

# AS9145 APQP Phases and Deliverables

Phase 1 Planning	Phase 2 Product Design and Development	Phase 3 Process Design and Development	Phase 4 Product and Process Validation	Phase 5 On-Going Production, Use, and Post-Delivery Service
Product Design Requirements	<b>Design Risk Analysis</b>	<b>Process Flow Diagram</b>	Product from Production Process Runs(s)	Quality Indices (e.g. Cpk, Parts per Million (PPM), rejection rates)
Project Targets – Safety, Quality, Manufacturability, Service Life, Reliability, Durability, Maintainability, Schedule, and Cost	<b>Design Records and BOM</b> addressing the Findings of the Design Risk Analysis	Floor Plan Layout	<b>MSA</b>	Key Performance Indicators (KPIs) Reflecting Product Quality and Reliability
Preliminary Listing of Critical Items (CIs) and Key Characteristics (KCs)	DFM/DFA, tolerance, stack- up analysis, etc.	Production Preparation Plan	<b>Initial Process Capability Studies</b>	Evidence that Project Targets Have Been Met
Preliminary Bill of Materials (BOM)	Special Requirements including Product KCs and CIs Listings	Operator Staffing and Training Plan	<b>Control Plan</b>	On-Time Delivery (OTD) and Capacity KPIs
Preliminary Process Flow Diagram	Preliminary Risk Analysis of Sourcing Plan	<b>Process Failure Mode and Effects Analysis (PFMEA)</b>	Capacity Verification	OTD and Capacity Improvement Plan
Statement of Work (SOW) Review	Packaging Specification	Process KCs	Product Validation Results	MRO KPIs and Plans to Reach the Established Targets
Preliminary Sourcing Plan	Design Review Report	<b>Control Plan</b>	<b>First Article Inspection Report (FAIR)</b>	Project Closure Recommendations
Project Plan	Development Product Build Plan	Preliminary Capacity Assessment	<b>PPAP File and Approval Form</b>	Continuous Improvement Actions
	Design Verification and Validation Plans and Associated Results	Work Station Documentation	<b>Customer Specific Requirements</b>	Lessons Learned
	Feasibility Assessment	Measurement System Analysis (MSA) Plan		Updated Design Risk Analysis, PFMEA, and Control Plans
		Supply Chain risk Management Plan		
		<b>Material Handling, Packaging, Labeling, and Part Marking Approvals</b>		
		Production Readiness Review (PRR) Results		

NOTE: Deliverables in **bold** are elements of the PPAP file and may be required for the PPAP submission.