


PROCUREMENT QUALITY CLAUSES

Approvals				
	Name	Title	Date	Signature
Manufacturing/ Supply Chain	Jason Courtney	Operations Director	2023/06/30	Jason Courtney <small>Digitally signed by Jason Courtney Date: 2023.06.30 08:15:55 -07'00'</small>
Engineering	Daniel Avina	Engineering Director	2023/06/30	 <small>Digitally signed by Daniel Avina Date: 2023.06.27 16:19:00 -07'00'</small>
Quality	Eden Godinez	Quality Manager	2023/06/30	Eden Godinez <small>Digitally signed by Eden Godinez Date: 2023.06.27 12:58:53 -07'00'</small>

Revision Records		
Rev	Description	Date
NC	Initial Release	2022/03/10
A	See SDC_ECN_1637	2023/02/15
B	See SDC_ECN_1652	2023/06/30

1 Scope

This procedure contains the quality clauses for use on purchase orders for the procurement of materials, goods, and services.

2 Application

These clauses apply to purchase orders presented to Applied Composites – San Diego (ACSD) sub-tier suppliers by the Purchasing Department and are authorized by Quality Assurance.

3 Quality Clauses

Q1 – Certificate of Conformances (COC)

Supplier shall provide a certification with each shipment to attest that the parts conform to the Contract/Purchase Order requirements. When other documentation is required, each line item of the certificate shall have an identified and separate package. Certificates shall contain the following:

- Contract/Purchase Order number
- Line item number from the Contract/Purchase Order
- Part number as identified in the Contract/Purchase order
- Name and address of manufacturing or processing location
- Manufacturer's lot number, heat lot number, batch number, date code, and/or serial number(s), if applicable
- A certification statement stating that all requirements of the drawing, Contract/Purchase Order, Statement of Work, and all associated specifications have been met
- A signature and date of a supplier representative

Q2 – Dimensional Inspection Report Required

Dimensional inspection reports – of any written format – with recorded actual measurements are required for all dimensions and all relevant notes as identified as critical by ACSD, for each individual item unless specifically stated on the purchase order. If no dimensions or notes are identified, then all dimensions and notes are considered critical. Multiple place features are to be reported as a range. All basic dimensions shall be reported with their actual value. Reference dimensions need not be reported.

Q3 – Material Certifications

Certifications of chemical, physical, mechanical and/or analytical test results are required in accordance with the applicable material specification for each item delivered. Certifications shall include:

- Reference to the specification(s) and revisions as noted.
- Shelf life and temperature sensitive material certifications shall include the storage conditions, maximum shelf life, and out time requirements.
- All composite prepreg vendors: Certification packages shall include the following at a minimum:

1. Certificate of Conformance to your manufactured prepreg product
 - a. Certificate shall include testing showing conformance to resin content, FAW values, additional chemical and physical tests required by the applicable specification(s) as specified on the Purchase Order
2. Certificate of Analysis for raw fiber materials
3. Certificate of Analysis for raw resin materials
4. Defect Inspection Log for all prepreg rolls
- ALL MACHINE SHOPS, DISTRIBUTORS AND RAW MATERIAL (METALS) SUPPLIERS: Full chain of custody certifications from the mill or manufacturer, through all distributors and/or processors to the supplier's facility. Certification packages shall include the following at a minimum (where such activities have occurred):
 1. Certificate of Conformance to YOUR shop from processor (paint, prime, clean, anodize, etc)
 2. Certificate of Conformance from metals distributor to YOUR shop.
 3. Certificate of Test/Conformance from the mill/manufacturer to YOUR distributor
 4. Certificate of Conformance from heat treat facility to YOUR distributor
 5. Certificate of Test/Conformance from third party chemical analysis test facility to YOUR distributor
 6. Certificate of Test/Conformance from ultrasonic inspection facility to YOUR distributor
 7. Certificate of Conformance from anneal process facility to YOUR distributor

Q4 – Special Process Certifications

Certifications are required for each shipment of items from special processing (i.e. priming, painting, plating, anodize, heat treating, passivation, etc.). Certifications shall include:

- Supplier's name and address
- Purchase order number
- Part number(s)
- Serial number if applicable
- Reference to the process specification and revision
- Lot and/or batch number of the raw materials used as applicable (e.g., primer, paint etc.)
- Objective evidence shall be made available upon request showing compliance with the applicable specification as required

Q5 – Right of Access

ACSD, its customers, and regulatory agencies reserve the right to examine the supplier's facility as necessary to ensure that quality of work, records, and materials are being processed in accordance with contract requirements.

