



Supplier Quality Assurance Provisions (Replaces SQAP-100)

Code No.	Requirement Name	Requirement
01 (General Requirements)	Product Verification System	For product verification the supplier shall have implemented as a minimum, an inspection system meeting the requirements of ISO 9001 or equivalent. When required, the supplier shall be prepared to demonstrate the system through 1) submission of quality manual and supporting documentation; 2) responding to questionnaires; and 3) on-site surveys and audits by TRI representatives, etc.
	Design and/or Process and/or Material Changes	The supplier shall not implement any changes to TRI drawings and/or specifications and/or materials without written approval from TRI in the form of a TRI-approved Supplier Deviation Request (TRI form QSF-106-2), available from TRI Purchasing, Supplier Quality Assurance, and posted electronically at www.teledynereynolds.com .
	Submission of Nonconforming Material to TRI	Items not in conformance with the requirements of the Purchase Order, TRI drawings, specifications, and industry standards referenced therein, or that cannot be corrected through continuation of the original manufacturing process or by rework, shall not be submitted to TRI without prior written approval from TRI in the form of a TRI-approved Supplier Deviation Request (TRI form QSF-106-2), available from TRI Purchasing, Supplier Quality Assurance, and posted electronically at www.teledynereynolds.com . Submittals shall include supplier-recommended disposition(s) with sufficient technical justification.
	Return of Nonconforming Material from TRI	Nonconforming items returned from TRI which are subsequently resubmitted by the supplier following material review disposition activities shall bear a particular indication of such resubmission on the accompanying paperwork and shipping documents. Reference shall be made to the TRI rejection documentation and evidence presented to demonstrate that the causes for rejection have been corrected.
	First Article Inspection	TRI may perform First Article inspection per SAE AS9102 under the following conditions: 1) new supplier; 2) new part number; 3) revision change; 4) same manufacturer but lapse between production runs; 5) verification of implementation of corrective & preventive actions; 6) new facility; or 7) change of ownership.
	Corrective Action	When requested by TRI, the supplier shall investigate nonconformities to determine the root cause(s) of failures and take effective action(s) as appropriate to correct the items and prevent future failures. Unless otherwise requested by TRI, such corrective action(s) may be documented in the supplier's format.
	Calibration	The supplier shall only utilize inspection and test equipment for acceptance that has been calibrated by a laboratory, whose quality program is consistent to the requirements of ISO/IEC 17025.
	Preservation & Packaging	Unless otherwise specified, the supplier shall use good commercial practices for preservation and packaging of items supplied to TRI.
	Flow Down Requirements	The supplier shall insure that requirements be flowed down to every sub-tier suppliers, including key characteristics where required.
	Traceability	The supplier shall maintain internal traceability to the raw material level and shall be able to provide such traceability within a reasonable time frame if requested by TRI.
	Record Retention	Suppliers and special processors, as well their subcontractors, shall maintain quality records to substantiate product compliance to the TRI purchase order requirements and must be capable of furnishing copies of these records immediately upon request of TRI, it's customers, and government / regulatory representatives as applicable. Such records shall be maintained for a minimum of 10 years after date of delivery to TRI. After 10 years, the supplier / special processor (as applicable) shall not be destroyed without TRI's written concurrence.
	TRI Furnished Tooling	Tooling (fixtures, jigs, molds, etc.) and test equipment fabricated by the supplier at TRI expense, or furnished by TRI, shall be considered property of TRI. TRI is responsible for routine and periodic maintenance and calibration of such items. Suppliers are responsible for insuring appropriate protection during transport, storage, and use. Some amount of wear and tear is expected through usage.
	Counterfeit Parts & Materials	The supplier shall verify the procurement source and associated certifying paperwork. 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.
	Change of Facility or Ownership	The supplier shall notify TRI when manufacturing operations being performed in support of this purchase order are moved to another facility with a separate street and/or city address. Supplier shall also notify TRI if ownership of the supplier has changed.
	Surveillance & Right of Entry	Representatives of TRI, it's customers, Government, and/or regulatory agencies (if applicable) reserve the right to visit the supplier and it's suppliers with the intent of performing surveillance activities including inspections, surveys, and audits with the intention of verifying conformance to 1) product requirements as invoked by TRI purchase order; 2) general requirements as defined in this table; and 3) specific requirements in Table 2 as invoked by TRI purchase order. In addition, TRI reserves the right to visit to resolve product quality issues.
