



# IEC SUPPLIER QUALITY PROVISIONS

The list below is to be used as a reference for the supplier quality provisions documented within the IEC purchase order. If included within the PO, the provision is in effect and the order must comply with the requirement.

In cases where the seller feels a provision is not applicable or should be removed; the seller should contact IEC and have the PO updated or submit a pre-approved supplier variance request with the shipment.

## **Quality Provisions:**

### **01. CERTIFICATE OF COMPLIANCE**

- a. Certification is required with each shipment of this item. The certificate must contain a signature of an authorized Quality Assurance representative of the seller and should read substantially as follows:

*“Materials and processes, including special processes, used to produce the item(s), component(s), and / or part(s) described on the Purchase Order conform to all Purchase Order requirements, referenced specifications and / or special requirements.”*

- b. When required, the supplier shall provide a Certificate of Compliance that contains the name, specification number, type, and class of the material or process specified in the appropriate specification or drawing. The certificate must include serial numbers, lot codes, and date codes as applicable. The certificate must also list all special processes used in the manufacture of the delivered items.
- c. Where PR32, PR33, or PR34 are listed on the order, compliance to the appropriate RoHS requirement should be included on the CofC.

### **02. COMPONENT AGE REQUIREMENT**

- a. The Supplier shall deliver to IEC only those parts manufactured less than two years prior to date of shipment. This shall be determined by date code marking on each individual part, as required by the procurement specification or drawing.
- b. If only available components exceed this age, written authorization must be obtained from an authorized IEC representative.

### **03. COMSEC**

- a. When invoked, the seller must be compliant with all COMSEC requirements and be able to demonstrate compliance if requested.

### **04. PRINTED CIRCUIT BOARDS**

- a. When invoked, the seller must review and comply with the applicable requirements called out within the document EP-023 PCB Specification.
- b. Contact IEC for the latest revision of this document if not provided.

### **05. ELECTRO-STATIC DISCHARGE SENSITIVE (ESDS) COMPONENTS**

- a. The delivered material shall be properly packaged to prevent electro-static damage to the components.
- b. ESD Material shall comply with ANSI/ESD S20.20.

### **06. FIRST ARTICLE REPORT**



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- a. For each production run, a first article inspection shall be performed by the seller and documented within a report. The original or true copy of this report must be provided for review with the initial shipment of the production run.
- b. When this requirement is invoked, the supplier cannot change processes or sub-tier suppliers that invalidates the existing FAI on file without IEC approval.
- c. Any changes to processes or sub-tier suppliers will require a new full or delta FAI, depending on complexity of change; contact IEC for guidance if needed.

### **07. AS9102 FIRST ARTICLE INSPECTION**

- a. For each revision of a delivered material a first article must be completed and submitted by the seller in accordance with the requirements of the AS9102 standard
- b. When documenting this FAI, the seller may use the forms contained within the AS9102 standard (recommended) or their equivalent as long as the forms used contain all the information required by the AS9102 standard.
- c. This report needs only be conducted and sent in with the first delivery of each revision of the material unless production has lapsed (reference AS9100 document for current guidelines). A revision change will necessitate a submission of a new (or delta version) AS9102 FAI report.
- d. When this requirement is invoked, the supplier cannot change processes or sub-tier suppliers that invalidates the existing FAI on file without IEC approval.
- e. Any changes to processes or sub-tier suppliers will require a new full or delta FAI, depending on complexity of change; contact IEC for guidance if needed.

### **08. PRODUCT FLOW PLAN**

- a. The supplier will prepare and submit to IEC a product flow plan. This should include the list of manufacturing steps and verification operations.
- b. Unless otherwise specified, the product flow plan along with the supplier's inspection and test acceptance procedures shall be submitted prior to the initial shipment to IEC.

### **09. SECURITY CLEARANCE**

- a. The seller must supply satisfactory evidence of government clearance by the Department of Defense for access to classified information furnished on this order. The personnel having access to this material must have the necessary security clearance.

### **10. RECEIPT OF CLASSIFIED MATERIAL**

- a. By signing and returning the "Record of Receipt" the Supplier acknowledges the receipt of classified material and the obligation to handle such material in accordance with Department of Defense Industrial Security Manual, Chapter 5, Section 4, paragraph 5-407.