Q6 – Source Inspection

Final source inspection is required. Request shall be sent to ACSD Quality Engineering with a copy to the ACSD buyer issuing the Purchase Order no less than 2 working days in advance of the need date. Shipment is authorized only after receiving the ACSD representative's documented approval. All applicable ACSD Source Activity Reports or waiver emails are required to be included in documentation with the shipment.

Q7 – First Article Inspection

First Article Inspection (All 3 forms in AS9102 format) of all dimensions and notes shall be furnished to ACSD with recorded actual measurements for each part number listed on the purchase order. Multiple place features are to be reported individually as separate items on the first article inspection report. Ranges are not acceptable. For example, a hole called out (5x) must have all five places recorded for size and position with the actuals for all basic dimensions. Exceptions to the multiple place requirement are limited to chamfers, fillet radii and corner radii, in which case ranges will be accepted. All basic dimensions shall be reported with their actual value. Reference dimensions need not be reported.

Q8 – Nondestructive Test Certification

Certifications are required in accordance with the applicable specifications. Certifications shall be included with each shipment. Certifications shall include:

- Purchase order number
- Name and address of the company performing NDI/NDT
- Date of inspection
- Reference to the specification and revision
- Inspector/name/stamp and NDI/NDT certification level
- Specification or other requirement defining the NDI/NDT accept/reject criteria
- Material or item identification
- Material or item traceability
- Inspection results

Q9 – Certificate of Calibration

Calibration shall be performed using equipment and standards fully traceable to NIST. Calibration supplier shall be certified to ISO 17025, with the exception of OEM calibrations. The calibration shall meet the requirements of ANSI/NCL Z540-1. A certificate of calibration is required and shall include:

- “As Found” and “As Left” statement of conformance including:
 - Actual measured values. Minimum of 3 data points shall be reported within the operational range
 - Acceptance limits / criteria
- Statement of calibration method used
- Statement of calibration of environmental measurement capability, as applicable to equipment type
- Statement documenting any adjustments performed, if applicable
- Statement of NIST traceability and ISO 17025 certification(A/R)
- Signature attesting to the correctness of the results

Q10 – End Item Data Package

EIDP is to be furnished with hardware shipment. The data package shall include (when applicable) at a minimum: a certificate of conformance, inspection data, test data, cure charts, material certifications, and any other process documentation as specified on the purchase order.

Q11 – Testing

Test results are to be furnished upon completion of the required tests. The report document can be in any format unless otherwise designated on the purchase order. Traceability shall be maintained on all lots throughout processing.

Q12 – Quality Management System

Supplier is required to maintain a quality system that complies with the requirements as set forth by ACSD at their time of approval. The supplier is further required to notify ACSD Quality Assurance of any change to the status of their registration, if so registered at the time of approval, change in Quality management personnel, and revisions to their Quality Management System. Supplier is required to have Configuration Management procedures, which assure the latest applicable drawings, parts lists (PL), generation breakdown (GB), specifications and P.O. instructions, as well as authorized changes, are used to fabricate, inspect, and test the material, supplied, or are used in the fabrication process. The configuration (hardware, software) delivered under the contract shall conform to those configuration management and engineering documentation requirements implicit in the specification. The Supplier shall impose the same configuration requirements on their sub-tier Suppliers in concert with this paragraph's requirements.

