

SUPPLIER QUALITY CLAUSES

Feb 7, 2024 Release

Supplier Quality Clauses apply to all divisions of OTTO

Suppliers are required to comply with and flow-down to their subcontractors, all applicable Quality Clauses listed or referenced on the OTTO Purchase Order/order line. Questions regarding the applicability and/or how to comply with a Quality Clause should be directed to SupplierQuality@OTTOExcellence.com

In accordance with OTTO's Document Control requirements, changes from the previous edition of this document will be typed in italics and identified with a vertical bar in the right-hand margin. This will be a continuing process.

All certificates issued by OTTO's Tier 1 suppliers (holder of the OTTO Purchase Order) shall include the following:

A100	IS/ATEX Data
Deliverable	Supplier shall provide with each shipment, IS/ATEX data in support of OTTO drawing requirements.
Application	Each shipment of parts/product where the OTTO drawing indicates IS/ATEX.
A101	ROHS/REACH
Deliverable	Supplier shall provide the complete breakdown of the homogenous material to an elemental level. Data to be provided using OTTO Supplier Material Disclosure form # 4MA000009.
Application	1. Initial production shipment
	2. Initial shipment that includes a material change
	NOTE: material changes MUST be approved by OTTO in advance of implementation
C100	Certificate of Conformance
Deliverable	Supplier shall provide with each shipment, a Certificate of Conformance (CoC) that clearly indicates the material, parts, product and/or work performed in connection with the applicable OTTO drawing and Purchase Order were verified and found to meet all stated and/or referenced requirements. The CoC must include: 1. Amount of material or quantity of items covered by the CoC 2. Applicable lot, batch, job, heat number for the items covered by the CoC
Application	Each shipment of parts/product for which the supplier is responsible to provide. This code does not apply to raw material and special process suppliers.

