



# Collins Aerospace

## Interior Systems Collins Aerospace Leighton Buzzard Operating in the U.K. as B/E Aerospace (UK) Limited **PROCEDURE**

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Procedure Number: <b>BE-PUR-P7.4.3 Appendix D</b>	Revision: <b>5</b>
Title: <b>Supplier Quality Requirements Appendix D</b>	Total Pages: 22
	Date: <b>January 2020</b>

Written By: **Bethany Wood**      Authorised By: **Neil Broughton**

*PROCEDURE AUTHORISED VIA Q-PULSE*

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## 1.0 PURPOSE

- To define the quality requirements imposed upon suppliers to B/E Aerospace, Inc.
- To define B/E Aerospace, site-specific Supplier Quality Requirements.
- Applies to the Leighton Buzzard UK Section suppliers.
- All top level Corporate Supplier Quality Requirements in **BE-PUR-P7.4.3 shown in *italic text*** are applicable unless modified by the clauses stated herein.

## 2.0 SCOPE

*This document serves as the general quality requirements for [Collins Aerospace, operating in the U.K. as B/E Aerospace \(UK\) Limited](#), suppliers and their sub-tiers. It is intended to define the requirements necessary to ensure that all products and services delivered to B/E comply with specified requirements for quality, reliability and integrity.*

*Suppliers must demonstrate and maintain compliance with these requirements in order to be eligible to receive B/E orders. Failure to comply with the requirements herein may result in the disqualification of the supplier.*

*The requirements contained herein are to be satisfied in addition to any other contractual requirements levied by B/E. The Supplier is responsible for the immediate communication to B/E of any conflicts between existing contracts and the requirements herein.*

This appendix is valid as a complete document when used in conjunction with the top-level corporate document **BE-PUR-P7.4.3**. The Corporate document, Site-specific Appendices, and other applicable specifications, forms, and documents are available on the B/E Aerospace Corporate website:

<https://mps.beaerospace.com>

## 3.0 APPLICATION

*Compliance to this document is imposed on the B/E Purchase Order (PO) and thus constitutes part of the contractual relationship.*

*New revisions to this document will apply to orders placed after the published release date for the revision. Each revision of this document will not be applicable to orders placed before the published release date unless through formal PO amendment.*

*The words "shall" and "must" contained herein indicate mandatory requirements.*

*The words "may" and "should" indicate recommendations. "Notes" are used herein to explain and clarify requirements.*



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*The Supplier is responsible for complying with all documents referenced herein. It is strongly recommended that the supplier obtain and maintain current revision levels of all referenced documents which may be deemed applicable.*

### **3.1. Appendices**

*Due to the variety of products provided to B/E customers, it is necessary to comply with distinct B/E Site/Division requirements. Each appendix to this document defines and imposes product line specific requirements by Site/Division. The appendices are intended to define those requirements which go above and beyond the requirements contained herein. B/E Sites that do not carry additional requirements will display "N/A" as the revision level on their site's appendix and on the Table of Appendices (above). The Supplier is responsible for compliance to this document and the site specific appendices as called for on the B/E PO.*

### **4.0 NORMATIVE REFERENCES**

*ISO 9001:2008 or Latest Revision*

*AS9100 at the Latest Revision*

*AS9102 at the Latest Revision*

*AS9120 at the Latest Revision*

<http://beaerospace.com/contracts/supplier/> Terms and Conditions of purchase –

[http://www.https://utc.com/en/suppliers/purchase-terms-and-conditions.com/Our\\_Company/Ethics.aspx](http://www.https://utc.com/en/suppliers/purchase-terms-and-conditions.com/Our_Company/Ethics.aspx).

### **5.0 TERMS AND DEFINITIONS**

**B/E QUALITY** – *Quality Department of the B/E Aerospace, Inc. site / division with which the supplier is doing business*

**B/E PROCUREMENT** – *Procurement Department of the B/E Aerospace, Inc. site / division with which the supplier is doing business*

**BROKER** – *Party acting as an agent in negotiating contracts of sale between parties.*

**BSP** – *Buyer-Supplier Portal*

**MATERIAL REVIEW BOARD or MRB** – *A group of individuals who have the primary responsibility to disposition nonconforming material.*

**MANSPEC (MPS) DATABASE** – *Manufacturing Process Specifications Database*

**SUPPLIER** – *1st tier source of products and services to B/E Aerospace, Inc.*

**SUB-TIER SUPPLIER** – *2nd tier and lower suppliers who provide product or services which will be incorporated into 1st tier products*

**SPG** – *Seating Product Group*

### **6.0 GENERAL QUALITY SYSTEMS REQUIREMENTS**



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*The Supplier shall have an established Quality Management System certified to ISO 9001 latest revision to ensure that product provided meets B/E and applicable regulatory requirements. This requirement may be waived through formal letter from B/E Quality and the site head of Procurement. Compliance and certification to AS9100 or international equivalent is highly recommended.*

*The Supplier's quality management system shall be subject to evaluation by B/E and shall include, but not be limited to, the following provisions:*

*B/E Quality shall be notified in writing when any changes are made to the quality system that may affect product quality.*