Q13 – NADCAP Accreditation of Special Processes

Suppliers performing special processes identified below shall be accredited by the National Aerospace and Defense Contractors Accreditation Program (NADCAP). Special processes requiring NADCAP accreditation:

- Heat treatment
- Non-destructive testing
- Chemical processes (e.g., chemical milling, chemical conversion coat, anodize, prime, paint)
- Welding
- Brazing
- Shot peening
- Material testing by independent test laboratories
- Composite Manufacturing

Q14 – Limited Life and Age Controlled Items

This order requires submittal of product shelf life based on either date of manufacture, or date of shipment from the manufacturer/supplier. Upon shipment, shelf life remaining shall meet the minimum shelf life specified on the purchase order. If no shelf life is specified, 75% of the shelf life shall remain on the product at the time of receipt.

Q15 – Supplier (sub-tier) Process Controls

The supplier is responsible for maintaining a system to control processes per this purchase order, not only at their facilities, but for the processes performed at lower-tier suppliers' facilities. This clause mandates that all requirements, which are invoked or applied per this purchase order, including this clause, shall be flowed down to sub-tier suppliers.

Q16 – Electrostatic Discharge (ESD) Protection Program and Packaging

Supplier shall document and implement an ESD protection program in accordance with ANSI/ESD S20.20, ESD Association Standard for the Development of an Electrostatic Discharge Control Program for protection of Electrical, Electronic, and Electromechanical (EEE) parts, assemblies and equipment. EEE Parts shall be properly packaged and identified as required in ANSI/ESD S20.20. All EEE parts shall be placed in conductive or static-dissipative packages, tubes, carriers, conductive bags, etc., for shipment. The packaging must be clearly labeled to indicate that it contains electrostatic sensitive parts and the level of sensitivity, if it is below 100 volts. Electrical parts that may be used or shipped in conjunction with ESD sensitive parts shall be treated as ESD sensitive.

Q17 – Nonconformance Reporting

The supplier shall, upon discovery of a nonconformance to a product or process, or within 48 hours of discovering the shipment of nonconforming product, alert ACSD of the nonconformance for disposition.

Q18 – Third Party Material Test Report Required

Supplier shall send a sample of the material to an independent third party laboratory for analysis. Certifications of chemical, physical, mechanical and/or analytical test results are required in accordance with the applicable material specification for each item delivered. Certifications shall include:

- Testing laboratories name and address
- Reference to the Applied Composites San Diego purchase order number
- Date of testing
- Reference to the specification(s) and revisions as noted.
- Reference to lot number, heat lot number and/or batch number of the raw materials

Q19 – Prohibited Materials

The use of zinc, cadmium, pure tin, or conflict minerals is expressly prohibited. For electrical or electromechanical (EEE) hardware, all tin finishes must be alloyed with a minimum of 3% lead (Pb). Supplier shall submit a certificate with each shipment stating compliance with this clause. Any deviations from this requirement shall be approved by Applied Composites San Diego in writing prior to acceptance of the purchase order. All metallic hardware is scanned at incoming inspection at Applied Composites San Diego.

For additional information about Conflict minerals and any use of materials listed under the "Conflict Minerals", see the CONFLICT FREE SOURCING INITIATIVE's website (<http://www.conflictreesourcing.org/>).

Q20 – Export Control

The information contained in this document may be controlled by U.S. Export Laws and Regulations. An export license or other legal authorization is required to transfer or re-transfer items or information to foreign persons. An export includes the following: physically transferring items or information, or providing technical assistance or export controlled information to any foreign person, whether the foreign person is located inside or outside the United States.

Q21 – Quality Record Retention

Supplier and sub-tier suppliers shall maintain verifiable objective evidence of all inspections and tests performed, results obtained, and dispositions of nonconforming articles. These records shall be clearly associated with the procured supplies, including heat lot number of materials and unit or lot serialization, and shall be made available to ACSD, its customer and/or government representatives upon request. Records shall be retained in a safe, accessible location for a period of ten (10) years after date of delivery. The supplier's records associated with the manufacture of serialized or lot controlled articles will provide for continued traceability of serial number(s) or lot number identification through all phases of manufacture, commencing with raw material and continuing through final acceptance of the end item. ACSD requests a courtesy notification for records scheduled for disposal after the required retention period (10 years).

