



PURCHASE ORDER QUALITY CLAUSES

Suppliers shall comply with the Quality requirements that are identified below when they are specifically included as Clauses or Attachments to the Purchase Order. All accompanying documents submitted to us by the supplier shall be of a nature which will allow legibility and reproduction.

QNR Quality Not Required: This note requires no Quality Management System or action by the supplier.

QS Quality System: The supplier shall maintain a documented Quality System (Manual). The Quality System shall address the requirements of SAE ISO9001, AS/EN/JISQ 9100, SAE AS13100 (providers of Engine components only), SAE AS9120 (Distributors) or AC7004 (Nadcap).

Calibration Service - Suppliers of Calibration services shall maintain a Quality System in accordance with one of the following: ISO 10012, ISO 17025, ANSI Z540-1.

Fastener Manufacturers must be 'Accredited Laboratories' and shall comply with the 'Fastener Quality Act (FQA), Public Law 101-592'.

Non Conformances - The supplier must notify the Buyer of product or process anomalies, and changes in product definition. All nonconformance's to requirements shall be promptly reported to Plascore Purchasing. Product shall be held at the supplier's facility until written disposition of the material is provided by Plascore Purchasing.

Changes - The supplier must notify Plascore Purchasing in writing if there are any changes to products that include but are not limited to 'Change in design affecting fit, form, or function, 'Manufacturing Location, Key Processes, Equipment, ERP System, Key Personnel, and Sub-tier Suppliers or Base/Raw Materials'. These requested changes may go into effect only after they are approved by Plascore Purchasing via an updated Purchase Order and/or Drawing, if applicable.

Flow Down - The supplier shall flow all applicable P.O. Quality Clauses (if any) to sub-tier suppliers.

Right of Access - Plascore, its customers, and regulatory agencies reserve the right of access to the supplier's facility at any reasonable time during performance of the Purchase Order.

Prohibited Materials - The use of unalloyed tin, cadmium or zinc is prohibited in the construction and surface finish of space hardware. Parts with tin alloys containing less than **98** % tin are acceptable. Parts containing cadmium alloys or zinc alloys (e.g. brass) must be completely over-plated with an approved metal. Parts shall contain no corrosive solder flux. Exceptions to these prohibitions must be approved by Plascore in writing.

Counterfeit Parts and Materials Avoidance- Components, parts and materials shall be procured only through Original Equipment Manufacturers (OEM) or their franchised dealer or distributors. The supplier shall verify the procurement source and perform appropriate incoming inspection to detect potential counterfeit parts and materials. In addition:

- OEM Certificates of Compliance (CoC) must accompany all shipments. These CoC's will be filed in the Plascore ERP system under the OEM's unique batch number.
- Product received will not be released into Plascore production until OEM CoC's have been reviewed and approved by the Purchasing or Engineering department, per SP-18-017 Receiving Certified Lot Tracked Material.
- Any product received without OEM CofC's will be placed in a Non-conforming area without the required green tag signifying approval to release the product into production, per SP-18-017. Failure to provide OEM CofC's may result in the rejection and return of the product in question.

Configuration Management– The supplier shall maintain a process for design review that ensures the products or services the supplier provides meet Plascore’s physical and functional requirements throughout the product lifecycle. This process must, as a minimum, ensure that the documented information on the product or service is consistent with the actual attributes of the product or service, maintains traceability of the product or service, and includes a comprehensive Engineering Change system to ensure all risks of the change have been identified and mitigated.

Supplier Survey - When requested, supplier shall complete a self-assessment, or facilitate an onsite assessment by Plascore, or 3rd party, to determine the level of compliance to specified Quality Systems.

Record Retention - Retention of Quality Records shall be 10 years minimum.