*During fulfilment of the PO, the Supplier shall give B/E Quality written notice a minimum of 60 days before relocating any production, inspection or processing facilities; or before transferring any work between different facilities, or making other changes which may affect product quality. Written acknowledgement of this notice must be obtained from B/E Quality.*

*During fulfilment of the PO, the Supplier shall give B/E Quality written notice a minimum of 60 days before relocating any production, inspection or processing facilities; or before transferring any work between different facilities, or making other changes which may affect product quality. Written acknowledgement of this notice must be obtained from B/E Quality.*

### **6.1. Right of Entry**

*B/E, B/E Customers and regulatory agencies reserve the right to have unlimited access to the Supplier's and relevant sub-tier supplier's facility and records as necessary. Where a supplier is registered to AS91xx then B/E Aerospace shall be given access to the suppliers OASIS database information.*

*The Supplier is subject to initial and periodic reviews including but not limited to onsite audits, offsite reviews of quality documents, quality system surveys and source inspections in order to verify and validate the effectiveness of the quality management system. The Supplier shall provide all necessary information, facilities, equipment, documentation and personnel required to perform said activities at no additional cost to B/E. These reviews will be used to determine the approval status of all B/E suppliers. Failure to accommodate the above mentioned reviews may result in the disqualification of the Supplier for future B/E PO's.*

### **6.2. Significant Changes to Supplier Operations**

(Additional requirement)

The Supplier shall immediately notify B/E Aerospace of any change to the Supplier's operations that may affect the quality and/or delivery of the materials, components or articles. The changes include, but are not limited to:

- Moving Manufacturing Facility
- Change in Company Ownership
- Change in Quality Management
- Change in Sub-tier Suppliers
- Significant Changes in Quality Management System.



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- Loss of or changes to ISO 9000/AS9100 or other appropriate certifications
  - Change in Registrar
  - Change in Quality Manager
- Major changes to the Quality Manual, Procedures or Processes

## **7.0 DOCUMENTATION REQUIREMENTS**

*Upon request, the Supplier shall grant B/E Quality access to quality system documentation including the quality manual, procedures and records. If requested, the Supplier shall translate the required documentation into English.*

### **7.1. Control of Documents and Data**

*The Supplier is responsible for the control of B/E proprietary documents and for ensuring that they are controlled in order to preclude their use for other than B/E contract work.*

*The Supplier is responsible for acquiring copies of industry or government documents and/or standards available from commercial sources. Any problem experienced by the Supplier in obtaining required documents should be brought to the immediate attention of B/E Procurement prior to acceptance of work.*

### **7.2. MANSPEC (MPS) Database**

*Manufacturing Process Specifications (MPS) are made available to suppliers via a controlled website portal. Supplier access to the MPS database (also referred to as "MANSPEC") is restricted to holders of an ID & Password which is only granted to B/E Approved Suppliers.*

*Supplier access to the MPS database is restricted. If you are a B/E Approved Supplier, you may access to the MPS database as follows:*

- Go to [www.beaerospace.com](http://www.beaerospace.com)
- Click "Global Support"
- Click "Supplier Access"
- Click "Manufacturing Process Specifications"
- If you are new to MPS, click "Request User Account" and follow the instructions to request MPS access from one of the B/E sites with whom you are approved
- If you have already have ID and Password, proceed to login
- Use the search function to locate and download the required documents

*The MPS database contains only certain proprietary specifications that are referenced on a B/E PO or part drawing. The MPS database will NOT contain technical specs (such as ASTM) that are protected by copyright laws and are commercially available. It is the supplier's responsibility to secure their own copy of such specifications as well as assure that they have downloaded the most current revision of any B/E specification prior to PO acceptance and manufacture.*

*Supplier should contact their B/E Site Purchasing representative if any of the non-commercial specifications, forms or documents required for fulfilment of a PO is not available in the MPS database.*

### **7.3. Buyer-Supplier Portal (BSP)**

*Purchase Order engagement, acceptance and fulfilment with suppliers is handled via the B/E Buyer-Supplier Portal (BSP). The BSP is also the source for the Supplier Performance Scorecards.*



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#### **7.4. Control of Records**

*The Supplier shall retain production documentation and quality records for a period of current year plus 10 years minimum after final payment or as required by the applicable site specific appendix. This documentation must include all Material Certifications, Work Orders, Special Process Certifications, Test Reports, Inspection Records, and Shipping Documentation.*

*The supplier is responsible for ensuring that records remain legible, readily identifiable and retrievable.*

*The Supplier is responsible for the transfer of records to B/E in the event that the Supplier ceases operation.*

*Unless otherwise specified, all documents used to demonstrate product conformance must be provided in English.*

*The Supplier shall remain responsible for the requirements above regardless of whether the Supplier remains an approved B/E supplier or whether for any reason, the Supplier no longer accepts PO's from B/E.*

#### **7.5. Altering Data on Documents (Additional requirement):**

The Supplier shall not use any method to correct or otherwise alter the original data on certifications, test reports, or other quality documents that would result in the data becoming obliterated or unreadable. Prohibited methods include but are not limited to; write-over, whiteout, erase, etc. Corrections shall be made by drawing a single line through the data, initialling, and dating by authorized personnel.