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C101	Raw Material Cert: BULK METAL
Deliverable	Supplier shall provide with each shipment, the raw material test data (chemical, physical, heat treatment, etc.) issued by the mill
	that demonstrates conformance to applicable specification and/or the OTTO drawing.
	The raw material test report/cert packet shall clearly indicate
	1. The applicable material specification and revision level to which the material conforms
	2. Material heat, lot or batch number
	3. Name of mill that produced the material and issued the material test report/cert
	4. Other applicable technical data
	5. Complete material traceability (from the mill to OTTO)
	For material procured by OTTO's tier 1 supplier (holder of the OTTO Purchase Order), the cert packet submitted to OTTO shall be
	validated by the supplier's authorized representative.
Application	Each shipment of bulk raw metal, or where the supplier has procured raw material for use in producing parts/product furnished to OTTO.
	Does not apply to COTS, make from COTS or catalogue items
C102	Raw Material Cert: BULK NON-METAL (e.g., plastic, silicon)
Deliverable	Supplier shall provide with each shipment, the raw material test report issued by the manufacturer of the raw material that
	demonstrates conformance to applicable specification and/or the OTTO drawing
	The raw material test report/cert packet shall include
	1. The applicable specification and revision level to which the material conforms
	2. Material lot or batch number
	3. Name of company that produced the raw material
	4. Other applicable technical data
	5. Complete material traceability (from the raw material producer to OTTO)
	6. Manufacture date and shelf life/expiration date - if applicable
	For material procured by OTTO's tier 1 supplier (holder of the OTTO Purchase Order), the cert packet submitted to OTTO shall be
	validated by the supplier's authorized representative
Application	Each shipment of bulk raw plastic, silicon, rubber, etc. material, or where the supplier has procured raw material for use in
	producing parts/product furnished to OTTO.
	Does not apply to COTS, make from COTS or catalogue items
C102.1	Raw Material Cert: Colorant NON-METAL
Deliverable	Supplier shall provide with each shipment, a Certificate of Conformance (CoC) that clearly indicates the colorant provided or
	used conforms to applicable specifications per the OTTO drawing.
	The CoC shall include:
	1. Colorant name, number or description
	2. Lot or Batch number
Application	Each shipment of colorant or where the supplier is responsible for adding colorant to raw material provided by OTTO.
Application	This code does not require the supplier to furnish a raw material certificate
C102	Saldaving Cartificate
C103 Deliverable	Soldering Certificate Supplier shall provide with each shipment, a certificate that clearly indicates coldering was performed in accordance with all
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates soldering was performed in accordance with all
	stated and applicable specifications and standards per the OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for soldering per the OTTO drawing
C104	Anodizing Certificate
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates
Deliverable	1. Parts were anodized per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were anodized
	3. The anodize color has been verified and found to meet color requirements/standard per the OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for anodizing per the OTTO drawing
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C104.1	Anodizing Certificate - NADCAP
Deliverable	NADCAP certified supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were anodized per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were anodized
	3. The anodize color has been verified and found to meet color requirements/standard per the OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for anodizing per the OTTO drawing
C105	Plating Certificate
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were plated per requirements noted on the OTTO drawing
	2. The actual specification (including, as applicable, type, class, etc.) and revision level to which parts were plated per the OTTO
	drawing
	3. Actual plating thickness readings
Application	Each shipment of parts/product where the supplier is responsible for plating per the OTTO drawing
C105.1	Plating Certificate - NADCAP
Deliverable	NADCAP certified supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were plated per requirements noted on the OTTO drawing
	2. The actual specification (including, as applicable, type, class, etc.) and revision level to which parts were plated per the OTTO
	drawing 3. Actual plating thickness readings
Application	Each shipment of parts/product where the supplier is responsible for plating per the OTTO drawing
C106 Deliverable	Heat Treat Certificate Supplier shall provide with each shipment, a certificate that clearly indicates
Deliverable	1. Parts were heat treated per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were heat treated
	3. Actual hardness readings
	3. Actual fial uness readings
Application	Each shipment of parts/product where the supplier is responsible for heat treatment per the OTTO drawing
C106.1	Heat Treat Certificate - NADCAP
Deliverable	NADCAP certified supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were heat treated per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were heat treated
	3. Actual hardness readings
Application	Each shipment of parts/product where the supplier is responsible for heat treatment per the OTTO drawing
C107	Passivation Certificate
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were passivated per requirements noted on the OTTO drawing
	2. The actual specification, class, type, etc., and revision level to which parts were passivated per the OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for passivation per the OTTO drawing
C107.1	Passivation Certificate - NADCAP
Deliverable	NADCAP certified supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were passivated per requirements noted on the OTTO drawing
	2. The actual specification, class, type, etc., and revision level to which parts were passivated per the OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for passivation per the OTTO drawing
C108	Painting Certificate
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates
20	Parts were painted per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were painted (as applicable)
	3. The actual paint batch/lot number used
	4. Parts meet OTTO abrasion and/or adhesion specification 3TL000176 (formerly 3QA000176) as applicable
	5. Parts meet OTTO paint finish requirements per OTTO drawing and/or SQM appendix D as applicable
	6. Actual paint thickness readings per OTTO drawing
	7. Actual paint gloss readings per OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for painting per the OTTO drawing
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C108.1	Painting Certificate - NADCAP
Deliverable	NADCAP certified supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were painted per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were painted (as applicable)
	3. The actual paint batch/lot number used
	4. Parts meet OTTO abrasion and/or adhesion specification 3TL000176 (formerly 3QA000176) as applicable
	5. Parts meet OTTO paint finish requirements per OTTO drawing and/or SQM appendix D as applicable
