

BDS Terms and Conditions

Clause Number: Q017

Effective: 05/13/2022

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ADVANCED PRODUCT QUALITY PLANNING (APQP) AND PRODUCTION PART APPROVAL PROCESS (PPAP)

Applicability

Compliance with Aerospace Standard AS9145 (*Aerospace Series – Requirements for Advanced Product Quality Planning and Production Part Approval Process*), is required for all indicated line items in this Contract. AS9145 APQP compliance is required as the realization of AS9100 Rev D, Operational Risk Management, which is required to do business with Buyer. This is not an expansion or increase in requirements or work scope.

Artifacts

Production Part Approval Process (PPAP) referenced in Table 2 of AS9145 is the output of the APQP process. The following elements from AS9145 Table 2 are required artifacts under this Contract:

Production Part Approval Process (PPAP) Element		APQP Phase	Section References
1	Design Records	2	3.9
2	Design Risk Analysis* (e.g., DFMEA)	2	3.10; 4.4.2; 4.4.4
3	Process Flow Diagram	3	4.5.2; 4.5.3
4	Process Failure Mode and Effects Analysis (PFMEA)	3	3.11; 4.5.2; 4.5.4
5	Control Plan	3/4	3.3; 4.5.2; 4.5.6; 4.5.7; 4.6.2; Appendix C
6	Measurement Systems Analysis (MSA)**	4	3.14; 4.6.2; 4.6.3
7	Initial Process Capability Studies	4	3.20; 4.6.2; 4.6.5
8	Packaging, Preservation, and Labelling Approvals	3	4.5.2; 4.5.8
9	First Article Inspection Report (FAIR)	4	4.6.3; 4.6.4
10	Customer PPAP Requirements	4	4.6.7
11	PPAP Approval Form (or equivalent)	4	5.3.2; Appendix D

* Design Risk Analysis is not a required Element for “build to print” product. If the product is “build to specification”, Seller is responsible to provide a DFMEA per Element 2.

** MSA to be performed for all Key Characteristics (KCs) identified in the Control Plan

Seller is encouraged to use the templates in the International Aerospace Quality Group (IAQG) - Supply Chain Management Handbook (SCMH).

Any changes that affect form, fit, function, safety, and/or reliability of the items to be delivered as per AS9102B section 4.6.f shall require an update to the affected PPAP documents.

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Approval

Seller shall make all required PPAP artifacts available to Buyer's Authorized Procurement Representative upon request.

Buyer reserves the right to make final determination of Seller's compliance to AS9145 aerospace standard including PPAP artifacts.

Buyer reserves the right to conduct surveillance on Seller's AS9145 compliance and PPAP artifacts. Buyer also reserves the right to require PPAP artifact submittal and approval. When Buyer engagement is required, Seller will be notified in writing by Buyer's Authorized Procurement Representative. Seller shall coordinate and schedule APQP activity with the Buyer's Supplier Quality Representative (SQR) prior to the start of related procurement, manufacturing and/or processing. In these instances, Seller shall have written approval of PPAP artifacts from Buyer's Authorized Procurement Representative for all required contract line items prior to first part shipment, unless otherwise directed by Buyer's Authorized Procurement Representative.

Seller can obtain a copy of AS9145 Aerospace Standard for APQP/PPAP from the following source:

SAE International (formally known as Society of Automotive Engineers), *AS9145 Aerospace Series – Requirements for Advanced Product Quality Planning and Production Part Approval Process*.

Seller can obtain a copy of APQP/PPAP Checklists and Templates from the following source:

International Aerospace Quality Group (IAQG), Supply Chain Management Handbook (SCMH)