### **8.0 MANAGEMENT RESPONSIBILITY**

#### **8.1. Quality Management System Planning**


*In case the Supplier has no certified Quality Management System, the waiver mentioned in section 6.0 must be obtained from B/E Quality prior to acceptance of work.*

*As appropriate, the Supplier shall inform B/E Quality of any changes to the quality system (including changes in personnel with primary responsibility for the Supplier's quality functions). This does not include minor items such as clerical changes. B/E Quality will evaluate the change and the subsequent need for supplier re-qualification activities.*

##### **8.1.1. External providers consideration of "Interested Parties" (Additional requirement):**

The supplier shall plan and determine a risk based criteria, based on their ability to provide processes, products and services in accordance with customer requirements. When implementing such actions *consideration will be given to all interested parties.*

##### **8.1.2. Supplier's responsibility of conformance (Additional requirement):**

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Collins Aerospace requires external providers to deliver material that is 100% compliant with all PO requirements. The organization shall ensure that these requirements, or applicable portions thereof, are invoked on lower-tier suppliers of parts, materials, or services. It is the responsibility of the Supplier to ensure ALL the requirements defined in the PO and these document are flowed down to any sub-tier suppliers.

**8.1.3. Advance Quality Planning (Additional requirement):**

The seller shall submit (APQP or agreed equivalent) progress reports at intervals established by buyer. Reports will include at a minimum the following sections: design review updates, prototype/testing activities, status of specific quality initiatives/. Where appropriate the following may be requested – provide test specimens for design approval, inspection/verification, investigation, or auditing.

**8.1.4. Software Control (Additional requirement):**

Supplier shall establish and maintain a Software Quality Assurance (SQA) program in accordance with the applicable purchase order or contractual requirements.

**8.1.5. Work Environment (Additional requirement):**

Suppliers shall maintain an Environmental Health and Safety Management System that meets all legal requirements and is compliant with the requirements of recognised EHS management system. e.g. ISO 14001, OSHAS 18001

**8.1.6. FOD (Additional requirement):**

Assemblies delivering to B/E or direct to the installer will be free of Foreign Object Debris (FOD). AS9100 Section 7.5.1 and 7.5.5 require organizations to have provisions for the removal and prevention of FOD. Seller shall establish a FOD prevention program in accordance with D6-85622, "Foreign Object Debris / Foreign Object Damage (FOD) Prevention Requirements for Boeing Suppliers." Boeing documents such as D6-85622 can be obtained from your buyer.

**8.2. Responsibility, Authority and Communication**


*The Supplier shall define and maintain a register of authorities granted to individual personnel within the organization (i.e. FAI authorized officials, Certificate of Conformance authorized representatives, technical standard authorized personnel, etc).*

*The Supplier shall provide contact information and access to the person responsible for ensuring that B/E requirements are promoted throughout the organization. Said person must have the authority to resolve quality concerns.*

**8.2.1. Control and monitoring of the external providers' performance to be applied by the organization (Additional requirement):**

Initial and annual reviews of supplier's quality system may be performed at the option of.



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Objective evidence of supplier's compliance, either by submittal of requested evidence, or evidence of a third-party accreditation, may be acceptable for the purpose of re-survey, but will not preclude the use of on-site evaluations or other review methods.

**8.2.2. Improvements (Additional requirement):**

Additional levels of monitoring and controls may be requested directly as part of an improvement activity when Rockwell Collins considers performance levels have not been achieved, or requires the supplier to achieve business opportunities

**9.0 RESOURCE MANAGEMENT**

*The supplier shall determine and provide the resources needed for the establishment, implementation, maintenance, and continual improvement of the quality management system. Resources include people, infrastructure (such as equipment, tools, test equipment), and working environment.*

*The Supplier shall have a process to identify and perform training for all personnel who directly or indirectly affect product quality. The Supplier shall maintain records of this training (including On-The-Job training). These records shall be made available for review upon request.*

**9.1.(Additional requirement) Employee Awareness:**

**9.1.1. Product Safety Awareness (Additional requirement):**

All Suppliers shall have a training program to highlight the importance of product safety through-out the life cycle of the product.


- Design
- Development & Testing
- Manufacturing
- Assembly
- Inspection and measurement
- Shipping, storage, and preservation
- Transportation, docking, undocking
- Installation into next higher assembly
- End-use

**9.1.2. Product Conformity: Competency, Training and Awareness (Additional requirement):**

All employees shall be trained on execution of their activities and how they contribute to the achievement of the quality objectives and understand their impact on product conformity. Operators carrying out processes shall have the appropriate training and certifications to perform their job function. Records of education, training skills and experience shall be maintained at supplier's facility and available for review at any time

**9.1.3. Ethical Behavior (Additional requirement):**

Suppliers shall ensure that it conducts its business in accordance with all applicable laws rules and regulations and the highest ethical standards.

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In addition to T&C's flowed down through the purchase order.  
[http://www.rockwellcollins.com/Our\\_Company/Ethics.aspx](http://www.rockwellcollins.com/Our_Company/Ethics.aspx).

#### **9.1.4. Human Factors (Additional requirement):**

Supplier Management shall consider Human Factors through the realisation of the product life cycle, this shall include taking proper account of the interaction between employees and the processes required through the realization of the product.