	6. Actual paint thickness readings per OTTO drawing
	7. Actual paint gloss readings per OTTO drawing
Application	Each shipment of parts/product where the supplier is responsible for painting per the OTTO drawing
C109	Pad Printing Certificate
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were pad printed per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were pad printed (as applicable)
	3. Actual ink batch/lot number used
	4. Parts meet OTTO abrasion and/or adhesion specification 3TL000176 (formerly 3QA000176) as applicable
Application	Each shipment of parts/product where the supplier is responsible for pad printing per the OTTO drawing
C110	Welding Certificate
Deliverable	Supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were welded per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were welded (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for welding per the OTTO drawing
C110.1	Welding Certificate - NADCAP
Deliverable	NADCAP certified supplier shall provide with each shipment, a certificate that clearly indicates
	1. Parts were welded per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were welded (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for welding per the OTTO drawing
C111	Solderability Certificate
Deliverable	Supplier shall include with each shipment, a certificate that clearly indicates, external leads, pins, terminals, etc. of parts
	provided are capable of passing the solderability tests specified in MIL-STD-202 (Method 208).
Application	Each shipment of parts/product where the supplier is responsible for Iridite/Alodine (chem conversion coating) per the OTTO
C112	drawing. Iridite/Alodine (Chem Conversion Coating) Cert
Deliverable	Supplier shall include with each shipment, a certificate that clearly indicates
Deliverable	1. Iridite/Alodine was applied per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were iridited/alodined (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for Iridite/Alodine (chem conversion coating) per the OTTO
	drawing
C112.1	Iridite/Alodine (Chem Conversion Coating) Cert - NADCAP
Deliverable	NADCAP certified supplier shall include with each shipment, a certificate that clearly indicates
	1. Iridite/Alodine was applied per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were iridited/alodined (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for Iridite/Alodine (chem conversion coating) per the OTTO
	drawing
C113	Brite Passivate/Electropolish Certificate
Deliverable	Supplier shall include with each shipment, a certificate that clearly indicates
	1. Parts were brite passivated (Electropolished) per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were brite passivated (Electropolished) (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for brite passivated (Electropolished) per the OTTO drawing
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C113.1	Brite Passivate/Electropolish Certificate - NADCAP
Deliverable	NADCAP certified supplier shall include with each shipment, a certificate that clearly indicates
	1. Parts were brite passivated (Electropolished) per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were brite passivated (Electropolished) (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for brite passivated (Electropolished) per the OTTO drawing
C115	IPC-J-STD-001xS Certificate
Deliverable	Each shipment shall include a certificate that clearly indicates the product was produced in accordance with IPC-J-STD-001xS.
	NOTE: x indicates the revision level of the IPC-J-STD-001 standard to which the product conforms. Unless otherwise indicated or communicated by OTTO – conformance to current revision is expected/required.
	Per IPC-J-STD-001xS, 0.1.7.1.1 Shipping and Storage
	Wire and cable shall be shipped and stored in sealed water-vapor-proof packaging (i.e.: Moisture Barrier Bag, dry pack, etc.),
	with capped ends, activated desiccant, and humidity indicator card. Silver-coated copper wire and cable shall be segregated and
	dispositioned if the humidity indicator card registers 70% or more RH.
Application	Each shipment of wire/cable or product containing wire/cable where the OTTO drawing states IPC-J-STD-001xS applies
C116	Sandblast Certificate
Deliverable	Supplier shall include with each shipment, a certificate that clearly indicates
	1. Parts were sand/bead blasted or tumbled per requirements noted on the OTTO drawing
	2. The actual specification and revision level to which parts were blasted/tumbled (as applicable)
	3. The actual media type and size
	4. The actual blast pressure and time
	5. Part were verified/ inspected and found to meet requirements
Application	Each shipment of parts/product where the supplier is responsible for sandblast per the OTTO drawing
C117	Chromate Conversion
Deliverable	Supplier shall include with each shipment, a certificate that clearly indicates
	1. Chromate conversion was performed per the OTTO drawing
	2. The actual specification and revision level to which chromate conversion was applied (as applicable)
	3. Actual thickness readings (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for chromate conversion per the OTTO drawing
C117.1	Chromate Conversion - NADCAP
Deliverable	NADCAP certified supplier shall include with each shipment, a certificate that clearly indicates
	1. Chromate conversion was performed per the OTTO drawing
	2. The actual specification and revision level to which chromate conversion was applied (as applicable)
	3. Actual thickness readings (as applicable)
Application	Each shipment of parts/product where the supplier is responsible for chromate conversion per the OTTO drawing
C118	Wire/Cable/Insulation Certification
Deliverable	Supplier shall include with each shipment, a certificate that clearly indicates - as applicable per the OTTO drawing
	Wire Size
	Conductor Material
	Insulation Material
	• Filler Material
	• Shielding
	Wrap Material
	Jacket Material
	 Agency/industry approvals and/or standards and revision level
Application	Each shipment of wire/cable or product containing wire/cable where the OTTO drawing specifies wire/cable construction and
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a certificate that clearly indicates the wire/cable provided meets the referenced
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ntaining wire/cable where the OTTO drawing specifies wire/cable
drawing and the supplier is responsible for the manufacture or procurement of the
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supplier is responsible for black oxide per the OTTO drawing
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el to which black oxide was applied (as applicable)
supplier is responsible for black oxide per the OTTO drawing
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a certificate that clearly indicates
rce of Supply or Manufacturer per the OTTO drawing
or Manufacturer's part number as noted on the OTTO drawing
OTTO drawing indicates the items is a commercial off the shelf item, or the lists the
a certificate that clearly indicates
vel (as applicable)
ision level (as applicable) per the OTTO drawing
a Military part number per the OTTO drawing
/product Life cycle test data indicating conformance to OTTO drawing requirements
Quality department and/or noted on the OTTO purchase order
documentation that clearly indicates
the OTTO drawing
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supplier is responsible for meeting pull test requirements as noted on the OTTO