RoHS Compliance	As stated in the European Union's Restriction on Hazardous Substances (RoHS) Directive 2002/95/EC, materials provided to TRI must not contain more than 0.1% weight lead, mercury (or compounds thereof), hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE); and 0.01 % weight cadmium (or compounds thereof). If materials do not comply with the restrictions noted, the supplier shall notify TRI Purchasing for direction prior to acceptance of order or shipment.	
Distribution Sources	Distribution sources are required to provide documented supply chain traceability either directly from the OEM or from OEM-authorized distribution sources.	



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10	Certificate of Conformance	<p>A legible "Certificate of Conformance" (C of C) statement shall be provided with each shipment submitted to TRI. The C of C shall be in the supplier's format and may either be a separate document or may be included within the packing list. The C of C statement shall state that the items were produced in conformance with requirements as specified in the TRI purchase order. As a minimum, the C of C shall note 1) the manufacturer or distributor's name and address; 2) the TRI purchase order number; 3) the part number(s) and revision(s) when applicable; 4) traceability information including serial numbers, lot codes, or date codes as appropriate; 5) shelf-life expiration dates if applicable; and 6) signature of the supplier's authorized representative. The C of C shall contain enough additional information as necessary to facilitate traceability to supporting supplier documentation, which shall be maintained on-file by the supplier and available for retrieval if necessary.</p> <p>For Commercial Off the Shelf (COTS) or Public Domain product/material, an unsigned Certificate of Conformance (COC), Certificate of Analysis (COA), or Certified Material Test Report (CMTR) are acceptable certification methods.</p>
11	Raw Material Test Reports or Certifications	<p>For raw materials (metals) utilized to fabricate TRI parts, the supplier shall provide <u>either</u> 1) raw material test reports containing detailed physical and chemical analysis and data; <u>or</u> 2) evidence of conformance (raw material Certificate of Conformance) to <u>recognized specifications</u> (ASTM, Mil-Spec, WS spec, etc.).</p> <p>Additional Shipments: For additional shipments utilizing the same raw materials, the supplier may <u>either</u> 1) provide additional copies of the same raw material test reports or certifications; <u>or</u> 2) clearly note in their shipment documentation that the test reports or certifications have been provided with previous shipment (provide identification information). The supplier shall insure that sufficient traceability information to the raw material level is maintained.</p>
12	Special Processors, Certifications, and Reports	<p>Special Process Definition: Special processes including plating, painting, passivation, heat treating, welding, NDT, etc. as defined by Nadcap. The Nadcap website is located at https://www.eauditnet.com/eauditnet/ean/user/login.htm.</p> <p>Special Processor Selection: Suppliers are encouraged to utilize Nadcap-approved special processors wherever possible. Otherwise, special processors shall be capable of certifying their processes to the applicable industry specification(s) as required by the TRI drawing.</p> <p>Certification Requirements: The supplier shall furnish a special process certification <u>in addition to</u> the certificate of conformance as required by TRI SQAP Code 10. The certification shall specify the applicable special process specification(s) (plating, heat treat, passivation, etc.), type, class, etc. as specified on the TRI drawing or industry specification.</p> <p>Test Report Requirements: The certification or attachment(s) shall also include actual measurements as applicable to verify conformance to the TRI or specification requirements.</p>
13	Test Data	<p>The supplier shall provide test data with the subject item(s). Such test data shall include individual or summary parameter measurements as appropriate.</p>
14	TRI-Directed Special Processors	<p>Special Processor Selection: The supplier must use special processors (defined in Code 12) as directed by TRI. The TRI purchase order should note eligible special processors. If not, contact TRI Purchasing for direction before proceeding.</p> <p>Certification Requirements: The supplier shall furnish a special process certification <u>in addition to</u> the certificate of conformance as required by TRI SQAP Code 10. The certification shall specify the applicable special process specification(s) (plating, heat treat, passivation, etc.), type, class, etc. as specified on the TRI drawing or industry specification.</p> <p>Test Report Requirements: The certification or attachment(s) shall also include actual measurements verifying conformance to the TRI or specification requirements.</p>
