

Telect Supplier Quality Assurance Requirements

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1. Overview

The purpose of this document is to provide basic quality system requirements for Telect Suppliers of components and/or customized components and/or parts and/or contract manufacturing. These requirements are needed to provide overall evidence of product and procedures meeting all of Telect specifications, regulatory, workmanship, and industry standards. Telect Suppliers must maintain ISO 9001:2000 registration to and/or operate in compliance with the requirements of TL9000 or ISO 9001:2000 Quality Management System Standards.

2. Contract Review

Telect Suppliers need to have a documented process for contract review that adequately addresses:

- Bill of Materials
- Drawings
- Approved Vendor List
- Regulatory Requirements
- Telect Workmanship and Industry Standards
- Revision Control
- Supply Sources
- Process and Test Equipment Requirements
- Purchasing/ Production Capacity/ Planning
- Packaging
- Labeling
- Inventory/Storage
- Shipping/ Logistics
- Lead times

Any conflicts regarding specifications must be resolved and agreed upon by both Telect Buyer and Telect's Supplier before build. The Supplier is expected to alert the Telect Buyer of any specification that have not been defined by Telect documents but is deemed critical by the Supplier.

3. Telect Material/Color Requirements

Approved materials and manufacturers for paint, powder coat, ink, and resin are identified on Telect drawings and/or Telect Workmanship Standards and bill of materials.

- Telect Suppliers need to request a controlled color standard chip from the Telect Buyer when color code for plastic, paint, powder coat, or ink is specified on drawing. The Supplier is expected to provide their sources with controlled color standard. Color chips are identified with the code number and expiration date.
- Color standard chips need to be stored and handled per Telect Workmanship Standards to maintain integrity.
- All materials and coatings used to manufacture Telect products and parts must be RoHS compliant unless otherwise agreed upon in writing by the Telect Buyer.

4. Document and Revision Control

Supplier is required to have an adequate system in place for documentation and drawing revision control to ensure use of the correct one. This system must include all areas such as Incoming inspection, Engineering, assembly, and final test and inspection.

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5. Telect Supplier Website

The Telect Workmanship Standards and Forms are listed on Telect's website:

<https://www.telect.com/simplify/Workmanship-Standards.aspx>

are the controlling documents. Telect's Suppliers are responsible for ensuring any copies or translations of the Telect Workmanship Standards are updated to reflect the latest revision on the website.

- Supplier's personnel responsible for contract review, planning, manufacturing, quality, inspection and test, inventory, or logistics, should have access to those documents necessary to meet Telect specifications and requirements.

6. Telect Supplier Delivery and Quality Performance Report

Telect Suppliers are expected to monitor their Delivery and Quality Performance Report provided by the Telect buyer.

7. Product Serialization System

Contract manufacturers are responsible for applying and maintaining a twelve (12) digit serialization system using Telect's Purchase Order number as the first numeric characters and sequential numbering system for box builds and subassemblies. The numeric sequence must be representative as to when the unit was produced during the manufacturing process.

Example: Purchase Order 1234567 for 10 units would be 123456700001 through 123456700010.

Supplier is responsible for preventing duplication of serial numbers. If another order is placed using the same Purchase Order, the numbers need to be sequential starting with the number left off from previous order.

Example: Purchase Order 1234567 for 10 more units would be 123456700011 through 123456700021.

8. Traceability of Raw Materials Used in Manufacturing (Job Kitting)

The Supplier is required to have materials/item traceability throughout the entire assembly and manufacturing processes. This applies to all raw materials, subassemblies and finished products. Records will be kept referencing the assigned job/serial number (Telect Purchase Order).

- Raw Materials - Upon receipt of raw materials, the item number and date of receipt need to be identified and tracked.
- Sub Assemblies - The following will be identified and tracked in processing material: item number, product identifier—job number or serial number, date/time, test results, and specific packaging for product.
- Finished Product - The finished product will have: a printed label identifying job number, date of manufacturing (DOM), and applicable product information as required by regulations, bill of materials, and/or drawing requirements. Traceability to individual serial number is required for finished goods.
- All jobs will be traceable to the raw materials used to product the product. Documentation will at a minimum include:

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- Telect part number
- Manufacturer/Supplier
- Date of manufacture
- Purchase Order number/batch or lot number

Records must be easily accessed in case of product recall or for verification of processes.

9. First Article Process

First Articles are required for any part provided by a new Supplier, or when there are significant changes to molds or tooling, process and/or materials. This also applies to any new supply sources for the Supplier.

Telect requires Suppliers to perform all measurements, tests, and inspections per drawings, artwork files, materials, controlled color chip, regulations, industry standards, and Telect Workmanship Standards.

The Supplier is to ensure that all First Articles pass all specified requirements prior to shipping to Telect for approval.

- The document controlled First Articles Form and instructions are available to the Supplier from the Telect buyer.

NOTE: If Supplier is unable to meet all of Telect's First Article requirements, Supplier must immediately notify the Telect Buyer to expedite resolution.