Q22 – Packaging, Handling, and Labeling

The supplier shall provide packaging that maintains the quality of the fabricated item and prevents damage, deterioration, substitution, or loss in transit. The supplier shall label the exterior of the package to ensure adequate identification of the precautions needed to ensure the integrity of the product being shipped. All supporting documentation required to accompany the shipment shall reside inside at least one of the containers. The container(s) shall be clearly identifiable/marked as containing documentation.

All items and materials furnished by ACSD shall be handled, stored, and transported in accordance with ACSD document 2759001.

Q23 – GIDEP Alert and Problem Advisories

The supplier shall participate in the Government-Industry Data Exchange Program (GIDEP) per requirements of the GIDEP S0300-BT-PRO-010 and S0300-BU-GYD-010, available from the GIDEP Operations Center, PO Box 8000, Corona, CA 91718-8000. The supplier shall review GIDEP Alerts, GIDEP Safe-Alerts, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories to determine if they affect the supplier's products/services provided. For those that affect the program, the supplier shall take action to eliminate or mitigate any negative effect to an acceptable level. The supplier shall generate the appropriate failure experience data report(s) (GIDEP Alert, GIDEP Safe-Alert, GIDEP Problem Advisory) whenever failed or nonconforming items, available to other buyers, are discovered during the course of the purchase order.

Q24 – Digital Product Definition (Boeing)

The supplier shall adhere to Boeing's process specification D6-51991 (<http://www.boeingsuppliers.com/supplier/D6-51991.pdf>), Quality Assurance Standard for Digital Product Definition at Boeing Suppliers. This includes all process controls, sub-tier documents and first article reporting (FAI) requirements.

Q25 – Changes in Approved Processes or Product

The supplier shall not change any process or product approved /agreed to from the time of the submission of the quote to throughout the Purchase Order terms, without notification and approval by Applied Composites San Diego.

The supplier shall:

- Notify Applied Composites San Diego of nonconforming product,
 - Obtain Applied Composites San Diego approval for nonconforming product disposition,
- Notify Applied Composites San Diego of changes to product and/or process, changes of suppliers (including sub-tier), changes of manufacturing facility location and obtain Applied Composites San Diego approval prior to implementation
- Flow down to the supply chain the applicable requirements including customer requirements

Note: All of the above shall occur within 24 hours. Suppliers may negotiate a mutually agreed upon time frame.

Q26 – Right of Inquiry

The supplier shall notify all sub-tier suppliers that they must accommodate any and all reasonable inquiries or requests pertaining to the materials and processes supplied in support of the completion of this *Applied Composites* purchase order. Including the right to review and request documentation up through the end of the record retention period prescribed on this purchase order.

Q27 – Product Serialization

Product must have serialization maintained throughout the manufacturing process. All documentation required must be clearly segregated and identified by serial number. Supplier to maintain serial number log for follow on order part serialization.

Q28 – Material Batches and Lots

For each part number, all material used shall be from the same heat lot or batch. When this is not achievable Applied Composites San Diego approval must be obtained in writing.

Q29 – Suspect Counterfeit Parts

Note: Counterfeit Parts, reference AS9100

Definition Counterfeit Part: *An unauthorized copy, imitation, substitute, or modified part (e.g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer. Examples of a counterfeit part can include, but are not limited to, the false identification of marking or labeling, grade, serial number, date code, documentation, or performance characteristics.*

Prevention of Counterfeit Parts

Supplies furnished to ACSD under this contract shall not include suspect/counterfeit parts nor shall such parts be used in performing any work under this contract whether on or off the facility site.

Supplier must ensure that counterfeit product received are controlled by:

- Components and parts shall be procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their *authorized* dealer or distributors.
- *Ensuring parts are properly identified and;*
- *Ensuring paperwork received are traceable to the manufacturer and;*
- *Validating raw material test reports.* Appropriate incoming inspection test methods shall be used to detect potential counterfeit parts and materials.
- The supplier shall flow this requirement down to all sub-tier suppliers to prevent the inadvertent use of counterfeit parts and materials.

