is responsible for maintaining a documented quality system patterned after or in compliance with ISO 9001 or AS9100, as applicable to the work scope stated in this order. Procedures, plans, and records will be made available for review by request of authorized Howmet Aerospace Supply Chain representatives.

Q23 Calibration

(Q23) This/these instrument(s) must be calibrated using standards traceable to NIST per the guidelines specified in ANSI/NCSL Z540.3/ISO 10725. Only those line items with (Q23) are to be calibrated to this standard. Other specifications/standards may also impose specific calibration requirements.

Q24 Drawings/Specs

(Q24) A drawing/specification package must accompany parts when shipped to the supplier. This same drawing/specification package must be returned by the supplier with the parts. **Note:** These documents are controlled. Copying or otherwise altering these documents is prohibited unless prior authorization has been given by Howmet Aerospace.

Q28 Designated Source

(Q28) Howmet Aerospace Supply Chain has delegated a Supplier QA Representative to be a Howmet Aerospace Designated Source Inspector (HDSI). All supplied goods/services must be source inspected by RDSI before shipment.

Q29 Nonconforming Parts

(Q29) Supplier must establish controls to ensure that nonconforming materials are identified, segregated, dispositioned, and controlled to prevent inadvertent use. Supplier must document and notify Howmet Aerospace of any nonconforming product identified in manufacture. Supplier has no authority for disposition of nonconforming material, therefore approval must be obtained from the Howmet Aerospace Material Review Board (MRB) in writing prior to shipment. Contact responsible Buyer for further instructions.

Q30 AS9102 1st Article

(Q30) You are required to submit a complete written First Article Inspection (FAI) Report including 100% of the actual readings for all dimensions, per the requirements of AS9102. The Organization shall perform a full FAI for affected characteristics, when any of the following events occur: 1.) The first time a product is manufactured. 2.) A change in the design affecting fit, form, or function of the part (is applicable only to those characteristics affected by the change). 3.) A change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling, or materials that can potentially affect fit, form, or function. 4.) A change in numerical control program or translation to another media that can potentially affect fit, form, or function. 5.) A natural or man-made event which may adversely affect the manufacturing process. 6.) A lapse in production for two (2) years or as specified by Customer. A report shall accompany the parts and reference Howmet Aerospace's Purchase Order number. If the product has been previously manufactured and none of the 6 events listed above apply, a statement on the Certificate of Conformance, such as, "product has previously fulfilled the Q30 requirement" will be satisfactory. Inspection records must be maintained by the supplier for a minimum of seven (7) years or as specified by the Howmet Aerospace Purchase Order.

Q32 100% Inspection

(Q32) Supplier is required to perform 100% Inspection on all parts supplied on this purchase order. Actual readings for all dimensions must be recorded and submitted with the associated parts on this order. In addition, inspection records must be retained for a minimum of seven (7) years, or as specified by the Howmet Aerospace Purchase Order.



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Q33 Foreign Object Damage

(Q33) Foreign Object Damage (FOD): Supplier shall ensure that Foreign Objects and subsequent Foreign Object Damage is eliminated from all parts prior to shipment. Potential FOD includes but is not limited to burrs, chips, dirt, corrosion, and contamination resulting from the manufacturing, assembly, maintenance, processing, cleaning, storage, and subsequent packaging of parts. Compliance to AS9146 is required.

Q34 SPC Required

(Q34) Statistical Process Control (SPC) techniques shall be employed on key, critical, or controlling characteristics, as specified within the drawing(s), and/or within this purchase order.

Q35 Sampling Plan Req

(Q35) INSPECTION SAMPLING PLAN - Sampling procedures employed by the supplier must be in compliance with ANSI/ASQZ1.9-2003, and ANSI /ASQ Z1.4.2008. In all cases the acceptance criteria will be C = Zero.

Q37 DPD Sys. Compliance

(Q37) Supplier is responsible for maintaining a documented Digital Product Definition/Model Definition (DPD) system in compliance with Boeing D6-56199, D6-51991, and ISO 9001 or AS9100 as applicable to the work scope stated on this purchase order for design, fabrication, and/or inspection processes at your facility. Supplier's procedures, plans, and records will be made available for review by request of authorized Howmet Aerospace Supply Chain representatives and their customers as appropriate.

Q38 Flowdown Related to NADCAP

(Q38) If an item on this Purchase Order contains heat treating, plating (including underplating), surface finish, non-destructive testing and mechanical/metallurgical testing, or conditioning process(es) the seller shall use a NADCAP approved processor for the required process. Refer to website: <http://www.eauditnet.com> for the list of NADCAP approved suppliers.

Q39 Brittle Material Requirement

(Q39) For 6061 aluminum, all tempers, a minimum of 10 percent elongation is required. Cherry picking of material to achieve the 10 percent minimum elongation will be required. For mill run orders, a "best effort" to meet the 10 percent minimum elongation is requested. If the material does not meet this requirement, the seller shall notify Howmet Aerospace in writing prior to shipment.

Q40 Mat'l Cert Stored at Supplier

(Q40) One copy of the actual chemical composition and actual mechanical properties for each lot, batch, or heat, shall be maintained at the Supplier for each shipment and must reference Howmet Aerospace's Purchase Order #. Either Howmet Aerospace's Purchase Order # shall be referenced on the cert, or a packing list referencing the Howmet Aerospace Purchase Order # and mill cert Heat Lot # shall be filed with the cert. Retention shall be 11 years. However, Howmet Aerospace shall be contacted for decision of destroy or send to Howmet Aerospace for retention at the end of the retention requirement. Supplier shall be able to retrieve the material cert and provide Howmet Aerospace a copy (paper or electronic) within 4 hours of request. Howmet Aerospace, its customers, and Regulatory Agencies reserve the right of access to supplier's facilities and all applicable quality records pertaining to this purchase order.