10. Supplier Qualification and Monitoring System

Telect Suppliers must have a documented supplier qualification process that includes the following:

- Confirmation that supplier is not listed on the OFAC website:
<http://www.treasury.gov/offices/enforcement/ofac/sdn/t11sdn.pdf>

NOTE: Suppliers on this list have been associated with terrorist support or activity. DO NOT USE ANY SUPPLIER ON THIS LIST!

- An approved supplier list
- Compliance with Telect's Approved Supplier List
- Defines Supplier Qualification Requirements
- Defines First Article and First Lot Inspection
- Monitoring of Delivery and Quality Performance
- Supplier's Corrective Action process
- Method of communicating and verifying Telect's product requirements
- Document and Revision Control
- Process change notifications

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11. In-line Process Controls

Critical processes that could affect quality during manufacturing or assembly of Telect parts or product need to be identified. Check points need to be applied to address defective parts at the earliest opportunity. Supplier is expected to ensure:

- their personnel have the correct information describing product requirements, and that processes are maintained within controlled conditions, and documented; and
- all necessary work instructions are readily retrievable; and
- the use and maintenance of suitable equipment is completed in a timely manner, including test fixtures; and
- all discrepancies are documented and monitored at appropriate intervals; and
- the use of limit samples/Go-No Go Gauges, and jigs as needed to improve process consistency and prevent defects from moving on through the process; and
- the use of the appropriate electrical static discharge (“ESD”) equipment/clothing/training/housekeeping per industry standards during handling for products requiring ESD protection and training; and
- product/parts are not released to next stage until all process activities are conducted.

12. Preventative Maintenance

Telect Suppliers are to maintain a list of equipment/tools used for producing Telect product and maintenance scheduled detailing the tasks and timeframe for each. Supplier is required to document preventative maintenance activities. Adequate maintenance should be performed to help increase the life of equipment and tools and to prevent assembly line shut downs.

13. Calibration System

Any measuring tools or test equipment that are used to validate that Telect’s product meets specification, must be identified and a schedule must be in place for periodic calibration by an authorized source and method. Supplier is to maintain these records and ensure test equipment/tools are labeled with calibration date and next calibration due date. Any equipment/tools found to be out of calibration shall be visibly labeled as such to prevent use. Devices that do not require calibration will be also identified.

14. Approved Test Procedure/Equipment and Quality Test Plan

All test instructions, test equipment and Supplier’s quality test plan must be reviewed and approved by a Telect Test Engineer prior to use in production.

15. Traceability of Test Records to Product Serial Number

All test results need to be recorded and traceable to the serial number and date of manufacture. The records must be available upon Telect’s request.

16. Segregation and Identification of Non-Conforming Parts/Products

Product that does not conform to Telect’s product requirements will be identified and controlled to prevent unintended use. The controls, responsibilities, and disposition of the non-conforming product must be documented by Supplier in a Non-Conforming Procedure.

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17. Corrective Action System

Telect Suppliers need to have a Corrective Action process which ensures:

- Suspected inventory is identified and isolated to prevent shipping.
- Alerts Telect of any in-transit non-conforming product/ parts
- Elimination of causes and prevention of recurrences

18. Advance Waiver Process

Supplier must submit a completed Telect Supplier Advance Waiver Request Form to the Telect Buyer for any parts that do not meet Telect's specifications. Supplier should contact the Telect Buyer or Telect Supply Chain Management to obtain this Advance Waiver Request Form.

Supplier must have Telect's approval prior to shipping any parts that do not meet Telect's specifications. A copy of the approved Supplier Advance Waiver Request must accompany each box of parts and is only valid for the one Purchase Order and quantity or date range specified. Prior to further shipments, the Supplier is expected to correct the process problem which produced the non-conforming parts.

19. Process Change Notification and End of Life Alerts

Supplier shall not make any of the following changes without obtaining prior written consent from the Telect Buyer:

- changes to the raw material of the product;
- changes to any aspect affecting the form, fit, or function of the product;
- changes to manufacturing or assembly process(es);
- intent to discontinue manufacturing

Definitions

Fit: The external dimensions and associated tolerances, of the product, as specified.

Form: The visual appearance including shape, color, markings, and surface finish of the product as specified.

Function: The electrical, mechanical, thermal, and performance characteristics of the product as specified.

Process: A combination of people, procedures, methods, machines, materials, measurement equipment, and or environment for specific work activities to produce a given product or service.

20. Inventory Controls

Telect Suppliers are required to have inventory controls in place to:

- ensure parts/ product is used in a "First In, First Out" (FIFO) system;
- identify parts as Electrostatic Discharge Sensitive (ESD) and special handling requirements.
- monitor inventory determined to have a Shelf Life such as PCBs, adhesives, and chemicals, to prevent use after expiration date.