When a product is suspect or detected counterfeit parts, it must be reported and controlled.

Note: When a counterfeit product has been released to AC, Supplier must notify AC of the discovery. Refer to AC-SM111 (Applied Composites General Provisions of Purchase) section 39 “COUNTERFEIT GOODS”.

The supplier shall not use unapproved sources unless preapproval has been granted by ACSD. The Seller shall promptly replace such suspect/counterfeit parts with parts acceptable to the Buyer, and the Seller shall be liable for any and all costs relating to the removal and replacement of said parts, including without limitation the Buyer’s external and internal costs of removing such counterfeit parts, of reinserting replacement parts, and of any testing necessitated by the reinstallation of Seller’s goods after counterfeit parts have been exchanged. Seller shall be fully liable for all such costs, even if such cost might be considered indirect, special, or consequential damages. Seller’s liability for suspect/counterfeit parts shall not expire until the product is found to be in satisfactory operation after delivery for its implied warranty only if the product is used for non-space application (e.g., ground or airborne). At Buyer’s request, Seller shall return any removed counterfeit parts to the Buyer so that the Buyer may turn such parts over to its Government customer for further investigation. Seller agrees that any Government or quasi-Government directive, such as a GIDEP alert, DOE, or a directive from

ACSD indicating that such parts are counterfeit, shall be deemed definitive evidence that Seller's parts contain counterfeit parts, and such reports may be referred to the Department of Justice. The rights of ACSD in this clause are in addition to any other rights provided by law or under this contract.

Q30 – FOD Requirements

Seller is required to establish and maintain a FOD prevention program in compliance with AS/EN/SJAC 9146 or an approved equivalent. Prior to closing inaccessible or obscured areas and compartments during assembly, Seller shall inspect for FO/materials and ensure no protective devices or foreign objects (e.g., bags, caps, covers, plugs, shavings, chips, oil, contamination, etc.) remain embedded. Seller shall ensure tooling, jigs, fixtures, and test or handling equipment are maintained in a state of cleanliness and repair sufficient to prevent foreign objects or debris.

4 Commodity Q Clause Definition

Prepreg

Q Clause: Q1, Q3, Q5, Q12, Q14, Q15, Q17, Q18, Q19, Q21, Q22, Q25, Q26, Q29, Q30

Film Adhesive

Q Clause: Q1, Q3, Q5, Q12, Q14, Q15, Q17, Q18, Q19, Q21, Q22, Q25, Q26, Q29, Q30

Facesheet

Q Clause: Q1, Q3, Q4, Q5, Q12, Q15, Q17, Q19, Q21, Q22, Q25, Q26, Q29

Core

Q Clause: Q1, Q3, Q5, Q12, Q15, Q17, Q19, Q21, Q22, Q25, Q26, Q29, Q30

Machine Parts

Q Clause: Q1, Q2, Q3, Q4, Q5, Q12, Q15, Q17, Q19, Q21, Q22, Q25, Q26, Q29, Q30

Hardware (Less Q3 reqmnt)

Q Clause: Q1, Q5, Q12, Q15, Q19, Q21, Q22, Q25, Q26, Q29

Adhesive

Q Clause: Q1, Q3, Q5, Q12, Q14, Q15, Q17, Q19, Q21, Q22, Q25, Q26, Q29, Q30

Tooling

Q Clause: Q1, Q2, Q5, Q12, Q15, Q17, Q19, Q21, Q22, Q25, Q26, Q29, Q30

Testing

Q Clause: Q1, Q5, Q11, Q12, Q19, Q21, Q22, Q25, Q26, Q27, Q29

Non-Destructive Testing

Q Clause: Q1, Q5, Q8, Q11, Q12, Q19, Q21, Q22, Q25, Q26, Q27

Processing (non-Nadcap)

Q Clause: Q1, Q4, Q5, Q12, Q15, Q17, Q19, Q21, Q22, Q25, Q26, Q27,

Calibration – General

Q Clause: Q9

Calibration – CMS Equipment

Q Clause: Q9