



## Q-CODE Q45K QUALITY REQUIREMENTS

### ACCEPTANCE OF SUBCONTRACTED GOLD REMOVAL/TINNED PARTS PER J-STD-001 AND GEIA-STD-0006 FOR NORTHROP GRUMMAN DEFENSE SYSTEMS PROGRAM

The following are the quality requirements for product purchased under Q-code Q45K. Please reference the Plexus Supplier Quality Manual [DCS 10503](#) for additional details and purchasing requirements. These requirements are specific to our customer Northrop Grumman Defense Systems. Unless a written waiver is received from Plexus, the supplier agrees to abide by the quality requirements listed below. This includes but is not limited to:

- Granting the right of access to the supplier's facilities and all applicable records to Plexus, their customer and regulatory authorities
- The retention of all records that support the manufacturing or materials used for 10 years unless otherwise specified in the purchasing specifications
- The flow down all applicable requirements to sub-tier suppliers including key characteristics and retention of all records that support the manufacturing or material used per the requirements of AS9100.

### SHIPMENTS AND HANDLING OF EXPORT CONTROLLED ITEMS, DATA, OR SERVICES

The Supplier agrees to comply with The Arms Export Control Act, 22 U.S.C 2751-2794, the International Traffic in Arms Regulation (ITAR), 22 C. F. R. 120 - 130, the Export Administration Act, 50 U.S.C. app 2401-2420, and the Export Administration Regulations, 15 C.F.R. 730-774 for this product, all specifications, and associated documentation. This includes, but is not limited to:

- Export controlled items, data, services, or any element thereof, shall not be exported from the United States without U.S. Government authority and the express written authorization of a Plexus ITAR Empowered Official.
- Export controlled items, data, or any element thereof, shall not be transferred or disclosed to foreign persons including transfer to foreign persons employed by or associated with, under contract to Sub- tier suppliers including transportation carriers.
- Import licenses will be provided with all shipments where applicable.

### ALL SHIPMENTS

The below listed required documentation must be submitted with each shipment. Shipments received without the proper execution and completion of these Quality Requirements is considered non-conforming and Plexus reserves the right to return to the supplier at the supplier's expense.

- A. Parts to be processed per GEIA-STD-0006 section 4.2 subsection 1B "Robotic Dip without Qualification or Production Testing" per Northrop Grumman Defense Systems document 7554036 for Tin Whisker Mitigation in Electronic Components and Material Finishes. **In addition, OR fluxes are approved for use until such time as the customer updates the 7554036 document.**



- B. Certificate of Compliance - the Certificate of Compliance (COC) must be titled as such and shall include a statement declaring that the manufactured/materials item has been made to the appropriate customer specification requirements. The COC shall contain the following minimum information:
- Plexus Part Number
  - Plexus PO Number and Quantity
  - Original Component Manufacturer Name, Part Number, and Date Code(s)
  - Certification to the requirements of this Quality Code and revision level
  - Certification to the requirements of either “J-STD-001” or “GEIA-STD-0006 Qualification Category 1B.”
- C. Certificate of Analysis - or Equivalent which shall include a statement declaring that the manufactured/materials item has been tested to the appropriate specification requirements and the following minimum information:
- Name of Manufacturer
  - Manufacturer’s Item Number
  - Batch or Lot Number
  - Manufacture Date
  - Expiration Date\*
  - Product Properties and Analysis Results
- \*The remaining shelf life of the material must be greater than 50% of the stated shelf life.*
- D. The following requirements shall be followed if applicable to the order and certified on the COC:
- All parts must be baked 48 hours at 125° C regardless of component manufacturer’s MSD level unless the datasheet has specific requirements for baking on certain components (e.g. only one bake on component or temperature sensitive components).
  - Solder tinning material is defined by PO Item Number prefix: ‘T1’ for Sn63/Pb37 (eutectic), ‘T2’ for Sn96.5/Ag3.5 (Pb-free), ‘T3’ for Sn5.0/Pb93.5/Ag1.5 (high-melting point) and ‘T4’ for Sn96.5Ag3Cu0.5.
  - Manufacturer part numbers shall not be mixed in final component packaging.
  - Manufacturer date codes / lot codes cannot be mixed in final component packaging.
  - Original component manufacturer labels shall be returned with the completed parts affixed to the moisture-barrier bag.
  - All MSD level 1, 2, and 3 parts shall be processed and marked as MSD level 3 per J-STD-033. Parts with MSD levels greater than 3 shall be processed and marked per their specified level.
  - Pin 1 orientation in carrier tape per component manufacturer tape-and-reel specification. Packaging medium specified by last character of PO Item Description: ‘R’ for T&R, and ‘W’ for tray. Absence of either of these codes implies that parts be returned in their original packaging.

## PRODUCT CHANGE NOTIFICATION

Product or Process Change Notification requests (PCNs) shall be submitted to [pcns@plexus.com](mailto:pcns@plexus.com), please reference the details of our PCN policy and requirements in the Plexus Supplier Quality Manual [DCS 10503](#).



REVISION HISTORY

REV	RELEASE DATE	ORIGINATOR	DESCRIPTION OF CHANGE(S)	REASON FOR CHANGE(S)
A	24-Sep-24	Elise Tilton	New - Initial Release	Specific requirements for 16N Northrop Grumman Defense Systems materials processed under the Tin Whisker Mitigation document 7554036.