CEO2	Flow Took Date Required
C502	Flex Test Data Required Supplier shall include with each chipment, decumentation that clearly indicates
Deliverable	Supplier shall include with each shipment, documentation that clearly indicates
	 Flex test requirements/specification per the OTTO drawing Quantity of parts/product tested
	3. Actual flex test results per sample tested
	3. Actual nex test results per sample tested
Application	Each shipment of parts/product where the supplier is responsible for meeting flex test requirements as noted on the OTTO drawing
C800	NIST Traceable Calibration Certificate Required
Deliverable	Calibration supplier shall provide a NIST Traceable calibration certificate
Application	New, repaired and periodically calibrated measuring equipment
C801	ISO 17025 Calibration Certificate
Deliverable	Calibration supplier shall provide, for the indicated gage, an ISO 17025 calibration certificate
Application	New, repaired and periodically calibrated measuring equipment that requires calibration in compliance with ISO 17025
C850	OTTO Provided Material NO Certification Required
Deliverable	Notification only informing supplier that OTTO has provided material for use in the parts or products listed on the OTTO PO -
	therefore are not required to provide material certification
Application	Each shipment of parts/product where OTTO has provided some or all raw material and/or components
C900	Customer Supplied Product-NO Certification Required
Deliverable	Notification only indicating provided material is supplied by OTTO's customer - therefore no certification is require
Application	Each shipment of customer provided material
P100	Special Packaging Required
Deliverable	Notification only informing supplier the part/product listed on the OTTO PO requires special packing as noted on the OTTO drawing
Application	Each shipment of parts/product where the OTTO drawing indicates special packing is required.
P110	Parts shall be packaged in static shielding packaging materials per IPC-A-610
Deliverable	Notification only informing supplier the part/product listed on the OTTO PO requires special packing
Application	Each shipment of PCBAs that contain active components
P120	Parts shall be packaged in antistatic (low charging) packaging materials per IPC-A-610
Deliverable	Notification only informing supplier the part/product listed on the OTTO PO requires special packing
Application	Each shipment of PCBAs that contain passive components
Q100	First Article Inspection report per AS9102
Deliverable	The supplier shall provide a First Article Inspection report in accordance with the current revision of AS9102 requirements. Required documentation includes, but is not limited to: •AS9102 forms 1, 2 and 3. •Ballooned OTTO Drawing, including notes, materials, processes as applicable per full or delta AS9102. •Applicable supporting documentation such as material & process certs and when an assembly is being provided component FAIs.
Application	 The initial shipment of production parts/product for aerospace applications. The initial shipment following changes that invalidate the original results (e.g., engineering changes, manufacturing process changes, tooling changes). Lapse in production for 2 or more years. Per OTTO request. Actual first production without OTTO's first-piece inspection approval is solely at the supplier's risk.