### **10.0 PRODUCT REALIZATION**

#### **10.1. Planning of Product Realization**

*Prior to acceptance of work, the Supplier shall determine their ability to meet all PO requirements including the manufacture and inspection of all specified design characteristics.*

##### **10.1.1. Configuration Management**

*Unless otherwise specified on the contract or PO, the Supplier's quality system shall provide for procedures which will ensure that the latest applicable drawings, specifications, and instructions required by the contract or PO, as well as authorized changes thereto, are used for fabrication, inspection and testing.*

##### **10.1.1.1. Significant/Major Change Notification (Additional requirement):**

The Supplier shall notify B/E Aerospace of any significant changes to Sub-tier proprietary designs, drawings, specifications, materials or manufacturing processes used in components or articles for B/E Aerospace prior to making such changes in materials, components, articles or data.

The Supplier shall ensure the traceability of all changes (e.g. relation to the changed parts, changed Equipment and changed manufacturing/production/fabrication processes). Throughout the life cycle, traceability shall be maintained.

- The Supplier shall document justification for the classification of a change. Such documentation shall be provided to B/E via PDR.
- The Supplier shall ensure the archiving and configuration control of the change documentation.

##### **10.1.1.2. Use of PDR (Additional requirement):**

Supplier requested Deviations are to be submitted to the respective buyer using the Product Deviation Request form. Instructions for use of PDR provide separately. No deviation/unapproved change(s) are to be implemented without first receiving the appropriate approval from SPG.

##### **10.1.2. Control of Work Transfers**



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*The Supplier shall establish a process for the control of any work contracted to sub-tiers. Said process shall include the verification of the conformity of the work contracted prior to shipment to B/E. The Supplier must ensure that the B/E requirements contained herein are met by all sub-tiers and shall maintain records accordingly.*

*It is the Supplier's responsibility to ensure that B/E property and proprietary data are controlled per contractual agreements at all levels of the supply chain.*

*The Supplier shall not act as a broker for the manufacture of product under B/E design control without prior written authorization from B/E Quality and Procurement.*

*NOTE: Sub-tier manufacturing and processing is acceptable so long as the Supplier performs the necessary inspection, verification and certification activities prior to shipment to B/E.*

The supplier shall plan and control the temporary or permanent transfer of work (e.g., from one organization facility to another, from the organization to a supplier, from one supplier to another supplier) and to verify the conformity of the work to requirements.

## **10.2. Customer Related Processes**

All documents including drawings, electronic design approved data & specifications are considered part of the PO requirements when specified directly on the PO or in documents referenced by the PO.

All communications related to the fulfilment of PO requirements shall be carried out through B/E Procurement in writing. Communication associated with quality issues including but not limited to nonconformities, corrective action and supplier assessment activities shall be carried out with both B/E Procurement and B/E Quality included on all communications.

## **10.3. Purchasing**

### **10.3.1. Purchasing Process**

*The Supplier is responsible for ensuring that product scheduled for delivery to B/E from sub-tier suppliers (including B/E specified suppliers) complies with all applicable provisions of drawing, specifications, and other requirements of the B/E PO.*

*The Supplier shall maintain an Approved Supplier List. Criteria shall be established for sub-tier suppliers to achieve and maintain an approved status. The criteria shall not be limited to third party certifications. The Supplier shall establish periodic reviews of approved suppliers to determine their continued suitability.*

*When B/E establishes the requirement to use specific sub-tier suppliers, this requirement will be noted on the PO. The Supplier's*



*system shall ensure that only the specified sub-tier suppliers are used to procure products or services for PO fulfilment. The Supplier shall maintain records of B/E authorization or selection of sub-tier suppliers.*

*All special processes shall be performed in accordance with the requirements of section 10.4.4 at all levels of the supply chain.*

*The purchase of surplus materials which do not comply with section 10.5 herein is prohibited without written approval from B/E Quality. The use of distributors not authorized by the OEM to trade components or parts is prohibited.*

*For product under B/E design control, the supplier must document changes to sub-tier manufacturing or raw material sources through partial or delta FAI per the requirements of section 10.4.1. This requirement applies at all levels of the supply chain.*

**10.3.2. Purchasing Information**

The Supplier shall flow down all applicable product, regulatory, and quality requirements (including requirements for traceability, documentation, and software) to the Supplier's sub-tiers. The Supplier is responsible for ensuring and validating the compliance of the Supplier's sub-tiers and maintaining documented evidence of such per section 7.2.

**10.3.3. Verification of Purchased Product**

The Supplier shall implement a process for the validation of raw material certifications (i.e. mill reports, etc). The process of selection and testing must be defined (i.e. one sample from each sub-tier supplier per year). Said testing shall be performed at no additional charge to B/E. Dependent upon the material type, validation may include material composition testing, hardness and conductivity testing, flammability testing, etc. All testing used for validation must be conducted by personnel who are trained and/or by certified third parties. Records of the validation shall be retained per section 7.2. The Supplier shall flow this requirement down to relevant sub-tier suppliers. Note: Please see the applicable appendix for frequency requirements as applicable.

