



Supplier APQP Requirements Matrix

Latest Revision Date:

MY/Program:
 Supplier Name:
 Part Number(s)
 Part Name:
 Risk Assessment:
 Supplier Champion:
 phone/e-mail

| | | |
|------------------------|------------|--|
| "Actual" status symbol | G | item meets target (Shift + letter "o" key) |
| key: | Y | item does not meet target; plans exist; low risk (Shift + "d" key) |
| | R | item does not meet target with high risk (Shift + "c" key) |
| | N/A | not applicable |
| | Y R | note: these items to be included on gap analysis sheet with actions |

| Stackpole International Program Development Process (PDP) Stage | | | | | | | | | | |
|---|--|-----|---|-----|--|-----|---|-----|--|-----|
| APQP Elements | PROGRAM KICKOFF <small>date dd/mm/yy</small> | | PHASE D (Hard Tooling Samples) <small>date dd/mm/yy</small> | | PHASE E (Production Tooling Samples) <small>date dd/mm/yy</small> | | PHASE F (PPAP) <small>date dd/mm/yy</small> | | PHASE G (Volume Production) <small>date dd/mm/yy</small> | |
| | Material Required Date | Qty | Material Required Date | Qty | Material Required Date | Qty | Material Required Date | Qty | Material Required Date | Qty |
| | Target | | Actual | | Target | | Actual | | Per Releases | |
| 1. Design FMEA | Preliminary DFMEA created for supplier responsible components or supplier has reviewed Stackpole Int'l (SI) DFMEA. High RPN's have action plans with timing. | | DFMEA reviewed and signed for supplier responsible components or supplier has reviewed SI DFMEA. High RPNs have action plans with timing that meets tool kick-off date. | | DFMEA updated to current design level. | | DFMEA updated to current design level. | | | |
| 2. Design Review | Initial design review complete with supplier and SI per AIAG A-2 or equivalent. | | 100% design concerns addressed. AIAG A-2 checklist or equivalent complete and open issues resolved. | | Design changes reviewed and 100% acceptable. | | Design changes reviewed and 100% acceptable. | | Design changes reviewed and 100% acceptable. | |
| 3. Design Verification Plan | Agreement with SI on performance and functional validation plan; Identify key dimensional characteristics for layout on prototypes. | | Prototype testing and measurement is 100% complete. | | All DV testing to specifications is initiated per plan. | | All DV testing complete. Test results confirm product meets all requirements. | | | |
| 4. Master Timing Plan | Major program elements are documented to meet the program deliverables. | | Major program elements are documented to meet the program deliverables. | | Major program elements are documented to meet the program deliverables. | | Major program elements are documented to meet the program deliverables. | | | |
| 5. Facilities, Tool and Gauges | Tool lead time/maker concept gauge and fixture design concepts. Capacity study complete. Supplier manufacturing facility identified. | | Tool maker and lead time fixed w/ schedule. Gauge plan complete and approved by SI. Machine/fixture plan complete and approved by SI. Mold Flow Simulation completed for Die Cast tools. | | Tool tryout complete and problems identified. Gauges complete and verified. Machine/fixtures complete, problems identified w/countermeasures. AIAG checklist A-5 or equivalent initiated and open issues identified. Tooling Summary completed and submitted to SI, including pictures of tools with appropriate tool tooling tags/markings. | | Tool at current design release level. Tooling issues 100% resolved. Machine/fixture issues 100% resolved. Maintenance PM implemented. Set up instructions/process parameters 100% complete. Facility 100% ready per AIAG A-5. | | | |
| 6. Prototype Build Control Plan | Control plan contains DV test plan elements and prototype layout requirements. | | Prototype build issues fed back into pre-launch control plan. | | | | | | | |
| 7. Prototype Builds | Prototype build requirements are documented and agreed with SI (quantity, dates, lead time). | | Prototype parts delivered on time at quality level expected. Build issues have been addressed. | | | | | | | |
| 8. Design Verification Testing | Surrogate test data submitted to SI Engineering and QA if available. | | DV failures were addressed in the DFMEA and corrective actions incorporated into the design. DVP&R includes requirements from all pertinent specifications. All DV data is compiled into a test report and submitted to SI. | | | | | | | |
| 9. Prototype Part Layout and SSC/SCC Pp. | Preliminary list of critical characteristics identified and agreed with SI. Surrogate capability data reviewed with SI Engineering. | | Layout information complete, process capability known and can meet drawing tolerances or actions in place to resolve. | | | | | | | |