### **11. SUPPLIER QUALITY SYSTEM**

- a. The materials and services provided by the supplier for this order must be controlled by a documented quality management system certified to ISO 9001, or;
- b. The materials and services provided by the supplier for this order must be controlled by a documented quality management system acceptable to IEC.

### **12. SUPPLIER FAILURE ANALYSIS REQUIRED**

- a. When requested by IEC, the supplier shall provide detailed failure analysis describing the root cause of a failure.



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- b. It is expected that the supplier will provide corrective action for the issue found along with effectivity by date / lot code or serial number.

### 13. CLEANLINESS

Unless otherwise specified on the drawing, the specification, and/or the purchase order, the following requirements are mandatory:

- a. Prior to packaging, material shall be clean and free of foreign material.
- b. Tight tolerance surfaces shall be cleaned to ensure the removal of corrosion, grease, fingerprints, perspiration, or other residues.
- c. Material not normally resistant to corrosion shall be protected with suitable method.
- d. Delivered material shall be packaged to provide protection from contamination and physical damage during transport, general handling, storage, and issue.
- e. Applicable ESD packaging shall be used for all ESDS materials.
- f. All packaging material shall be of non-ozone depleting materials; reference Volume 40 of the Code of Federal Regulations, Part 82, Clean Air Act, Title VI.

### 14. IEC IN-PROCESS INSPECTION

- a. In addition to the requirements of IEC source inspection (PR18), all items covered by this purchase order are subject to in-process inspection by an IEC Source Inspector. This inspection may include surveillance of the products or the supplier's systems, procedures, or facilities.
- b. Inspection of the hardware will be prior to the application of epoxy materials, hermetic sealing, or any other permanent closure.
- c. The seller shall provide scheduling for in-process source inspection coverage. Evidence of in-process inspection will accompany each shipment.

### 15. IEC SOURCE INSPECTION

- a. IEC Source inspection is required prior to shipment from Supplier's plant.
- b. It is expected that the Supplier will notify IEC's QA representative a minimum of 48 hours in advance of shipment.

### 16. CUSTOMER / GOVERNMENT SOURCE INSPECTION

- a. Government inspection is required prior to shipment from Supplier's plant. It is expected that on the receipt of order the Supplier will notify the government QA representative who normally services the facility.
- b. A copy of this order will be furnished to the Government representative who normally services the Supplier's facility.
- c. In the even the representative or office cannot be contacted, notify IEC's purchasing agent.

### 17. MOISTURE SENSITIVITY LEVEL

- a. The supplier is expected to package the material on this order in accordance with the Moisture Sensitivity Level to maintain the usability of the material without extra processing.

### 18. PER PRINT / GERBER

- a. The supplier will build and submit the material ordered in compliance to the provided assembly print.
- b. This includes all drawing notes and notations.
- c. When the seller is manufacturing to print, no departure from the drawing and/or specification shall be made unless specifically authorized by the purchase contract.

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## 19. ITAR

- a. All or some of the components on this order fall under the purview of ITAR control and it is expected that the supplier meets all the requirements and restrictions for ITAR compliance.
- b. Contact IEC if there are any questions regarding what is under ITAR control.

## 20. LOT CODE REQUIRED

- a. For materials provided to complete this order, the supplier must assign a lot code that uniquely identifies it for traceability

## 21. ROHS REQUIREMENT

- a. The materials in this order are to be provided in accordance to the requirements of the Restriction of Hazardous Substances (RoHS) based on the EU Directive 2015/863 for the 10 restricted substances
- b. It is expected the supplier can provide objective evidence of compliance at request
- c. Applies to 10 substances:
  - i. Lead (Pb): < 1000 ppm
  - ii. Mercury (Hg): < 100 ppm
  - iii. Cadmium (Cd): < 100 ppm
  - iv. Hexavalent Chromium (Cr VI): < 1000 ppm
  - v. Polybrominated Biphenyls (PBB): < 1000 ppm
  - vi. Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm
  - vii. Bis (2-Ethylhexyl) phthalate (BBP): < 1000 ppm
  - viii. Benzyl butyl phthalate (BBP): < 1000 ppm
  - ix. Dibutyl phthalate (DBP): < 1000 ppm
  - x. Diisobutyl phthalate (DIBP): < 1000 ppm

## 22. REACH (REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS)

- a. Chemicals used in manufacturing material for this order are expected to meet the requirements

## 23. SPECIAL REQUIREMENTS

- a. When this requirement is invoked on an order, a separate instruction or document will be provided to define the special requirements.
- b. Contact IEC if special requirement is unclear or not defined.