**10.3.4. Flammability test requirements (Additional requirement):**

Unless otherwise specified by the approved design data, specification, or invoked on purchase order flow down, all non-metallic components and materials used on Aerospace product must meet the airworthiness requirements for fire properties (typical plastics, core in panel, post cured pre preg, post cured adhesive, foam, filler (core), insulation (panel cladding, piping, wiring) etc.) and the Suppliers should be demonstrating conformance to fire properties requirement by an additional statement on their CofC if the test certification is not supplied with the delivery. The



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statement for non-metallic components and materials used on Aerospace product meets the airworthiness requirements for fire properties which has been flowed down in the B/E requirements (i.e. CS/FAR 25.853(a) App.F Pt.I(a)(1)(i) – 60s Vertical, CA/FAR 25.853(d) App.F Pt IV(g) – Heat Release, CS/FAR 25.853(d) App.F Pt V(b) – Smoke Emission, ABD0031 para 7.3 – Smoke Density, CS/FAR 25 App.F Pt. II, CS/FAR 25.856(a) App. Pt VI, CS/FAR 25.853(a) App.F Pt.I(a)(3) – 30s 60 degree, ABD0031 para 7.3 – Smoke Density, ABD0031 para 7.4 – Toxicity etc.).

Customer Furnished Equipment (CFE) does not require a statement for the flammability as per the paragraph above. The Customer who supplies the CFE is required to supply a statement of conformity to meet the requirements of the order as a minimum.

For products produced for the Airbus A350 XWB program B/E Leighton Buzzard Engineering Bulletin EB00000047 (latest version) Fire Properties Requirements for Non-metallic Components may be used for guidance of the minimum requirements. This does not remove the responsibility of the Supplier to meet any additional requirements which have been flowed down in the B/E requirements.

Actual material lot test results shall be submitted with each First Article Report, thereafter, for ongoing production, Supplier shall keep proof of lot test results on file and available on request.

Supplier requirement for validation of raw material also applies to the flammability requirement invoked herein. It is recommended that Suppliers use B/E approved test houses as listed in B/E procedure number GSG-DOA-1521 (latest revision) Control of External Test Houses, an extract of this document will be provided by the B/E Leighton Buzzard Certification Department on request.

**10.3.5. No Substitutions** *(Additional requirement):*

No substitution of items to be delivered hereunder or any parts or components of such items shall be made unless the Buyer has been notified and approval has been given by issuance of a written change order.

**10.3.6. Counterfeit Prevention** *(Additional requirement):*

Unapproved or counterfeit parts shall not be used for any type certificated aircraft or aircraft components. The Supplier shall ensure that the parts they supply are compliant with the requirements. If Supplier suspects the use of unapproved parts, the guidelines in AC 21-29 should be used to report to B/E Aerospace and the applicable regulatory agency.

**10.4. Production and Service Provision**



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Authorised By: **Neil Broughton**

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*The Supplier shall employ a system for controlling, documenting and maintaining required product quality throughout the manufacturing process whether performed by the Supplier or the Supplier's sub-tiers. This shall include a step-by-step sequence of manufacturing operations and inspection points. This documentation shall provide objective evidence that the resultant product(s) conforms to the specified requirements.*

*Any test, prototype or qualification parts should be made under controlled conditions that ensure conformity to the applicable design data.*

**10.4.1. Supplier Design Data:** *(Additional requirement):*

The Supplier shall have an established and documented process that implements/controls for the submittal and approval of design documents created by the supplier for components for which B/E has provided a top level specification but contracts with a supplier to define the design.

**10.4.2. Electronic Assemblies** *(Additional requirement):*

The Supplier shall have an established and documented process that implements/controls:

- Electrostatic Discharge (ESD) practices as applicable.
- Training programs that ensure all technicians are qualified to applicable industry standards regarding soldering, assembly, testing, etc. of components and harnesses.
- The use of lead free or tin-based solder which may be prohibited per spec or drawing. Certification of compliance is required.

**10.4.3. Production Process Verification**

*The Supplier is responsible for completing an AS9102 compliant First Article Inspection Report (FAIR) for products under B/E design control. B/E reserves the right to have the first article inspection performed by a B/E representative at the Supplier's facility. Should the initial submission be found discrepant, additional samples may be requested following correction of the cause of discrepancy by the Supplier.*

*B/E approval of an FAIR shall not relieve the Supplier of the responsibility for meeting all specifications and requirements on future shipments of the same product.*

*Please Note:*

- *Partial or Delta FAIs are required according to the requirements of AS9102. Any intended deviation from the original FAI shall be brought to the attention of B/E Quality prior to the change. B/E Quality may require additional oversight of the change being made.*
- *Certification for material, components, and special processes (anodize, chemfilm, molycote, etc.) must be noted on the FAI form and be supplied with the FAI sample part.*



- *Where multi-cavity tools are used, an FAIR documenting the production results from each cavity must be completed.*
- 10.4.4. Control of Production Process Changes**  
*Any production process related to products under B/E design control must not be altered without prior approval by B/E Quality.*

*The Supplier shall define and implement a system that ensures equipment used for production is inspected, maintained, and validated prior to use. A schedule of this planned activity shall be documented.*