15	Printed Circuit Boards	<p>Unless otherwise specified on the TRI fabrication drawing, printed circuit boards (PCB's) shall meet the workmanship requirements of IPC-A-600, Class 3.</p>
17	Government Source Inspection	<p>Government inspection is required prior to shipment from supplier's facility. Upon receipt of purchase order, the supplier shall notify the government representative(s) who normally service the supplier's facility, for coordination and scheduling of inspection(s).</p>
18	TRI Source Inspection	<p>TRI inspection is required prior to shipment from supplier's facility. TRI shall be notified a minimum of 24 hours prior to intended shipment when items are ready for TRI source inspection. To schedule, FAX request to (310) 823-5098, or call (310) 823-5491, extension 2060. In either case, please provide 1) the TRI purchase order number; 2) the TRI part number(s); 3) the quantity of each part number; and 4) the date(s) source inspection is being requested for.</p>
20	Elastomeric Materials Information	<p>Documentation noting the manufacturer, cure date, raw material identification, expiration date (if applicable) and applicable specification numbers (military and/or industry, as applicable) shall accompany each shipment. The information may be included on the Certificate of Conformance (Code 10) or on a separate document. If the information has already been supplied to TRI on a previous shipment, the supplier may reference the previous shipment (TRI PO number) on the Certificate of Conformance.</p>
21	Destructive Testing of Plated Parts	<p>To ensure that plating adhesion is acceptable, supplier must perform a destructive test per the required sample size quantity as specified per the applicable standard listed in the drawing(s) and/or purchase order. The destructed part(s) must be tagged properly and submitted to TRI, along with "Certificate of Conformance" (C of C) indicating compliance to the listed standard.</p>
22	Plastic Materials Information	<p>Plastic materials provided to TRI shall be accompanied by a certified report showing the manufacturer's name, material designation, the generic type, and the specification(s) to which the material conforms.</p>



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26	Teledyne Internal Material Testing Requirement	TRI internal purposes. TRI shall perform internal material testing upon receipt of the parts and materials in accordance with TRI's internal specifications. A material test report shall be completed prior to the acceptance of the parts and materials.
27	Independent Laboratory Analysis	Raw material used in the fabrication of products on this order shall be traceable to a physical and chemical analysis by an independent laboratory. A copy of the analysis shall accompany each delivery. The supplier is also required to provide a certificate of conformance which includes a statement that the products delivered were fabricated from the material certified by the laboratory, and shall list the laboratory name and report number.
33	Soldering Workmanship	Soldering workmanship shall be in accordance with the requirements of IPC/EIA J-STD-001, Class 3.
34	Solderability	Component leads, terminations, lugs, terminals, and wires shall be capable of meeting the solderability requirements of IPC/EIA J-STD-002. Printed wiring boards shall be capable of meeting the solderability requirements of IPC/EIA J-STD-003.
35	Limited-Life Materials: Remaining Life & Labeling Requirements	Remaining Shelf-Life: The supplier shall not submit limited-life material(s) with <u>less than 75%</u> of the useful life remaining without written approval from TRI in the form of a TRI-approved Supplier Deviation Request (TRI form QSF-106-2, available from TRI Purchasing and Quality Assurance, and posted electronically at www.teledynereynolds.com .) Labeling: The supplier shall label (white label preferable) <u>each individual container</u> of limited-life materials with 1) the Teledyne Reynolds Purchase Order Number; 2) the supplier lot number; 3) the date of manufacture; 4) the date of expiration; and 5) storage conditions (if applicable and/or modifies expiration date). Teledyne Reynolds Internal Use Only: Please use shelf life material expiration periods defined in Tables 1.0 – 7.0 of Material & Process Specification RS-1279 and where exceptions are specified. Record expiration date in TIPQA
44	Mercury Exclusion - Supplier	Products furnished under this purchase order shall contain no metallic mercury or mercury compounds and shall be free of mercury contamination. The supplier shall furnish a signed statement of conformance to this requirement. The statement can be included within the supplier's certification of conformance submitted per Code No. 10. The supplier must include the following statement <i>"We certify that all parts and/or materials on this shipment contain no metallic Mercury or Mercury compounds."</i> Or an equivalent statement thereof.