## 24. TEST SCREENING REQUIREMENTS

- a. Material on this order requires parametric testing. The supplier will provide a copy of the results of that testing with the shipment. Reference part print for details.
- b. Supplier must be able to supply parametric information on request.

## 25. SERIAL NUMBER REQUIREMENTS

- a. Serial numbers uniquely identifying each unit are required.
- b. If a serial number format is not provided, the Supplier may use whatever format desired
  - i. Serial number design should prevent the possibility of duplication within the part number

## 26. RIGHT TO ACCESS

- a. IEC, its customers, and regulatory authorities shall be granted the right of access to all Supplier and sub-tier Supplier facilities and records involved in fulfilling the Purchase Order requirements to ensure conformance with the requirements.



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## 27. SHELF LIFE

- a. Materials with a limited life shall be supplied with an accompanying effective date of manufacture or date of expiration and must, at time of receipt at IEC, have at least 75% of their shelf life remaining.

## 28. HAZARDOUS MATERIALS

- a. The seller shall provide Safety/Hazard Data Sheets with the first shipment of material requiring such special handling.

## 29. SPECIAL PROCESSES

- a. Suppliers shall be accredited by Nadcap (National Aerospace and Defense Contractors Accreditation Program) if they provide products that are the result of Special Processes.
- b. This requirement shall be flowed down to all sub-tier suppliers.
- c. Supplier shall provide a Certificate of Conformance (C of C) certifying compliance with all Special Processes performed as required by this Purchase Order (PO) and any associated specifications and/or drawings.
- d. All Special Process suppliers, and sub-tier suppliers, utilized on this purchase order/subcontract shall have current accreditation by Nadcap. The Certificate of Compliance shall document all processes used in satisfying the PO/Subcontract and the Nadcap accreditation code(s) and date of last audit.
  - i. If an alternate sub-tier supplier is needed and exists as an approved manufacturer by the IEC end customer, it may be used with documented approval by IEC Quality.
- e. All costs associated with Nadcap accreditation shall be borne by the Special Processor.
- f. If First Article Inspection (FAI) is required by the PO, the C of C and other data, such as material certifications and paint gloss readings, will be attached as part of the FAI report.
- g. Some examples of special processes are (but not limited to):
  - i. Chemical Processes (including Plating),
  - ii. Heat Treating,
  - iii. Protective Coatings (Conformal/ Paint/ Epoxy),
  - iv. Welding,
  - v. Brazing (Vacuum/ Dip),
  - vi. Non-Destructive Inspection or Test,
  - vii. Material Testing Laboratories,
  - viii. X-Ray Inspection
- h. The supplier shall maintain this data for 7 years unless otherwise stated in the PO.

## 30. EXPORT ADMINISTRATION REGULATIONS

- a. When indicated by this provision, the supplier must comply with the EAR standard.

## 31. SUPPLIER QUALITY SYSTEM – MISSION-CRITICAL OR LIFE-SAVING

- a. The materials and services provided by the supplier for this order must be controlled by a documented quality management system certified to AS9100 (if Aerospace or Defense) or ISO 13485 (if Medical Device). OR
- b. The materials and services provided by the supplier for this order must be controlled by a documented quality management system certified to ISO 9001 and receive special approval from IEC Quality leadership.

## 32. RECORD RETENTION

- a. Supplier shall maintain records to provide evidence of conformity to requirements and of the effective operation of the Quality Management System for the longer of (1) 7 years or (2) the



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contractually required document retention period. Records shall be indexed, legible and stored in a manner permitting easy access, retrieval and protection, and shall be made available to IEC upon request.

## CHANGE HISTORY

| REVISION | DATE       | REFERENCE | AUTHOR     | NOTES           |
|----------|------------|-----------|------------|-----------------|
| 001      | 03/18/2019 | --        | B. Downing | Initial Release |