- Q1 CERTIFICATE OF CONFORMANCE:** The Supplier shall provide a Certificate of Conformance with each shipment. The Certificate shall include as a minimum:
- Supplier’s name and location
 - Manufacture’s name and location (if different)
 - Date of Manufacture / **expiration if applicable**
 - Date of Certification
 - Plascore Part Number, Revision level, and Description
 - Plascore Purchase Order Number
 - Quantity
 - Identification of the lot, batch, serial number **if applicable**.
 - All required Governing specifications and revisions as specified on the Plascore Purchase Order and/or Material specification.
 - A statement of conformance indicating that all requirements have been met.
- Q2 CHEMICAL TEST REPORT - RAW MATERIAL:** A test report must accompany each shipment. The report must indicate the actual percentage of each element that makes up the chemical composition properties of the raw materials. The report shall specifically identify the material by indication of the number of the melt, batch, lot, or other designators, as well as the applicable specification and revision. All certifications must be issued from the OEM or a 17025 certified lab.
- Q2A PROHIBITED MATERIAL CERTIFICATION:** Certify per Q2 and provide an XRF or equivalent test or mill report. The report should quantify the prohibited materials. A statement that the supplied product either contains no prohibitive materials and or meets the specific limits of the prohibitive materials noted in Quality Clause QS.
- Q3 PHYSICAL TEST REPORT - RAW MATERIAL:** A test report must accompany each shipment. The report must indicate the actual physical properties of the raw materials. The report must specifically identify the material by indication of the number to the melt, heat, batch, lot, or other designators, as well as the applicable specification and revision. The suppliers name and address shall appear on the certificate. All pages will be numbered using the following format: Page X of X.
- Q4 DIMENSIONAL INSPECTION REPORT:** The supplier shall submit dimensional inspection acceptance data, identifiable to the material supplied, with each shipment made. Data is to include sampling plan (if applicable), actual dimensions, and quantities inspected, accepted and rejected. Unless otherwise specified, 100% inspection of all materials, notes, and features required on all parts. Sampling plan, if approved, must be specified in the Plascore Purchase Order Line Item Detail Notes. The suppliers name and address shall appear on the certificate. All pages will be numbered using the following format: Page X of X.

Q6 SAFETY DATA SHEET: A Safety Data Sheet (SDS), following the Hazard Communication Standard (HCS) and Globally Harmonized System of Classification and Labeling of Chemicals (GHS) format, must accompany initial shipment made against this Purchase Order.

Q7 MANDATORY INSPECTION POINT - Completed items: require inspection and test verification by Plascore Quality at the Supplier's facility prior to shipment. Supplier shall provide 72 hours advance notice of activities to Plascore purchasing to permit scheduling of Source Inspection.

NOTE: Any source inspection by Plascore or its customer does not absolve the supplier of the responsibility to provide acceptable products.

Q8 GOVERNMENT SOURCE INSPECTION: Items are subject to Government Source Inspection at the Supplier's facility prior to shipment. On receipt of this order, promptly furnish a copy to the Government Representative who normally services your facilities, or, if none, to the nearest Defense Supply Agency Inspection Office. In the event the Office cannot be located, contact Plascore purchasing immediately.

Q9 FIRST ARTICLE INSPECTION: First Article Inspection Report is required. A part representing the tooling and methods to be used for the finalized production process shall be inspected by the Supplier, and documented in accordance with AS 9102 or the relevant Plascore material specification. The report must include dimensional and functional data as required. The First Article Inspection Report shall be submitted prior to the first shipment. A new or revised First Article Inspection Report is required when a change in design, tooling, materials, or methods of the production process occurs.

Q10 FIRST ARTICLE INSPECTION-SUPPLIER'S FACILITIES: First Article Inspection Report is required. A part representing the tooling and methods to be used shall be inspected by the supplier, and documented in accordance with AS 9102 or the relevant material spec, and witnessed by a Plascore Quality Representative or designee. The report must include dimensional and functional data as required. Determination of Acceptability will be made by the Plascore representative and shall be noted on the report. A new or revised First Article Inspection Report is required when a change in design, tooling, materials, or methods of production process occurs.