45	Mercury Exclusion - TRI	Products furnished under this purchase order shall contain no metallic mercury or mercury compounds and shall be free of mercury contamination. TRI will perform mercury test upon receiving of materials. Any materials that contain mercury in excess of 10 ppm or 0.01 mg/m ³ shall be rejected and returned to supplier.
49	Spare and Replacement Parts	For items not fabricated to TRI drawings and specifications (for example, off-the-shelf and/or supplier part number), the supplier shall document spare and replacement parts or assemblies and supply sufficient data and/or information for ordering spares and replacements.
52	Electropolish fixture requirement	Supplier shall only utilize Copper fixtures (wire/racks) that will be in contact with the item(s) listed on this purchase order before, during and after electropolishing. Fixture(s) that contains Titanium material is prohibited. The supplier shall flow down to sub-tier suppliers this requirement when electropolish process is required.
53	Nadcap-Approved Special Processors Required	The supplier shall utilize Nadcap-approved special processors to perform special processes as defined by Nadcap (primarily codes CP for chemical processes and HT for heat treating). Nadcap-approved special processors are listed in the eAuditnet Online QML at: https://www.eauditnet.com/eauditnet/eau/user/login.htm



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54	Specific TRI Customer Flow-Down Requirements	<p>The following requirements as noted herein are required by a specific TRI customer, and supersede all other SQAP requirements as noted:</p> <p>1) <u>Supplier Product Quality Program</u> (supersedes Code 01): The supplier shall, in the performance of this purchase order, provide and maintain a Product Quality Program which shall ensure that adequate control of reliability and quality is maintained throughout all phases of purchase order performance.</p> <p>2) <u>Raw Material Test Reports or Certifications</u> (supersedes Code 11): Chemical and physical test results shall be submitted for all raw materials, whether supplied in product or directly to TRI. Detailed analysis reports and physical test results, when applicable, shall be included. Certification of conformance to government or industry specifications without analysis and test results (when applicable) is not acceptable.</p> <p>3) <u>Inspections Performed</u>: Evidence of specific tests or inspections shall be provided with shipment. Inspection and test records maintained by supplier shall be adequate enough to support the quality level of the products provided.</p> <p>4) <u>Specific Revisions</u>: Due to strict traceability requirements of the TRI customer for which this material will be utilized, the supplier shall note the specific revisions of all applicable specifications as noted in the TRI purchase order text for this material. Should a revision as noted on the TRI purchase order be incorrect or not the most-current, the supplier shall notify TRI Purchasing to have the purchase order revised. Revisions not noted as required on supplied documentation shall warrant TRI rejection.</p> <p>5) <u>Counterfeit Parts & Materials</u>: In addition to the requirement noted in SQAP Code 01, all parts and materials shall be procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their franchised dealer or distributors. The supplier shall not use unapproved brokers (any company, person, or entity who is not an OEM/OCM or not an OEM/OCM authorized franchised dealer or distributor) for the purchase of components/materials/parts unless pre-approval has been granted by TRI.</p> <p>6) <u>Special Process Certification Requirements (supersedes Code 10)</u>: A special process certification shall be provided with each shipment of item(s) delivered on this contract. Special Process Certifications may be in supplier format and shall:</p> <ul style="list-style-type: none"> • Include the customer's (TRI) order number; • List applicable part number(s); • Include serial and/or lot numbers, of the hardware processed (if applicable); • Note the material process specification & revision; • Include a certification statement stating the special process was performed per the applicable drawing/specification requirements; • Include the processing organization's name and address; and • Be signed and dated by a company official of the organization and/or processor attesting to the acceptance of the processes performed to the required specification(s). <p>The organization shall insert the substance of this clause, including this sentence, in all lower-tier subcontracts for work performed under this contract.</p>