Q101	First Article Inspection report
Deliverable	The supplier shall provide a First Article Inspection report in accordance with OTTO requirements. Required documentation
	includes, but is not limited to:
	•Dimensional layout that includes notes, materials, processes as applicable per full or delta FAI.
	•Ballooned OTTO Drawing, including notes, materials, processes as applicable per full or delta FAI.
	•Applicable supporting documentation such as material & process certs and when an assembly is being provided component
	FAIs.
Application	1. The initial shipment of production parts/product.
	2. The initial shipment following changes that invalidate the original results (e.g., engineering changes, manufacturing process
	changes, tooling changes).
	3. Lapse in production for 2 or more years.
	4. Per OTTO request.
	Actual first production without OTTO's first-piece inspection approval is solely at the supplier's risk.
Q102	PPAP Required
Deliverable	The supplier shall provide a Level 3 PPAP in accordance with AIAG Production Part Approval Process manual.
Deliverable	The supplier shall provide a Level 3 FFAF in accordance with AlAG FFOULCEION Fait Approval FFOCESS manual.
Application	1. The initial shipment of production parts/product
пррпсатіон	2. The initial shipment following changes that invalidate the original results (e.g., engineering changes, manufacturing process
	changes, tooling changes)
	3. Per OTTO request
	Actual first production without OTTO's first-piece inspection approval is solely at the supplier's risk
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Q103	Inspection Data Required- Key Characteristics
Deliverable	Supplier shall include with each shipment, actual inspection results and the method of inspection for key characteristics noted
	on the OTTO drawing
Application	Each shipment of parts/product where the OTTO drawing identifies features/characteristics as key or special, and the supplier is
Application	
0104	directly or indirectly responsible for producing those features/characteristics
Q104 Deliverable	Source Inspection Required Supplier to contact OTTO (SupplierQuality @OTTOexcellence.com) to schedule source inspection prior to shipping parts/product
Deliverable	
	to OTTO
Application	As directed by OTTO's Quality, Engineering or Purchasing department and noted on the OTTO purchase order
Q500	PCB must be fabricated IAW and meet IPC-A-600 class 2 Regmts. Ref SQM Appx C
Deliverable	Notification only informing supplier the PCB must be fabricated in accordance with IPC-A-600 class 2
Deliverable	Notification only informing supplier the FCB must be fabricated in accordance with FC-A-000 class 2
Application	Each shipment of PCBs where the OTTO drawing requires fabrication in accordance with IPC-A-600 class 2
Q500.1	PCB must be fabricated IAW and meet IPC-A-600 class 3 Regmts. Ref SQM Appx C
Deliverable	Notification only informing supplier the PCB must be fabricated in accordance with IPC-A-600 class 3
Deliverable	Notification only informing supplier the Feb mast be fasheated in accordance with he in ood class s
Application	Each shipment of PCBs where the OTTO drawing requires fabrication in accordance with IPC-A-600 class 3
Q501	PCBA must be fabricated IAW IPC-J-STD-001 meet IPC-A-610 class 2 Reqmts. Ref SQM Appx C
Deliverable	Notification only informing supplier the PCBA to be fabricated in accordance with IPC-J-STD-001 and must meet IPC-A-610 class
Deliverable	2 Regmts
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Application	Each shipment of PCBAs where the OTTO drawing requires fabrication in accordance with IPC-A-610 class 2
Q501.1	PCBA must be fabricated IAW in accordance with IPC-J-STD-001 and meet IPC-A-610 class 3 Reqmts. Ref SQM Appx C
Deliverable	Notification only informing supplier the PCBA to be fabricated in accordance with IPC-J-STD-001 and must meet IPC-A-610 class
	3 Regmts
Application	Each shipment of PCBAs where the OTTO drawing requires fabrication in accordance with IPC-A-610 class 3
Q502	Cable or Wire Harness must be fabricated in accordance with IPC/WHMA-A-620
Deliverable	Notification only informing supplier the cable or wire harness is to be fabricated in accordance with IPC/WHMA-A-620
Application	
Application	Each shipment of the cable or wire harness where the OTTO drawing requires fabrication in accordance with IPC/WHMA-A-620
	Each shipment of the cable of whe harness where the OTTO drawing requires labilitation in accordance with IFC/WINIA-A-020

Q510	ESD Sensitive Item, Handle per ANSI/ESD S20.20
Deliverable	Notification only informing supplier the part/product listed on the OTTO PO is an ESD Sensitive Item and requires handling per
	ANSI/ESD S20.20 or equivalent
Application	Each shipment where the OTTO drawing indicates the part/product is an ESD sensitive item.
S100	ISO9001 System Certification
Deliverable	Notification only informing supplier they must hold a valid ISO 9001 certificate in order to accept the applicable OTTO PO
Application	As required by OTTO's Engineering and/or Quality department and noted on the OTTO purchase order
S200	AS9100 System Certification
Deliverable	Notification only informing supplier they must hold a valid AS9100 certificate in order to accept the applicable OTTO PO
Application	As required by OTTO's Engineering and/or Quality department and noted on the OTTO purchase order
S300	NADCAP Certification Required
Deliverable	Notification only informing supplier they must hold NADCAP accreditation for the special process(es) noted or referenced on the
	OTTO drawing and/or PO in order to accept the applicable OTTO PO
Application	As required by OTTO's Engineering and/or Quality department and noted on the OTTO purchase order