



Submission Requirements

Quick Reference
(For internal Cooper use Only!)

Note: This document is meant as a desk reference for Cooper Industries PPAP submissions. Complete guidelines and definition are provided in the Cooper Industries PPAP manual. Application and defined requirements are at the discretion of your Cooper Divisional Quality Representative. Contact them with any additional questions.

Element Order	PPAP Requirements AIAG PPAP Fourth Edition Important: Submit your documents in this order.	Level 1	Level 2	Level 3	Level 4	Level 5	Required Documents	Additional Comments and Clarity
1	Part Submission Warrant (PSW)				AR		Cooper PSW only	Cooper PSW is required for all submissions and required on all Cooper designed parts.
2	Design Records & Bubbled part print(s).				AR		Cooper Divisional Part Print	Include one clean copy of the current approved revision print with all dimensions, applicable specifications, and notes, bubbled (circle with corresponding number) on the print for reference to dimensional report.
3	Approved Engineering Change Documentation				AR	AR	Various engineering documentation	Any formal documentation that is not reflected in the current released print such as un-released marked up prints, formal engineering changes and any pertinent engineering correspondence.
4	Customer Engineering Approvals						<i>Not Required for Cooper Submissions</i>	<i>Not used with Cooper Industries submissions.</i>
5	Design FMEA,			AR	AR	AR	Can be Cooper FMEA Format or an AIAG compliant DFMEA.	Required only if supplier is responsible for part design.
6	Process Flow Diagrams				AR		Any standard flowchart format.	Identifies all process steps from receiving to shipping/warehouse operations. Must include all offline and in process inspections and testing including ongoing routine conformance checks such as annual dimensional layouts. Process steps must match PFMEA and Control Plan steps.
7	Process FMEA				AR		Can be Cooper PFMEA Format or an AIAG compliant PFMEA.	FMEA must be AIAG or comparable format that contains the same information as the AIAG form. Process steps must match Process Flow Chart, Control Plan and address all characteristics associated with each operation. RPN numbers must be in accordance with AIAG guidelines with critical processes and inspections identified. Recommended Actions for high RPN totals are required.
8	Control Plan				AR		Can be Cooper supplied format or AIAG compliant format.	Control Plan must be AIAG or comparable format that contains the same information. Must match the Flow Chart/FMEA process steps and describe the actions of each phase of the manufacturing process from receiving to shipping/warehouse. All CTQs and SPC items must be addressed within the corresponding process step. Any dedicated check/testing fixtures that are used will be identified along with the numbered characteristics it measures/verifies/tests on the print. All CTQ's must be identified in the control plan.
9	Measurement System Analysis Studies		AR		AR		Cooper GRR format or any statistical package format for gage R&R.	Require an analysis of the capability of all measuring tools identified in the Control Plan (in process or offline) used in the decision making process of normal production. As a minimum gauge R&Rs, using percent of total tolerance must be included for all process tools used in determining acceptability of equipment measurement capability.
10	Dimensional Results				AR		Must be on Cooper Dimensional report format	Cooper Dimensional Data Sheet is only acceptable format.
11	Material, Performance Test Results		AR		AR		Industry Standard reports or test result formats designated by Cooper Industries.	Certificates of Analysis for all primary raw materials such as chemicals, plastic resins and rubber. Chemical composition lab reports for all metals and controlled substances. Performance life testing results such as salt spray, impact testing, heat, humidity, electrical performance, etc, when required either by print, specification or specific request by Cooper representative to be submitted on AIAG forms CFG-1004, CFG 1005, or equivalent. For Catalog Parts Generic or family data maybe substituted with prior approval. AEC Qualification testing or equivalent is required for semiconductor devices. Any gaps between supplier qualification testing and AEC qualification testing requirements should be documented and approved by Cooper Prior to submission.
12	Initial Process Study (Cpk) Capability Studies		AR		AR		Process Capability Study using any statistical package or Cooper Capability Data Forms.	A short term study of process control capability (Cpk), must come from one continuous significant production run. At least 100 individual samples must be used for Cpk calculations. Multi-cavity tools would require a separate study per cavity. Supplier must have minimum Cpk value of 1.33 on all CTQs. No attribute data will be accepted for any PPAP submissions for Initial Process Study. If CTQs are NOT identified on the print, the supplier will identify a minimum of two characteristics that have a direct affect on fit, form, or function and perform Initial Process Studies on them.
13	Qualified Laboratory Documentation				AR		Lab Scope and outside lab proof of accreditation.	A Quality Record that contains the specific tests/evaluations/calibrations that your facility performs, a list of your personnel's competency to perform these tests/evaluations/calibrations, a list of all measuring equipment used during production, and a list of methods and standards used to calibrate those tools. NOTE: All outside calibration or testing labs are required to show proof of certification.
14	Appearance Approval Report	AR	AR	AR	AR	AR	AIAG format AAR	Needed only if part has color, grain, or some other cosmetic appearance requirement specified on the part print, or if specifically requested by Cooper to clarify a cosmetic requirement not clearly identified on a print. Format is AIAG form CFG-1002.
15	Sample Product Parts				AR		Parts tagged in accordance with Cooper PPAP reference manual	The organization shall provide 3 sample parts WITH EVERY submission unless otherwise requested. Multi-cavity tools require 1 part per cavity.
16	Master Samples						Required only for level 5	Not required for submission but must be maintained by the supplier.
17	Checking aids				AR		Checking aid design prints and GRR for checking fixtures.	Any part specific fixture, gauge, model or template. Tooling/gauges/fixtures must include design prints and a 3rd party layout confirming conformity to print.

