



Supplier Quality Assurance Requirements

The following terms and conditions shall apply to purchases of all articles, materials, work, or services (supplies) by CNC 2000 INC. The following items, when specifically referenced in the purchase order by number, form a part of the purchase order in addition to all other clauses, terms and conditions, and drawings and specifications which are made a part of the purchase order. Unless otherwise specified, specifications referenced herein shall be of the issue in effect on the date of request for quotation.

1. MIL-Q-9858A - The Supplier shall provide and maintain a quality program acceptable to the Buyer for all supplies and services covered by this purchase order. The quality program shall be in accordance with Military Specifications MIL-Q-9858A. The Supplier, in addition, shall establish and maintain a system which complies with MIL-STD-45662, for the calibration of all measuring and test equipment used in fulfillment of the purchase order requirements. The application of this requirement to the purchase order does not imply authorization for independent MRB action. Requests for use of non-conforming material must be made at each specific occurrence, and approval obtained from the Buyer's Quality Assurance Department.

2. MIL-I-45208A - The Supplier shall provide and maintain an inspection system acceptable to the Buyer for all supplies and services covered by this purchase order. The inspection system shall be in accordance with Military Specifications MIL-I-45208A. The Supplier, in addition, shall establish and maintain a system which complies with MIL-STD-45662, for the calibration of all measuring and test equipment used in fulfillment of the purchase order requirements. The application of this requirement to the purchase order does not imply authorization for independent MRB action. Requests for use of non-conforming material must be made at each specific occurrence, and approval obtained from the Buyer's Quality Assurance Department.

3. NHB 5300.4 - The Supplier shall provide and maintain an inspection system acceptable to the Buyer for all supplies and services covered by this purchase order. The inspection system shall be in accordance with NASA Specifications NHB 5300.4. The Supplier, in addition, shall establish and maintain a system which complies with MIL-STD-45662, for the calibration of all measuring and test equipment used in fulfillment of the purchase order requirements. The application of this requirement to the purchase order does not imply authorization for independent MRB action. Requests for use of non-conforming material must be made at each specific occurrence, and approval obtained from the Buyer's Quality Assurance Department.

4. GOVERNMENT SOURCE INSPECTION - "Government inspection is required prior to shipment from Supplier's plant. Upon receipt of this order, Supplier shall promptly notify and furnish a copy to the Government Representative normally servicing Supplier's plant so that Government Inspection can be appropriately planned. If a Government Representative does not service a Supplier's Plant, Supplier shall contact the cognizant Defense Contract Administration Services District (DCASD) for direction. If Supplier cannot locate the Government Office, Supplier shall notify Buyer's Purchasing Agent immediately".

5. BUYER SOURCE INSPECTION - Source inspection by Buyer is required for all material covered by this purchase order, prior to shipment from the Supplier's plant. The Supplier shall notify the Buyer's Quality Assurance Department at least seven (7) days prior to the date material will be ready for inspection. Buyer may reject the material if non-conforming and require that full corrective action be completed prior to shipment.

6. STANDARDS OF WORKMANSHIP - The Supplier shall provide and maintain a written and thoroughly descriptive standard of workmanship directly applicable to the nature and level of work to be performed under this purchase order. A copy shall be furnished to the Buyer's upon request. The Buyer may disapprove standards of workmanship considered inconsistent with the work to be performed, and request correction of deficiencies. Standards of workmanship must satisfy as a minimum the requirements of MIL-STD-454 and any other specifications applicable to the purchase order. The Buyer may improve his own standards of workmanship if the Supplier is unable to comply with this requirement.

7. GOVERNMENT ACCESS - "During performance of this order Supplier's Quality Control or Inspection System and Manufacturing processes are subject to review, verification and analysis by authorized Government Representatives. Government inspection of release of product prior to shipment is not require unless Supplier is otherwise notified. A copy of this order will be furnished to Supplier's Government Representative upon request".

8. SPECIAL PROCESS CONTROL - Buyer approval of Supplier's special processes, operation personnel, equipment, and process procedures, is required. Supplier shall provide copies of procedures and personnel certifications upon request. If the Supplier uses a facility other than this own, that facility is subject to the same conditions of Buyer approval. All certifications supplied as objective evidence must indicate the name and location of the facility performing each special process.

9. CASTING REQUIREMENTS - Castings shall meet all applicable drawing requirements. An inspection report listing actual measurements of all cast dimensions must be supplied with the first article of the initial order. Test bars and material certifications representing each melt and heat shall be supplied with each shipment. All castings supplied shall not exceed applicable limitations of porosity, distortion, shifts, corrosion and shall meet dimensional requirements. Repairs shall not be made to defective items without prior approval from the Buyer's Quality Assurance Department.