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21. Storage and Handling

Storage areas, equipment, and stock rooms need to be designed to prevent deterioration and damage of product pending use or delivery. Appropriate methods should be available for authorizing receipt of material and proper dispatch to and from such areas. The condition of the stock will be assessed at appropriate intervals.

22. Country of Origin Marking Requirement

Telect Suppliers must maintain identification of all parts and products through all stages of production **and** during transportation, per the requirements found on Telect's website: https://www.telect.com/Portals/0/documents/Telect_s%20Country%20of%20Origin%202015.%20CO%20PY.pdf

23. Packaging

All packaging materials for Telect products and parts must be RoHS compliant unless otherwise agreed upon in writing by the Telect Buyer.

All corrugated packaging must have an approved Box Manufacturer Certificate (BMC) mark or equivalent certification based on the commodity shipping and the weight per box. Information can be accessed at <http://www.nmfta.org/Pages/NMFCPackaging.aspx>

All wood packaging or pallets must comply with the International Plant Protection Convention (IPPC) standards and International Standard for Phytosanitary Measure 15 (ISPM15). Information can be accessed at <http://www.ippc.int>

Mixed Purchase Orders in the same box are not allowed.

Closures on units shall not be made with staples, glue or in a way that the container cannot be opened for inspection, material handling and storage purposes.

24. Shipping Labels/Packing Slips

Master box labels/ packing slips/ commercial invoices must have the following information:

- Vendor Name
- Telect Purchase Order number
- Telect part number
- Revision Level
- Part Description
- Lot/ Date Manufactured
- Unit of measure
- Quantity
- Country of Origin
- Number of cartons
- Freight Payment Terms (where applicable)

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25. Individual Packaging Label

Non-Telect Branded Boxes

All individual packaging requires the information below unless otherwise specified on Telect drawings or Engineering documentation.

Telect Purchase Order Number with release number, line number, and shipment number. Example: 163593-0-1-2

Telect Part Number

Telect Part Description

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Unit of Measure (UOM)

Quantity

Lot ID Number/ Manufactured Date

Country of Origin

Below is an example of an acceptable label. The information is bar-coded and clearly printed for easy reading and processing. Affix labels at the end of each container.

Bar Code Symbology Code 39 – The Code Symbology 39 shall be in accordance with (AN)USS-39 Symbol Specification.

Sample of Telect Barcode requirements:

Telect PO: 153539-0-1-1	Date: 03/26/2007
	UOM: EA
Telect PN: 108954-1	REV: 3
	QTY: 1
DES STRIP:FO,6PACK,B/W,ADH,ROHS	
Manufactured Date: 01/30/2007	
Made in Poland	

Telect Branded Boxes

Parts ordered that require the use of specific Telect branded boxes per the bill of materials, BOM, are required to label the box with a Telect product label. The Specification for this label, is part # 146438. This document would be the controlling document unless otherwise specified on product drawings or BOM. Telect's Suppliers are responsible for ensuring any copies or translations of the Product Box Label Specification are updated reflecting the revision on the product documentation package (BOM or drawing).

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Supplier's personnel responsible for contract review, planning, manufacturing, quality, inspection and test, inventory, or logistics, should have access to those documents necessary to meet Telect specifications and requirements.

Affix labels at the end of each container.

26. Shipping

All shipments should be shipped per Telect's Routing Guide and/or per instructions provided on Telect's Purchase Order. Questions regarding shipping terms should be directed to the appropriate Telect Buyer.

27. CTPAT Requirements

As a Telect business partner we require that Suppliers mirror the security criteria of the U.S. "Customs Trade Partnership Against Terror (C-TPAT)" program. The three main security criteria are: (1) Facility Security; (2) Personnel Security; and (3) Conveyance Security. Information about the criteria can be found at U.S. Customs Border and Protection website:

<http://www.cbp.gov/border-security/ports-entry/cargo-security/c-tpat-customs-trade-partnership-against-terrorism>

Suppliers must complete and return the SUPPLIER C-TPAT SECURITY QUESTIONNAIRE as provided in the Telect Supplier Qualification Documents packet.

REVISION HISTORY			
Revision	Description	Approval	Date
01	Document Released	Kelly Jones Charlie Bingham	May 2007
02	Added CTPAT requirements	Kelly Jones Charlie Bingham	July 2007
03	Changed name of document, added Country of Origin requirements, updated Telect Supplier and Delivery Performance Report to reflect switch to https://www.telect.com/simplify/Home2.aspx , Added End of Life alert requirement, added packaging and labeling requirements Added Revision History Block.	Kelly Jones Charlie Bingham	Oct. 2007
04	Update links and review changes to reflect current process.	Mark Courtney	Jan 2013
A5	Updated format, links, & product Id label /box requirements	John Olsufka	Jun 2014
A6	Updated header/footer format	Patricia Lee	10/7/2014
A7	Updated format & punctuation	Gary Kougl	10/15/2015

The controlling document is located in PDM. Telect's Supplier Qualification Documents ("SQD") Packet must be updated with all revisions to this document.