18	Customer Specific Requirements						Documents as specified by Cooper Industries	
a	Tooling Information Form				AR		Specific Cooper Document	Applies to all Cooper owned tooling. Typical application includes information and pictures on production tools such size, maximum cycles, ownership etc...
b	Packaging Form				AR		Specific Cooper Document	Used to outline and verify both external and internal packaging requirements including any related testing.
c	Inspection Plan (ASC Suppliers only)		IA	IA	IA	IA	Specific ASC Format	Specific format used by many ASC suppliers to document quality inspections
d	Specification Deviation Form		IA	IA	IA	IA	Specific Cooper Document	Used for any requirement that is non-conforming and requires review by Cooper to provide for approval of the PPAP submission. The supplier must provide a recommended action plan for any issue identified on the Specification Deviation Form.
e	Supplier PPAP Checklist				AR		Specific Cooper Document	To be submitted with every submission level except level 1 and must be signed by supplier representative. Used as both a reference/checklist tool as well as a verification that the right documentation is provided at the time of submission.

Cooper Industries PPAP Submission Levels (In compliance with AIAG Fourth Edition PPAP March 2006 release)

Level 1	Warrant only and Appearance Approval Report as requested submitted to the customer. Applied to: "Non-critical" parts, "non critical" raw/bulk material or catalog/ commodity parts for electrical applications and re-certification of existing parts previously approved by Cooper at levels 3, 4 or 5. Also used for Self Certification.
Level 2	Warrant with product samples and limited supporting data submitted to the customer. Applied to: Critical Bulk products such as Plastic/Paint/Chemicals, critical fasteners, simple material changes, simple revision level only changes or simple print updates not affecting form-fit-function. This level can also be applied to low and medium risk parts within a product family.
Level 3	Warrant with product samples and complete supporting data submitted to customer. Default Cooper Industries Submission Level Applied to: All new parts on Cooper programs. All changes affecting form-fit-function, reliability, or performance. All product resourced to new suppliers, serial production parts, existing high risk parts undergoing a part number change.
Level 4	Warrant and other requirements as defined by the customer. This level is reserved for special applications only. Applied to: This level can only be applied with prior approval from the designated divisional Cooper Quality PPAP representative.
Level 5	Warrant with product samples and complete supporting data reviewed at the supplier's manufacturing location. Applied to: On site review as requested by each Cooper Division

Required for PPAP submission	<input type="checkbox"/>	Not required	<input type="checkbox"/>	Documents on a case by case basis are marked AR for "As Requested"	<input type="checkbox"/>	IF Applicable	<input type="checkbox"/>
------------------------------	--------------------------	--------------	--------------------------	--	--------------------------	---------------	--------------------------