

MSK Precision Products, Inc. Supplier Quality Requirements

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This document establishes product assurance requirements for all products and services ordered under the Purchase Order of this part to assure that such products and services conform to the required levels of quality and reliability. All suppliers to MSK Precision Products, Inc. must adhere to acceptable industry standards for product safety and ethical business practices. All suppliers shall certify that no parts supplied to MSK can be deemed counterfeit. Note that products and services purchased on this order are intended for use in applications, such as Medical and Aerospace that require a high level of quality and reliability.

Seller's Quality Control System. The Seller shall implement, document and maintain an inspection/quality control system in compliance with the following quality clauses. Seller's inspection/quality system shall be subject to compliance as audited by Buyer's Quality Representative. Seller shall be required to notify Buyer of any significant changes to their quality management personnel.

The Seller, as the recipient of the contract, is responsible for meeting all contract specified technical and quality requirements, whether the Seller performs the work or the work is performed by the Seller Sub-Tier source. The Seller cannot use Sub-tier sources to perform work on products and or services scheduled for delivery to MSK without the approval of MSK. When approved, the Seller shall include (Flow down) on Purchase orders or Contracts to his Sub-tier sources, all applicable technical and quality requirements of the MSK Precision Contract, including when applicable, the requirements to control key characteristics and/or key processes, and the Quality expectations from herein that are applicable.

- a) **Inspection System.** The Seller's inspection system shall be complaint to the Buyer's quality system survey based on ISO9001, ISO13485 and/or AS9100.

- b) **Receiving Inspection.** Products and services purchased by the Seller for use in Buyer's orders shall be subject to receiving inspection upon receipt to assure conformance to Buyer's Purchase Order requirements. Product shall be adequately identified and/or controlled to prevent commingling with other product.
- c) **In-Process Controls.** The Seller shall employ a system for controlling product and the associated processes throughout manufacturing. This may be accomplished via a manufacturing outline, part traveler, shop routing or other suitable method which details the planned step by step operation sequence and inspection points and includes provisions for controlling the drawing/specification revision status during the manufacturing process. Changes to processes or product must be submitted to and approved by MSK Precision, prior to implementation. Most parts by nature of their design have no blind areas (that are less than 45 degrees line of site) or internal passageways where foreign particles could be trapped. However, there are parts where blind areas exist or other passageways where extra precautions must be taken. To assure that parts are completely clean, these areas must

- have extra precautions taken. The supplier must have a manufacturing/quality procedure that prevents the shipment of parts with foreign material.
- d) **Calibration.** When measuring and test equipment are used to assure deliverables meet prescribed MSK's requirements, the Supplier shall utilize a qualified/certified calibration lab and/or have a documented calibration system that meets the requirements of ISO 10012 or ANSI/NCSL Z540-1. All inspection equipment shall be calibrated against certified standards that have known valid relationships traceable to National Standards.
 - e) **Non-conforming Material.** The Seller shall implement and maintain a system to identify, segregate, document, report and disposition nonconforming material. Control of non-conforming material must include prompt investigation and action to correct the cause of non-conforming material. In the event that it is discovered that nonconforming material was shipped to MSK, disclosure shall be within 2 business days of the nonconformance being discovered. This requirement applies to all Purchase Orders
 - f) **Final Inspection.** In all instances, prior to shipment to the Buyer, the Seller shall perform a final inspection as required to substantiate the Buyer's requirements.
 - g) **Record Retention and Documentation.** All manufacturing and inspection data, collected as documentation for part acceptance is to be retained by the Seller and its suppliers for the lifetime of the product but in no case less than 5 years from the date the manufacturing order was released by the Buyer. Records are to be documented in a manner or medium that if altered, would be obvious that changes were made.
 - h) **Specification Compliance.** Seller shall have on file adequate data showing that all components and materials used in the articles furnished against the Purchase Order comply with the physical and chemical properties required. Seller further warrants that unless otherwise specified, the articles to be furnished shall be in compliance with all applicable specifications including process and Government specifications current as of the date of this order. Seller agrees that data attesting to the above shall be retained on file for the lifetime of the product but in no case less than 5 years from the date the manufacturing order was released by the Buyer, and shall be available to the Buyer when requested.
 - i) **Preparation of Certifications.** The Seller is responsible for the integrity of the certification/document that is provided per the purchase order requirements. All special process/nondestructive specifications noted on the drawing(s) shall be certified individually. This shall be accomplished by listing each specification and its corresponding approved metallurgical laboratory number (MCL) on the certification supplied by the company performing the special process.
 - j) **Inspection by Buyer.** All work performed shall be subject to inspection, surveillance and test by the Buyer at all reasonable times; including the period of performance, and at all places, including that plant or plants of the supplier or that of any Sub-Tier supplier engaged in the performance of work to fulfill this purchase order.
 - k) **Recommended Abrasives.** The recommended abrasive materials utilized for stock removal are silicon Permanent ink shall be used. No erasures or "white-out" is allowed.

carbides, tungsten carbides, and boron carbides.