10. CERTIFIED WELDERS - All fusion welding must be performed by welders certified in accordance with MIL-T-5021. Welders who may be certified to another welding



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specification may be used upon specific approval from the Buyer. Any alternate specification used must meet the minimum requirements of MIL-T-5021.

11. **MAGNETIC PARTICLE/PENETRANT INSPECTION** - Magnetic particle/penetrant inspection shall be performed in accordance with applicable drawing requirements. Where specific requirements are not otherwise identified, the following specifications apply:

a) Penetrant inspection per MIL-I-6866

b) Magnetic particle inspection per MIL-I-6868

Personnel performing inspections shall be qualified in accordance with MIL-STD-410. A report of the results of inspection shall accompany each lot shipped.

12. **RADIOGRAPHIC INSPECTION** - Radiographic inspection shall be performed in accordance with applicable drawing requirements. Where specific requirements are not otherwise identified, MIL-STD-453 shall apply. The Supplier shall furnish X-Ray film identifiable to each part, and two copies of the X-Ray laboratory report with each shipment.

13. **TEST BARS** - Two (2) test bars and material certifications must be submitted with each shipment of castings for each melt and heat.

14. **SHEAR SPECIMENS** - The Supplier shall furnish three (3) shear specimens in accordance with MIL-W-6858, for each lot of material on which resistance welding (Spot or Seam) is performed. Samplers shall be prepared for each lot concurrently with the performance of welding. Welding machines shall be qualified to MIL-W-6858.

15. **PRINTED CIRCUIT REQUIREMENTS** - For each lot of printed circuit cards and plated-through holes delivered against this purchase order, the Supplier shall furnish a micro sectioned sample of the plated-through holes taken from a sample board or strip from the same lot, and a lab report indicating that the sample meets the requirements of MIL-STD-275. All printed circuit boards delivered against this purchase order shall be capable of passing the qualification tests specified in MIL-P-55110.

16. **CURE/MOLDING/MFG DATE** - The Supplier shall furnish with each shipment made against this purchase order complete information in accordance with applicable military specifications, relative to the limited life of the material supplied. Each unit package or container shall be marked. Rubber products, whether individually supplied or in assemblies, shall be identified as to cure or mold date. Containers of life limited materials shall be marked with the date of manufacture and and/or or the expiration date. In no case shall material be supplied with more than 20% of its useful life expired.

17. **IDENTIFICATION/SERIALIZATION** - Each item delivered against this purchase order shall be identified by a unique part or type number. Control of individual items or lots shall be maintained by use of one or more of the following methods:

data, codes, lot numbers, serialization. Where individual items are furnished with inspections and/or test acceptance reports, items are furnished with inspection and/or test acceptance reports, each item shall be serialized and traceable to the data.

18. **CHEMICAL/PHYSICAL CERTIFICATION** - The Supplier shall furnish certificates of physical tests and and/or or chemical analysis for material delivered against the purchase order. The heat, batch, melt number, etc., applicable to the material shall be included in the certificates.

19. **INSPECTION/TEST ACCEPTANCE REPORTS** - The Supplier shall furnish inspection and/or test acceptance data for each individual item delivered against this purchase order, indicating full conformance to all purchase order requirements, and approved by Supplier's Quality Assurance. Reports shall identify Buyer's purchase order number. Supplier's name and location, item delivered, date codes, or lot number or serial numbers, applicable drawings and/or specifications of inspection, parameters measured and/or tests with applicable limits and conditions, quantitative data recorded against each parameter, and a summary of results.

20. **CERTIFICATE OF TEST AND CONFORMANCE** - The Supplier shall furnish with each shipment against this purchase order, a certificate indicating full conformance to all purchase order requirements and approved by Supplier's Quality Assurance. The certificate shall identify Buyer's purchase order number. Supplier's name and location, item delivered, data codes, lot numbers or serial numbers, applicable drawings and/or specifications, date of inspection, test performed and/or parameters measured with applicable limits and conditions, total quantity submitted for tests, and the quantities accepted for shipment and rejected. The certificate shall further state that test reports and certifications for all material, parts and processes used in manufacture are on file and available for examination.

21. **CERTIFICATE OF COMPLIANCE** - The supplier shall furnish with each shipment against this purchase order, a certificate indicating full conformance to all purchase order requirements and approved by Supplier's Quality Assurance. The certificate shall identify Buyer's purchase order number, Supplier's name and location, item delivered, date codes or lot numbers or serial numbers, applicable drawings and/or specifications (including revisions) and quantity delivered. The certificate shall further state that test reports and certifications for all material, parts, and processes used in the manufacture are on file and available for examination.