Q11 SPECIAL PROCESS SUPPLIERS: Plascore Suppliers and supplier Sub-Tiers who perform special processes or tests as identified below must assure personnel are qualified/certified as required. They shall include with each shipment:

Supplier or Sub-Tier Certification and/or Test report identifying the specifications and revision to which they conform. Certification shall include;

- Name and location of the process facility
- Date of service
- Plascore Part Number, Revision level, and Description
- Plascore Purchase Order number
- Quantity
- Identification of the lot, batch, serial number if applicable.
- Materials used and Processes performed
- All required processing specifications and revisions as specified, see Plascore Purchase Order Line Item Detail Notes for specific requirement or relevant material specification.
- Supporting Test data, Oven Charts, Time/Temperature Charts, Point maps, Data Files, etc. as applicable.
- A statement of conformance indicating that all requirements have been met.
- Each page of the test report shall be numbered using the following format: Page x of x.

Examples of Special Processes are: Firing, Pyrolysis, Autoclave cure, Flame/Metal Spraying, Welding, Heat Treatment, Plating and Coatings, Etching and priming, Nondestructive Testing (i.e. Ultrasonic, Magnetic Particle, Dye Penetrate, and X-ray inspections, etc.), Environmental and Laboratory Testing, De-scaling, Bronzing, etc.

Q11A SPECIAL PROCESS SUPPLIERS - Customer Approved: Plascore Suppliers and supplier Sub-Tiers, who perform special processes or tests as identified in Q11, must be approved by Plascore's customer.

Contact Plascore purchasing for a list of customer approved special process suppliers. Certification shall be per Q11.

- Q11B SPECIAL PROCESS SUPPLIERS – NADCAP Approval:** Plascore Suppliers and supplier Sub-Tiers, who perform special processes, as defined by PRI eAuditnet, must have current Nadcap certification during the period of manufacture/processing.
- Q12 PART IDENTIFICATION:** Minimum identification shall consist of the Manufacturer's part number, and trademark if applicable. If the part does not lend itself to stamping due to size, composition, etc., the container or tags shall bear appropriate identification. Parts manufactured to Plascore drawings shall be identified as specified on the drawings.
- Q13 CONTAINER IDENTIFICATION:** Supplier shall identify each unit and multiple over-pack container with the Part Number, Plascore P.O. #, Traceability number, recommended storage conditions, and hazardous warnings as applicable. If not otherwise specified, all items shall be protectively packaged to prevent contamination and damage during handling, shipping, and storage.
- Q14 HANDLING & PACKAGING:** When Purchase Order, drawing, and/or specifications do not otherwise specify, at a minimum all items shall be enclosed with wrappings, bags, cartons, boxes, or other container, as applicable to the extent necessary to provide protection from hazards of static electricity, contamination, and physical damage encountered in general handling, shipping, and storage. Material in direct contact with metal surfaces shall not cause or promote corrosion. Packaging material used shall be non-abrasive, chemically neutral (ph 6.5 to 7.5) and have a water-soluble acidity of not more than .02% equivalent sulfur trioxide.
- Q14A HANDLING & PACKAGING of CRITICAL HARDWARE -** The supplier shall provide a Critical Hardware plan indicating special precautions to be taken to meet Q14 on Critical Hardware.
- Q14B HANDLING & PACKAGING of BONDABLE MATERIAL -** The material shall be free of corrosion or contamination from oils, other foreign materials, or any agent detrimental to bonding.
- Q16 CUSTOMER FURNISHED MATERIAL –** Verify quantity received, paperwork matches, visual inspection for identification and possible transit damage.
- Q18 WEIGHT-**The supplier shall provide a weight report for each individual item procured on the PO. Traceability shall be maintained to all part numbers, serial/lot numbers, material designations, and/or any other specified data/information.
- Q19 MATERIAL RETENTION:** The Supplier shall retain for a period of at least 12 months from the date of shipment, sufficient material of the same lot of each shipment to perform 2 sets of certifiable tests as required by specifications and/or drawings pursuant to the Purchase Order.
- Q20 CALIBRATION:** Supplier shall provide a calibration certificate. The calibration standards used shall be traceable to NIST or other standards. Validity of previous inspections shall be recorded when adjustment to a gage is necessary. Gages requiring MSA studies must be < 10%. Results between 10% and 30% require documentation explaining the continued use of the gage. No calibration instruments are to be used when the results are > 30%.
- Q21 STATISTICAL PROCESS CONTROL:** Statistical Process Control (SPC) techniques must be used on *Key Characteristics* as specified on the part drawing. See Plascore Purchase Order, Line Item Detail Notes, or Plascore material specification for specific requirements.
- Q22 LIFE LIMITED MATERIAL:** The Supplier shall identify the material and the Certificate of Conformance with the date of expiration, including (if applicable) out-time requirements. At the time of shipment, at least 90% of the Shelf Life must be remaining. Life Limited Materials shall be packaged to assure required storage temperatures and life limited requirements are not adversely affected by the transport and/or interim storage prior to delivery. When required by specification, temperature recorders shall be included.