- 10.4.5. Post Delivery Support**  
*As required, all documentation supporting the build and verification of the product shall be made available within 24 hours of the submitted request. All process nonconformities identified subsequent to the shipment of product to B/E shall be communicated per the requirements of section 11.3.*

- 10.4.6. Validation of Processes for Production and Service**  
*For products under B/E design control, the Supplier's in-house or contracted special processes shall be in compliance with the requirements of Table 1. In Main body document.*

*A B/E process source recommendation or requirement does not absolve the Supplier of the responsibility to ensure that the requirements of Table 1 are met. B/E reserves the right to change or create deviations from the requirements of Table 1 through specification or written B/E Quality approval.*

*When a specific process source is required by a B/E drawing or manufacturing specification, the Supplier is responsible to ensure that only the specified sources are used. Two examples are shown below:*

- a) Structural Bonding Primer*
- b) Honeycomb panel fabrication*

*NOTE: A listing of NADCAP approved sources is available at [www.pri-network.org](http://www.pri-network.org)*

**10.5. Identification and Traceability**

- 10.5.1. Traceability:**  
*The Supplier is responsible to maintain traceability of product and materials through all stages of production including at sub-tier processing sources. Supplier's system shall ensure that products are traceable back to the raw material batch or lot from which they were made, including traceability to the source mill. Supplier's system shall also provide means to trace where raw materials have been used.*



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*NOTE: The requirement for traceability applies to all raw materials and manufactured goods. Examples include but are not limited to: alloys, sub-assemblies, machined components, composites, rubber, fabric, foam and leather.*

**10.5.2. Identification:**

*Part identification or part marking requirements vary between distinct B/E sites. The Supplier must comply with the requirements as defined by the engineering drawing, part marking specification, PO or site specific appendix.*

*NOTE: When shipping raw material each unit must be uniquely identified by lot or batch.*

**10.5.3. Acceptable Signatures:**

*Seller's system shall provide for the control of acceptable signatures or stamps as applicable with regard to authority. This control shall include provisions for assignment, issuance, and use.*

*For computer generated signatures, Seller's system shall provide for the control of documents which do not bear the original signatures or where the name(s) of authorized official(s) are computer generated.*

*NOTE: Signatures must be rendered in ink.*

**10.6. Customer Property**

*While in the possession of the supplier, B/E furnished material shall be identified, segregated, protected and safeguarded for use or incorporation into final product.*

*When material is furnished to a supplier by B/E or B/E Customer, the supplier is responsible for inspection and verification that the materials meet applicable requirements upon receipt.*

*The Supplier shall be responsible for determining the accuracy and stability of B/E furnished equipment used for product realization and acceptance. B/E furnished equipment shall be periodically re-inspected and validated as required to ensure continued accuracy. B/E shall promptly be notified of any B/E tooling or equipment damage.*

**10.7. Preservation of Product**

*The Supplier's quality system shall ensure that items shipped are effectively preserved, protected, and packaged to guard against damage, degradation or loss during shipment.*

*This is to be accomplished in accordance with best commercial practices unless otherwise specified on the PO or contract. The supplier shall implement production and packaging practices that ensure detection and removal of foreign objects and debris.*





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*Age sensitive materials or products must be properly identified and labelled to ensure product conformity including necessary environmental conditions. Shipping documentation for age sensitive materials must include date of manufacture and expected product life or expiration date. Age sensitive materials must arrive at B/E with a minimum 70% shelf life remaining unless authorized by B/E in writing.*

*NOTE: please see the applicable appendix for any additional requirements.*

#### **10.8. Control of Monitoring and Measuring Equipment**

*All equipment used to verify or validate the conformance of product must be calibrated. All calibrated equipment shall be traceable to the National Institute of Standards Technology (NIST) or a National or International equivalent standard.*

*B/E shall be notified of any potential nonconformities resulting from equipment used to verify or validate the conformance of product found to be out of calibration. Please see section 11.3.*

#### **10.9. Process Control Plan (Additional requirement):**

B/E Aerospace reserves the right to require a process control plan, including inspection steps identified. The process control plan is subject to approval by B/E Aerospace.

#### **10.10. Digital Data (Additional requirement):**

Where applicable, the Supplier shall have a documented process for the control of digital data used for the purpose of design, manufacture, or inspection of materials, components or articles. The document shall state adequate controls for:

- Verifying the integrity of digital data transfers (translation)
- Storage and maintenance of the digital data
- Security (limited access) of the digital data
- Traceability of all derivative data back to the original digital data
- Effective control and management of changes (including digital data provided to sub tiers).

#### **10.11. Calibration (Additional requirement)**

The Supplier shall ensure that all monitoring and measuring devices (i.e., inspection equipment, tooling used as Media-of-Inspection, gages, digital media, testing equipment, etc.) used for acceptance of B/E Aerospace materials, components and/or articles are periodically verified against measurement standards which are traceable to the National Institute of Standards and Technology (NIST) or National or International comparable measurement standard. Calibration process and record administration will be done in accordance with AS9100 sections 4.2.4 and 7.6.