| Stackpole International Program Development Process (PDP) Stage | | | | | | | | | | |
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| | Material Required Date | Qty | Material Required Date | Qty | Material Required Date | Qty | Material Required Date | Qty | Material Required Date | Qty |
| | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Per Releases | Actual |
| 10. Drawings and Specifications | CAD data reviewed for feasibility issues and submitted to SI. | | Drawings and specifications released and verified against CAD data. Drawings contain appropriate material and performance requirements. Drawings contain critical and safety characteristics. | | 100% design change implemented. | | 100% design change implemented. | | 100% design change implemented. | |
| 11. Team Feasibility Commitment | Team Feasibility Commitment has been reviewed by team and signed off as approved. | | Signed off to current design level. | | Signed off to current design level. | | Signed off to current design level. | | Signed off to current design level. | |
| 12. Manufacturing Process Flow Chart | | | Initial process flow is complete; used to develop PFMEA and Control Plan. AIAG checklist A-6 or equivalent initiated and open issues identified with actions. | | Process Flow complete and AIAG A-6 checklist or equivalent complete with no open issues. Launch containment is addressed in flow. | | Process Flow complete and AIAG A-6 or equivalent checklist complete with no open issues. | | Process Flow complete and AIAG A-6 checklist or equivalent complete with no open issues. | |
| 13. Process FMEA | | | PFMEA reviewed with SI and signed. High RPNs have action plans with timing. AIAG checklist A-7 or equivalent has been initiated and open issues identified. | | PFMEA complete and approved by SI. AIAG checklist A-7 or equivalent complete with no open issues. Packaging, labeling and shipping are included in analysis. | | PFMEA complete and approved by SI. AIAG checklist A-7 or equivalent complete with no open issues. PFMEA updated based on PPAP and early production runs. High RPN and high severity failures have action plans completed. | | PFMEA complete and approved by SI. AIAG checklist A-7 complete with no open issues. PFMEA updated based on early production runs. High RPN and high severity failures have action plans completed. | |
| 14. Measurement Systems Evaluation | Plan for measurement of prototype parts exists and agreed with SI. Requirements for Gauge R&R agreed with SI. | | MSA complete for prototype as agreed in Program Kickoff Phase. Concerns with measurement system addressed in production gauge or fixture design. | | MSA complete with actual operators. MSA outside plan has action plans to address or SI approval. Gauge instructions exist. A plan exists for gauge correlation study with SI incoming inspection. | | Gauges and instructions updated to current design level. MSA complete with actual operators. MSA meets plan or SI approval. Gauge correlation study complete and acceptable. | | | |
| 15. Pre-launch Control Plan | | | | | Pre-launch control plan complete and approved by SI. Launch containment is documented in plan. AIAG checklist A-8 or equivalent is complete with no open issues. | | Controls listed in pre-launch control plan have been audited and open issues identified with actions and timing. | | | |
| 16. Production Ramp-up Schedule | Program production launch ramp released to supplier (annual volumes). Supplier to provide capital plan which supports this schedule. | | If applicable, ramp schedule updated. Supplier to provide updated capital plan as required. | | Production ramp-up plan defined to support SI's pre-production and production requirements. | | Production schedules fixed in MRP systems including raw material and component releases to support SI requirements. Requirements for SSC are agreed with SI. | | No delivery issues during SOP. | |
| 17. Packaging Specifications (PKG Declaration) | Prototype packaging concept approved with SI. | | Production packaging plan reviewed with SI. | | Packaging design complete and reviewed with SI. Testing plan established. | | Testing complete with no open issues. Packaging Declaration submitted and approved by SI. | | No labeling or packaging issues during SOP. | |
| 18. Production Control Plan | | | | | | | Production control plan complete and approved by SI. Launch containment is documented in plan. AIAG checklist A-8 or equivalent is complete with no open issues. | | Process audit complete to control plan to confirm effective implementation.. | |
| 19. Production Trial Run | | | | | Plans exist for production trial run with trained operators and production process. AIAG checklist A-4 or equivalent updated. Scrap rate and cycle time objectives vs. plan understood with action plans. | | Trial run complete with production process, tooling and equipment. Problems identified and corrective actions complete. Scrap rate and cycle time 100% to plan. | | | |
| 20. Production Part Layout | | | | | Part layout requirements agreed with SI - number of pieces, dimensions, etc. Plans exist to complete on-time. | | Part layout complete and parts match SI drawing. Dimensional results approved by SI. | | | |