55	Fraud or Falsification	<p>1) This purchase order and activities hereunder are within the jurisdiction of the Department of Energy and/or the Navy. Any knowing and willful act to falsify, conceal or alter a material fact, or any false, fraudulent, or fictitious statement or representation in connection with the performance of work under this purchase order may be punishable in accordance with applicable federal statutes.</p> <p>2) <u>Seller agrees that all employees engaged in the performance of this purchase order will be, if they have not been previously, informed in writing prior to commencing performance of work under this purchase order that there is a risk of federal criminal penalties associated with any falsification, concealment, or misrepresentation in connection with work performed under this purchase order.</u> Seller agrees that a signed statement shall be, if it has not been previously obtained, from said employees prior to their commencing performance of work under this purchase order that they have been so informed. Such statements shall be retained by seller for at least three years after final payment on this purchase order. An acceptable form for such a statement is substantially as follows: <i>"This company/division/branch performs work under contracts which are within the jurisdiction of departments of the United States Government. Some of the work performed under these contracts affects the national security of the United States and the requirements of these contracts are designed to ensure that essential attributes of the work are carefully checked or inspected and that records accurately reflect the results of all work. Any falsification, concealment, or alteration of any material fact, or any false, fraudulent, or fictitious statement or representation in connection with the work under any contract within the jurisdiction of the Government is not only prohibited by company policy, but may also be punishable under federal law. Please acknowledge by your signature that you have read and understand the above."</i></p> <p>3) <u>Seller must also agree to include the following statement preprinted on each manufacturing, inspection, or test record used in conjunction with the subject subcontract: "Note: The recording of false, fictitious, or fraudulent statements or entries on this document may be punishable as a felony under federal statute."</u></p> <p>4) <u>Subcontracted work must be forwarded to those listed on Form NN-P32.</u> Contact your buyer for the most-current revision and clarification as required.</p> <p><u>All codes must be flowed down to all lower tier suppliers.</u></p>



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56	Specific TRI Customer Flow-Down Requirements for Distribution Source	Distribution Source (supersedes Code 1): In addition to the requirement noted in SQAP Code 01, all parts and materials shall be procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their franchised dealer or distributors. The supplier shall not use unapproved brokers (any company, person, or entity who is not an OEM/OCM or not an OEM/OCM authorized franchised dealer or distributor) for the purchase of components/materials/parts unless pre-approval has been granted by TRI. Distribution sources are required to provide documents, C of C and/or Test report, from the OEM.
60	Customer Code 1	TRI internal purposes. See QSF-106-9 for relevant information.
61	Customer Code 2	TRI internal purposes. See QSF-106-9 for relevant information.
62	Customer Code 3	TRI internal purposes. See QSF-106-9 for relevant information.
63	Customer Code 4	TRI internal purposes. See QSF-106-9 for relevant information.
64	Customer Code 5	TRI internal purposes. See QSF-106-9 for relevant information.
88	Single Lot / Date Code Traceability	Parts and materials provided against this line item shall be from one lot, manufactured and/or processed at the same time, and shall be traceable to the same raw material lot(s). For example, machined parts shall be manufactured in the same production run and utilize raw material from the same lot.
98	SPC Sample Size Inspection	The supplier shall perform XRF inspection based on SPC sample size to measure all specified locations on the drawing. (a) Definition: A plating lot - Is the total quantity of parts plated on one plating rack. SPC sample size - 30 pieces or 10% of the PO quantity, whichever is greater number. When the drawing requires multiple measurement locations, the sample size can be fulfilled by completing measurements equally distributed across all locations within the sample size (i.e., 30 parts or 10% of the order quantity) (b) The Cp ≥ 1.33 shall be calculated based on the SPC sample size. (c) If the Cp < 1.33, the vendor will conduct 100% XRF inspection on the balance of parts in the lot. (d) The supplier shall submit the Cp calculations and raw data with each shipment.
99	First Article Inspection	The supplier shall perform a First Article Inspection (FAI) on one piece chosen at random from the first lot presented for TRI acceptance. The FAI shall be performed and documented per the requirements of SAE AS9102, latest revision in effect at time of order placement. A copy of the FAI report shall be submitted to TRI with the shipment. If discrepancies are noted during the FAI, the supplier shall promptly notify the TRI Buyer/Planner for directions. If a two-year lapse in production has not occurred on the deliverable item, then FAI is not required (REF SAE AS9102) and this SQAP Code will not apply. Also, this code is not applicable to commercial off the shelf (COTS) commodities.