### **11.0 MONITORING & MEASUREMENT**

Written By: **Bethany Wood**Authorised By: **Neil Broughton****\*\*Printed copies are considered UNCONTROLLED – Verify current issue before use\*\*****11.1. B/E Source Inspection:**

*Suppliers to B/E are subject to Source Inspection, either contractually or as situations dictate. Source inspections will be performed by B/E and/or B/E Customer representative(s) at the Supplier's facility prior to shipment of items. The Supplier shall furnish at no additional cost to B/E, necessary facilities, equipment, documentation, and personnel required to perform these inspections.*

*The source inspection may be a one time event or continue until the requirement driving the source inspection has been satisfied. When the Supplier has been notified that source inspection is required, no parts are to be shipped until the source inspection has been completed or waived by B/E Quality.*

*Source Inspection of parts or materials by B/E and/or B/E Customers should not be used as an effective control of quality by the Supplier.*

*If the Source Inspection is contractual, B/E must be notified at least 10 working days in advance of shipment to permit scheduling of Source Inspection.*

*If the Source Inspection is the result of a particular issue or on-going issues, Supplier is required to notify B/E as soon as possible prior to shipping.*

*Objective evidence of B/E and/or B/E Customer representative(s) Source Inspection must accompany each shipment. Such inspections shall not necessarily constitute final acceptance of the material and final acceptance shall be at the B/E facility.*

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

*The Supplier must submit with each shipment, a written statement signed and dated by an authorized representative certifying that items or services provided are in accordance with specified requirements, and stating that the manufacturer has objective evidence of compliance to applicable specifications on file, traceable to the material/equipment supplied and available for review upon request.*

*For product under B/E design control, the C of C must include the following:*

- Supplier's Name*
- Supplier's Physical Address (including country of manufacture)*
- Customer's Name*
- PO and Line Item Number*
- Part Number*
- Part Name (as identified on the print)*
- Part Revision Level*
- Quantity of Parts Shipped*
- Name and Signature of Authorized Representative*



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- *List of Special Processes Accomplished Including:*
  - *Description of Process Performed*
  - *Source of Process (Outside Process Supplier)*
  - *Results of Processing as applicable*
  - *Unique Process Certificate Number*

*Also required, as applicable, are lot / batch numbers (in the case of raw materials, castings, and forgings), shelf life information / expiration dates, serial numbers, and any part number reference information, for example if the B/E part number is different from the Supplier's part number.*

*When providing shipments of raw material, Seller shall include with the C of C the applicable material test / mill reports.*

**11.2.1. Provisions For Direct and Drop Shipment (Additional requirement):**

*Direct/Drop shipments to B/E Aerospace customers or suppliers are prohibited unless specifically defined and approved by B/E Aerospace.*

**11.2.2. No Short/Partial Shipment (Additional requirement):**

No partial shipments are permitted without authorization.

**11.2.3. Additional Shipping Document Information**

Required on the Certificate of Conformity (CofC) for materials which are non-metallic used on Aerospace product (typically plastics, core in panel, post cured pre preg, post cured adhesive, foams, filler (core), insulation (panel cladding, piping, wiring) etc.)

A statement of Conformity that non-metallic components and materials used on Aerospace product meets the airworthiness requirements for fire properties which have been flowed down in the B/E requirements.

REACH Compliancy – Registration, Evaluation and Authorisation of Chemicals Rockwell Collins Vendors are required to adhere and comply with the REACH regulated substances listing and demonstrate as stated within the Terms and Conditions of Purchase.

**Section 29A clearly states:**

**Supplier warrants that, except as agreed in writing by Buyer, none of the chemical substances constituting or contained in the Components sold or otherwise transferred to Buyer under this Purchase Order are (i) "hazardous Substances" as defined in the United States Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), (ii) substances included in Annex XIV of the European Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of**



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***Chemicals ("REACH") or (iii) on the "candidate List" in a concentration greater than 0.1% by weight as defined by the European Chemicals Agency ("ECHA"), all as modified from time to time.***

### **11.3. Control of Nonconforming Product**

*The Supplier shall establish a system for identification, segregation and documentation of any nonconforming product(s) found during the Supplier's manufacturing or inspection operations.*

*Neither the Supplier nor the Supplier's sub-tiers is granted Material Review Board (MRB) Authority for product under B/E design control.*

*Supplier shall have a system for reporting occurrences to ensure that parts with deviation from applicable design data that could lead to an unsafe condition is reported.*

*All communication regarding nonconforming product shall be in compliance with section 10.2.*

#### **11.3.1. Submittal of Nonconforming Product:**

*The Supplier shall not ship any nonconforming material to B/E without first receiving authorization through the MRB at the applicable B/E Site. These waivers and/or concessions must be referenced on the accompanying certificate of conformance and be included with the shipping paperwork.*

#### **11.3.2. Notification of Delivered Nonconforming Product:**

*The Supplier shall notify the applicable B/E Quality representative by phone of any suspected nonconforming material discovered to have shipped to B/E. Notification must be accomplished and acknowledged by B/E Quality within 24 hours of the discovery and be followed by email notification to the same. Formal written communication shall be submitted within 5 business days containing applicable information concerning the defect; this shall include part numbers, lot numbers, quantities, ship dates, detailed description of the non-conformance and the final corrective action plan.*

#### **11.3.3. Nonconforming Product Discovered at B/E Aerospace:**

*Any product found nonconforming at B/E may be returned to the Supplier with instructions from the applicable B/E-MRB.*