The suppliers are expected to have systems in place to ensure that contamination or other adverse effects do not occur during the use of other abrasive materials.

l) **Certificate of Conformance (C of C).**

The supplier shall provide with each shipment a written statement titled "Certificate of Conformance" that complies with the requirements of this document. All certificates and test reports shall include the typed or printed name and acceptable signature of the authorizing company official. The following methods are the only approved and acceptable methods for applying signatures to certificates:

- a. Actual signature rendered by ink.
- b. Facsimiles of actual signature such as rubber stamps; or
- c. Machine or computer graphics generated facsimile signature

When quality or inspection stamps are used in lieu of signatures, such stamps shall clearly identify the issuing organization and the authorized individual to whom the stamp is assigned. The issue, use and control of such stamps shall be governed by documented procedures in the Supplier's Quality Management System. Seller use of electronic signatures on documents certifies that the Seller adheres to the following requirements;

- a. Application of electronic signature is under the direct control of the person whose name appears on the document
- b. An electronic signature is only applied at the location or facility where the person is located and the individual must have direct access to the products or services, and

supporting data to monitor the process, perform inspections and ensure that the products or services conform to all Contract requirements, and

- c. The preparation of Electronic documents and application of electronic signatures is governed by documented procedures in the Suppliers Quality Management System to ensure the validity and integrity of all electronic documents.

m) **Protection of Materials in Transit.**

All articles delivered on this order shall be packed adequately to prevent damage in shipment or storage. Uses of newsprint and glassine bags are prohibited. All packages shall be properly identified.

n) **Supplier Furnished Material.**

Seller who furnishes raw material shall provide samples of material as specified. This material sample(s) must be submitted to the Buyer's facility immediately upon Seller receipt of the purchased raw material. When submitting raw material sample(s), provide a copy of the material's mill certification referencing the part number(s) to be made, the heat code number and purchase order number that the product will be shipped against. Physical, mechanical and chemical properties of all raw materials incorporated into Seller's product shall be considered quality characteristics. The Seller's quality system shall provide assurance that these characteristics are verified and maintained throughout the entire manufacturing cycle. The Seller

- shall furnish physical, chemical and mechanical test reports as applicable per the specifications covering raw material on this order. The certifications shall be denoted with the statement “conforms to all drawing and/or specification requirements” and shall be signed by the Seller’s cognizant quality person. Furnish physical and chemical test reports and material certifications as applicable in accordance with the specifications covering raw material on this order.
- o) **Audit Right Reserved.** The Buyer, the Customer, the Government, the FAA/FDA and/or any other regulatory agencies reserve the right to audit the Seller’s books and records and have the right to inspect at the Seller’s plant any and all materials and systems.
- p) **Inspection Gaging.** Seller is held responsible for the protection and care, other than normal wear, of all inspection gaging that may be loaned by the Buyer to facilitate performance of work on this order. Said gaging, or replacement gaging of equal quality shall be returned in acceptable condition upon completion of order or upon demand or notice, whichever comes first. Seller is required to maintain gaging per requirements unless order states that said gaging is subject to recall for Buyer calibration.
- q) **Software Requirements.** Software used in the manufacturing, design, inspection, and test of items shall be controlled in accordance with the current revisions of the industry standards ISO9000-3.
- r) **Lot Control.** Product made from more than one lot of raw material shall be processed and documented in a manner that maintains lot traceability to individual heat numbers. Lot control shall be further maintained so that when special processes, such as heat treatments, hard coating, etc. are performed on a portion of the original lot, each individual process application to that segment of the lot shall require a unique traceable lot identifier for subdivided lot. Special process lots shall be controlled by batches and each batch shall have an individual batch/run number. Lot control of special process runs that exceed one day’s production shall require approval from the buyer.
- s) **Non-Traditional Gaging and Measurement Techniques.** Any gaging method that cannot be reasonably verified by a standard inspection method including layout requires the Buyer’s approval prior to use. Any use of tooling as an inspection method or any non-commercial test software also requires calibration and an independent method of verification of accuracy prior to use.
- t) **Delivery of Suspect Discrepant Hardware.** Should the Seller discover that there is sufficient reason to suspect defective materials have been delivered to the Buyer, notification of the known facts shall be made to the Buyer within twenty-four (24) hours of discovery.
- u) **Special Process Requirements.** When the Seller or the Seller’s Sub-Tier performs any special processing to the Buyer’s product or provides a special process service, this information must be provided to the Buyer for approval before the special process work is conducted.
- v) **First Article of Inspection.** The Seller shall have a system, as appropriate for the inspection, verification, and documentation of the first production article.
- w) **Heat Treating and Brazing.** Heat Treating and Brazing – Processing Controls shall apply to any product or services where the Seller or the Seller’s Sub-Tier performs brazing and/or heat treating to the Buyer’s product per the purchase order requirements.
- x) **Use of International Suppliers.** If the Seller elects to subcontract or purchase any manufacturing, special processes

and/or raw materials from a non-USA Sub-Tier, this must be communicated to the Buyer before the activity takes place. Ref. DFAR 252.225-7014, Alternate 1.

Note: All material certifications must identify the country in which the material was melted.

- y) **Radiographic Inspection.** Shall apply to any Seller or the Seller's Sub-Tier's product requiring radiography per the Buyer's purchase order requirements. The Seller or any Seller Sub-Tiered radiographic procedures shall be approved by the Buyer to the implementation of the service.
- z) **Fluorescent Penetrate Inspection.** Shall apply to any Seller of the Seller's Sub-Tier's product requiring Fluorescent Penetrate Inspection per the Buyer's purchase order requirements. The Seller or any Sub-Tiered Fluorescent Penetrate Inspection procedures shall be approved by the Buyer prior to the implementation of the service.