| Stackpole International Program Development Process (PDP) Stage | | | | | | | | | | |
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| | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Per Releases | Actual |
| 21. Launch Readiness Review Meeting | A launch readiness review has been conducted with SI to review status of program and deliverables listed above. | | A launch readiness review has been conducted with SI to review status of program and deliverables listed above. AIAG checklist A-4 or equivalent initiated and open issues identified with actions and timing. | | A launch readiness review has been conducted with SI to review status of program and deliverables listed above. AIAG checklist A-4 or equivalent initiated and open issues identified with actions and timing. | | A Run-at-Rate has been completed and open issues affecting SOP have adequate plans to meet program timing. | | Open issues from the Run-at-Rate have been resolved. | |
| 22. Preliminary Process Capability Study | | | Prototype capability data collected and reviewed. Action plan generated for items which are not capable prior to Production tooling kickoff. | | A plan exists for completing PpK studies in support of PPAP. | | PpK studies complete and meet PPAP requirements. Containment plans are in place and documented on the control plan for PpK < 1.67 or unstable processes. | | | |
| 23. Production Validation Testing | | | A test plan exists for PV testing including specifications, tests, sample size, requirements, and test facility. | | Testing per plan. Plan updated to current design level. | | Testing to all material and performance specifications is complete and product meets requirements. | | | |
| 24. Boundary Samples | | | | | Boundary sample plan reviewed with SI Quality Department. | | Boundary samples agreed and signed off by SI. | | | |
| 25. Production Part Approval (PPAP) | | | | | Requirement for Appearance Approval (AAR) is agreed with SI. AAR is complete if applicable. | | PPAP status full approval. | | PPAP status full approval. | |
| 26. Production Part Delivery at MRD | | | | | | | Production shipping schedules established to support SI requirements. Delivery and frequency method agreed with SI. | | No critical delivery occurrences or paperwork errors. | |
| 27. IMDS Data Entered into System | | | Design has been reviewed for compliance to ELV requirements. Concerns have been reviewed with SI Engineering. | | IMDS complete. 'Received' number has been provided to SI | | IMDS complete to current design level. 'Received' number has been provided to SI. | | | |
| Supplier Management Approval | | | | | | | | | | |
| * Overall program rating - GREEN, YELLOW or RED | | | | | | | | | | |
| * Project Manager | | | | | | | | | | |
| * Top Management | | | | | | | | | | |

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GAP ANALYSIS

| Program Name: | | 0 | | | | | | | |
|---|-----------|--------------|--------|--------------------------|-----------------|-----------------|----------------|----------|----------------|
| Champion: | | 0 | | Worksheet Revision Date: | | | | | |
| Key to "Status" symbols: "O" = item meets target (Shift + letter o); "Δ" = item does not meet target; plans exist; low risk (Shift + d); "X" = item does not meet target with high risk (Shift + c) | | | | | | | | | |
| 1 | MSR Stage | APQP Element | Target | Actual | Gap Explanation | Counter Measure | Responsibility | Due Date | Current Status |
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