#### **11.3.4. Product Field Failure or Malfunction:**

*When a product field failure or malfunction is reported by B/E, B/E may request the Supplier to conduct a formal failure investigation and analysis to identify the cause of the failure. Such investigation and analysis shall be completed within the specified time required by the relevant B/E site / division and when applicable shall include corrective and preventive action.*



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*The decisions and disposition instructions of the B/E MRB shall be binding to the Supplier's organization. Failure to comply with the given decisions and disposition instructions may result in formal corrective action or the disqualification of the Supplier as a supplier to B/E Aerospace. If the Supplier does not agree with the disposition or can improve upon the disposition given by B/E MRB, Supplier shall contact B/E Quality and gain written approval prior to implementation.*

*Material to be scrapped shall have part number removed and be conspicuously and permanently marked or positively controlled, until physically rendered unusable. Note: Please see the applicable appendix for any site specific requirements.*

*If the Supplier does not agree with the liability/charges associated with a given rejection, the Supplier shall contact B/E Quality with supporting evidence within 2 business days of the original nonconformance notification.*

#### **11.4. Corrective Action**

The Supplier shall take prompt action to correct assignable conditions which have resulted, or could result, in products or services being offered to B/E for acceptance which do not conform to any of the following:

- The quality assurance provisions of the item specification
- Inspections and tests required by the contract or purchase order
- Other inspections and tests required to substantiate product conformance
- The requirements contained herein

When a quality system or product non-conformance is identified by B/E, B/E may request a formal corrective action response from the supplier. The Supplier shall complete

#### **11.5. Materials Acceptance Authority (Additional requirement):**

The Supplier shall have no authority to accept materials, components or articles on behalf of B/E Aerospace unless the Supplier has been issued a formal letter granting such authority from B/E Aerospace Quality.

#### **11.6. Acceptance Sampling (Additional requirement):**

Supplier shall perform 100% inspection for in-process and final inspection or Supplier shall conform to the Acceptance Sampling requirements stated herein. Acceptance Sampling (statistical product acceptance) of parts and assemblies is authorized (except where prohibited by drawing or specific PO note) provided the Supplier and its Sub-Tier Suppliers have a documented process in place that meets the requirements of Boeing D1-8007 or SAE ARP9013 where the lot acceptance number is C=0, with minimum protection levels meeting SAE ARP9013 Figure B1 "Examples of Probability of Conformance Values." The requirements of sections in SAE ARP9013/1, ARP9013/2, ARP9013/3 and ARP9013/4 shall be satisfied



when the methods referred to in these sections are employed by the Supplier for acceptance of product. When Acceptance Sampling is operated, Supplier is not relieved of its obligations under this contract. Aerospace documents such as ARP9013 can be obtained from SAE International at: <http://standards.sae.org>. Boeing documents such as D1-8007 can be obtained from your buyer.

**11.7. Key Characteristics (Additional requirement):**

All Key Characteristics identified in the materials, components and articles technical requirements documents (i.e., Engineering Drawing, Parts Lists, Specifications, Purchasing Documents, etc.) shall be 100% inspected or require a Statistical Process Control Plan. The Supplier's Statistical Process Control Plan is subject to review by B/E Aerospace at any time.

**11.8. Operator Self Verification (Additional requirement):**

The Supplier and its Sub-Tier Suppliers shall not operate Operator Self Verification of product. Operator Self Verification is verification that a product conforms to all applicable requirements by the individual who produced the product. Product Verification shall be independent of the manufacturing process.

**12.0 REGULATORY REQUIREMENTS**

*When required, an FAA Airworthiness Approval Tag (FAA Form 8130-3) or an equivalent (EASA Form 1) shall be submitted with the shipment of parts or material to B/E.*

*The Airworthiness Approval Tag must be issued by Seller's FAA approved designee or EASA Certifying Staff.*

*All relevant packages must have copies of the required documentation (ie. 8130, FAA, EASA form 1 or CofC) clearly displayed on the outside of the box.*

**13.0 REVISION HISTORY**

ISSUE	DATE	EFFECTIVITY		REASON FOR REVISION	PERSON UPDATING
		PAGE	PARA.		
1	MAY 2013	ALL	ALL	Update to clarify CofC requirements for non-metallic material	N/A
2	AUG 2017	3 4	4.1 4.3	Amendment to 4.1 – EB0000047 Addition of 4.3 – REACH Requirements	N/A
3	APR 2018	ALL	All	Flow Down of AS9100 Rev D Requirements. Please refer to Index of Change for additions.	N/A
4	AUG 2018	16  ALL	10.3.3. 1  ALL	Clarification on FST requirements for CFE parts All top level Corporate Supplier Quality Requirements from BE-PUR-P7.4.3 shown in italic text	Andrea Amodeo



**Collins  
Aerospace**

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5	JAN 2020	ALL 3 9; 10.4; 10.8; 11.3	ALL	Update to Collins Aerospace template Update to specify Collins & B/E naming Update in line with corporate document (BE-PUR-P7.4.3 rev H) Amendment to references section <a href="#">Included definition of SPG</a>	Bethany Wood
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END