22. **QUALIFICATION DATA** - For each item on the purchase order, the supplier shall furnish with the first shipment against this purchase order, a copy of the latest completed lot evaluation performed on any device within the same family of devices. The buyer may disapprove data considered not relevant to current production, or to the device supplied.

23. **OTHER** - To be defined by the purchase order.

24. Each die shall be visually inspected to assure conformance with the applicable die related requirements of



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MIL-STD-883 Method 2010, MIL-STD-750 Method 2072 and 2073.

a) Class B (Class H)

b) Class S (Class K)

25. Each die shall be electrically tested, which may be done at the water level, provided all failures are identified and removed from the lot when the die is separated from the wafer. The minimum requirements shall include static testing at 25°C (per MIL-H-38534 Group A Subgroup 1 for Microcircuits and MIL-S-19500 Group A Subgroup 2 for Semiconductors).

26. Each Passive Element shall be visually inspected as per MIL-STD-883 Method 2017 and 2032.

a) Class B (Class H)

b) Class S (Class K)

27. Passive Elements shall be 100% electrically tested at 25°C per MIL-H-38534 Paragraph 4.3.3.4. Attributes summary shall be provided.

28. Lids shall be evaluated per MIL-H-38534 Paragraph 4.3.7. Attributes summary shall be provided. Generic data acceptable.

29. Cases shall be evaluated per MIL-H-38534 Paragraph 4.3.7. Attributes summary shall be provided. Generic data acceptable.

30. Calibration shall be in accordance with MIL-STA-45662 (Latest Revision).

31. Polymeric Adhesives shall have been evaluated and accepted per MIL-STD-883 Method 5011 for:

a) Type I – Electrically Conductive

b) Type II – Electrically Insulative

A Certificate of Compliance shall be provided for each adhesive order and shall contain the actual test data for the suppliers testing as prescribed in Method 5011 of MIL-STD-883.

32. NOTIFICATION OF CHANGE – The supplier and/or supplier of material on this purchase order and/or contract shall not make any changes to the material in the design, manufacturing process, construction. This shall include any Class 1 change that would affect performance, quality, reliability, or interchangeability of the material to be delivered. Notification of the change must be made prior to shipment of the material and approved by CNC 2000 INC. Quality Assurance Department is writing to the supplier and/or supplier of the material.

33. PACKAGING OF MATERIAL

a) Best commercial practices shall be used by the supplier when shipping to prevent damage, deterioration, or degradation of the material.

b) Electrostatic sensitive devices and/or material must be packed in antistatic materials or containers, consistent with the electrostatic discharge. All packaging shall be clearly labeled as to

ESD warning or caution as required per MIL-STD-129. All components shall be protected from static damage by the supplier during processing and shipment in accordance with DOD-STD-1686.

c) All components shall be packaged in conductive materials or containers consistent with the electrostatic discharged sensitivity range as described in DOD-HDBK-263 and DOD-STD-1686. All packaging shall be clearly labeled as to ESD warning or caution as required per MIL-STD-129. All components shall be protected from static damage during processing, packaging, and shipment in accordance with DOD-STD-1686.

d) All parts shall be free of contaminants and packaged in a manner to prevent packaging residue from contaminating the parts.

e) Each individual container shall be marked with its -40°C storage expiration date.

34. MIL-STD-1535, SUPPLIER QUALITY ASSURANCE PROGRAM REQUIREMENTS

a) This is a Group I Procurement in accordance with MIL-STD-1535 (Latest Revision)

b) This is a Group II Procurement in accordance with MIL-STD-1535 (Latest Revision)

c) This is a Group III Procurement in accordance with MIL-STD-1535 (Latest Revision)

d) This part has been designated as a Registered Component as per MIL-STD-1535 (Latest Revision)

35. SOLDERABILITY REQUIREMENTS – All devices and and/or or material supplies shall meet the following requirements, as applicable:

a) MIL-STD-202 Method 208 for other parts not covered by items (b) to (e).

b) MIL-STD-750 Method 2026v for semiconductors

c) MIL-STD-883 Method 2003 for microelectronics

d) MIL-P-55110 Paragraph 3.5.6 for Rigid Printed Circuit Boards

e) MIL-P-50884 Paragraph 3.5.6 for Flexible and Rigid Flex Printed Circuit Boards.



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36. MOISTURE RESISTANCE TEST – Moisture Resistance performed per MIL-STD-883 Method 1004 shall include performance of isolation resistance as specified in Method 1004. Evidence of this shall be included on the Certificate of Compliance.

37. As applicable per OSHA requirements of 29 CFR 1910.1200 the supplier of this material shall furnish a safety data sheet with the first shipment against this purchase order, on any shipments against this order occurring more than a year from supplying the last safety data sheet or upon any change in the safety data sheet.