Q41 RoHS Directive

(Q41) Restriction of Hazardous Substances Directive 2002/95/EC (RoHS)
Prohibits the use of Mercury, Cadmium, Lead, Chromium VI, PBB, and PBDE in the manufacturing of product supplied to Howmet Aerospace Medical. RoHS compliance must be included on every Certificate of Conformance.



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Q42 Fixed Process

(Q42) Fixed Process - Your process is an engineering controlled, pre-approved fixed process. Definition of Fixed Process: A documented method of manufacture, subject to audit, for which equipment, operation sequence, methods, parameters, and control techniques are established and approved by the end customer, and where deviations from this method may be detrimental to part quality. Requested changes must be submitted, documented as a process revision, and approved by Howmet Aerospace's customer before they are initiated. Only trained qualified personnel shall perform this process.

Q43 WEEE

(Q43) Prevention of waste electrical and electronic equipment Directive 2002/96/ED (WEEE) directs the reuse, recycling and recovery of such wastes to reduce the disposal of waste in the manufacturing of product supplied to Howmet Aerospace.

Q44 REACH

(Q44) Directive EC1907/2006 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) shall be adhered to in the manufacturing of product supplied to Howmet Aerospace.

Q45 COUNTERFEIT WORK

(Q45) (a) Work consists of those parts delivered under this Order that are the lowest level of separately identifiable items (e.g., articles, components, goods, and assemblies). "Counterfeit Work" is or contains items misrepresented as having been designed and/or produced under an approved system or other acceptable method. It also includes approved Work that has reached a design life limit or has been damaged beyond possible repair, but is altered and misrepresented as acceptable. (b) SELLER shall not deliver Counterfeit Work to Howmet Aerospace under this order. (c) SELLER shall only purchase products to be delivered or incorporated as Work to Howmet Aerospace directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), or through an OCM/OEM authorized distributor chain. Work shall not be acquired from independent distributors or brokers unless approved in advance in writing by Howmet Aerospace. (d) SELLER shall immediately notify Howmet Aerospace if SELLER becomes aware or suspects that it has furnished Counterfeit Work. If requested by Howmet Aerospace, SELLER shall provide OCM/OEM documentation that authenticates traceability of the affected items to the applicable OCM/OEM. (e) This clause also applies to any quality provision, specification, statement of work or other provision included in this Order. (f) If Work delivered under this Order constitutes or includes Counterfeit Work, SELLER shall, at its own expense, replace such Counterfeit Work with genuine Work conforming to the requirements of this Order.

SELLER shall be liable for all costs relating to the removal and replacement of Counterfeit Work, including without limitation Howmet Aerospace's costs for removing Counterfeit Work, and installing replacement Work. The remedies contained in this paragraph are in addition to any remedies Howmet Aerospace may have in law, equity or under other provisions of this Order. (g) SELLER shall include this entire clause or equivalent provisions in lower sub-Orders.

Q46 Raytheon SP Supplier Approval

(Q46) The suppliers performing special processes of painting, welding, brazing, or non-destructive testing must be approved by Raytheon before performing any processing to this purchase order. The suppliers performing special processes of plating (conversion coat, anodize, passivation, etc.) or heat treating must be approved by either NADCAP or Raytheon before performing any processing to this purchase order. Refer to website: <http://qnotes.raytheon.com/> for the applicable Raytheon Quality Note for the list of approved suppliers. Refer to website: <https://www.eauditnet.com/> for the list of NADCAP approved suppliers. In either case supplier must be listed by specification of process being performed. You are required to notify Howmet Aerospace Purchasing of the suppliers to be used prior to any processing being performed, and of any changes which may negate any previous qualifications, certifications, and approval status, as related to this order.



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Q47 EBAD Manned Space Flight

(Q47) Manned Space Flight - Articles ordered in this PO are for use in Manned Space Flight. Materials, manufacturing, and workmanship of the highest quality standards are essential to astronaut safety. If you are able to supply the desired items with a quality which is higher than that of the items specified or proposed, you are requested to bring this fact to the immediate attention of the EBA&D Buyer. Insert this clause in all subcontracts and purchase orders for such items down to their lowest tier.

Q48 FAR 52.204-27 Compliance

(Q48) To protect and safeguard Howmet Aerospace and its customers' data, and to maintain compliance with all applicable Federal, State, and Local Regulations—including FAR 52.204-27, Prohibition on a ByteDance Covered Application—suppliers and their sub-tier suppliers are prohibited from installing or using the TikTok application on any device used in the performance of work under this contract. This includes any device that accesses company or customer systems, data, or communications related to Howmet Aerospace contracts or business activities.

Q49 Controlled Unclassified Information (CUI)

(Q49) Supplier is responsible for maintaining CUI control of all documents distributed in relation to this Purchase Order. For suppliers that cannot attest to compliance with the requirements of FAR 52.204-21 "Basic Safeguarding of Covered Contractor Information Systems" [17 NIST FAR controls must be fully implemented without a Plan of Action and Milestone (POAM)] the following safeguarding is required: Drawings should only be accessed by authorized individuals and printed drawings should be stored in a locked location. Drawings should not be left out for unauthorized individuals to access. Electronic data should be stored in a restricted access location. Hardware should be accessible only to authorized individuals. Hardware should be stored or secured until ready to work on, then covered when out but not actively being worked on. Hardware should be covered when non-company personnel are present. Further information and training on CUI may be found at:

<https://www.dodcui.mil/Training/>