- Q23 MATERIAL CERTIFICATIONS:** Supplier shall provide a Certificate of Conformance for all raw materials purchased from a sub-tier used in deliverable items to Plascore. See Plascore Purchase Order, Line Item Detail Notes or Plascore Material Specification for Plascore specific requirements.
- Q24 SUPPLIER INSPECTION RECORDS** must be retained for 10 years minimum with regard to test/inspection points. Records shall be available for review by customers and regulatory authorities.
- Q25 GIDEP Program:** Supplier is required to implement a GIDEP program within their facility. Government Industry Data Exchange Program (GIDEP) Weekly Summaries and Parts Lists will be reviewed thru GIDEP notification hyperlinks for Parts List, Delimited List, R&M Summary, Engineering Summary, Failure Summary, Suspect Counterfeit Material Summary, Metrology Summary and the Product Information Summary on a weekly basis. In the event a GIDEP notification indicates a supplied material may be affected, supplier will check stock for applicable dates and quarantine, if necessary, until resolution is found. Supplier will also notify Plascore of any applicable product.

REVISION HISTORY

Revision Level	Clause	Description of change	Date	Approved by
A	N/A	Initial Release	10/17/08	Poliski
B	14B	Add bondable material	3/10/10	Poliski
C	QS	Add Counterfeit Parts Clause. Add notify in writing in change management	7/18/14	Poliski
D	25	Add GIDEP program	9/25/19	Francois
E	6	Update MSDS to SDS	2/17/20	Francois
F	QS	Added additional elements to Change management notification	2/28/20	VanKampen
G	QS	Added Configuration Management	8/26/22	Stachowiak
H	QS	Added Counterfeit detail	11/22/22	Stachowiak
I	N/A	Consolidated SP-18-010_2 and SP-07-005_2	2/24/23	Stachowiak

The suggested clauses below are reference only and are used as a general guideline. Specific Plascore Quality Requirements apply when included on the purchase order

PRODUCT/SERVICE	SUGGESTED STANDARD CLAUSES	SPECIAL CLAUSES (As Applicable)
Generic Program P.O.'s – Unless QNR is Specified	QS, Q1, Q13,	Q14
Fasteners (MS, NAS Parts etc)	QS, Q1, Q13 & Q14	Q14A, Q2A
Machining/Machined Details	QS, Q1, Q4, Q13, Q14, and Q23	Q2, Q2A, Q3, Q7, Q7A, Q9, Q10, Q12, Q14A, Q18
Special Processes	QS, Q11, Q13 and Q14 - Q11 is often Added to Machined Detail Clauses	Q2A, Q7, Q7A, Q9, Q10, Q11A, Q11B, Q14A
Tooling	QS, Q1, Q4, , Q23 – Q4 & Q23 are often waived on minor tool orders.	Q2, Q2A, Q3, Q7, Q7A, Q14, Q14A, Q18
Testing	QS, Q11, Q13 and Q14	Q7, Q7A, Q14A
Prepreg	QS, Q1, Q13, Q14, Q19 Q22 Q23	Q3, Q6, Q7A
Core	QS, Q1, Q13, Q14, Q23	Q2, Q2A, Q3, Q7, Q14A

Other Life Limited Materials (Adhesives, Kapton etc)	QS, Q1, Q13, Q14, and Q19	Q6, Q23, Q14A
Primary Raw Materials	QS, Q1, Q6 and Q23	Q2, Q2A, Q3, Q19,
Chemicals	QS, Q1, Q6 and Q23	
Calibration & Thermocouples	QS, Q20	