

Check List PPAP (0340-01 ANNEX 05)

PPAP	Search/Rate by:	N1	N2	N3	N4	N5
Project Records	a) Must be mapped b) Polymeric parts must be identified with the ISO symbols	R	S	S	*	R
Measurement Systems Analysis Studies	a) The Studies (as below) must be included for all devices, measuring equipment and tests that are included in the Control Plan and must be in accordance with the AIAG Manual: <u>Studies by Variable:</u> -R&R (<30%); - Stability: all points on the graph (Mean/Range) must be within the Control Limits (UCL e LCL); - Trend: zero should be between the UCL e LCL; - Linearity: trend line=0, must be entirely contained within the confidence band of the best fit line; -Ndc: it must be =>5 <u>Studies by Attributes:</u> -Agreement ≥ 80%; Error Rate: ≤ 5%; False Alarm Rate: ≤ 10%	R	R	S	*	R
Verification Aids	When requested by MANGOTEX a) Calibration report must be submitted (revision date of calibration report must be same as that of drawing) b) MSA studies should be included	R	S	S	*	R
Dimensional Results	a) The product measurements (according to the approved Control Plan) must be included for each cavity, if any. b) Must include: date and revision of the drawing	R	S	S	*	R
Process Flow Diagram	a) All operations must be in the flowchart, including rework, including control points	R	R	S	*	R
Process FMEA	For all new parts/services, a process FMEA must be prepared (according to the AIAG Manual). If any special characteristics are identified in the MANGOTEX drawing/specifications, these must be clearly identified in the Process FMEA. a) It must include all operations described in the Process Flow Diagram. b) Analyze whether the Severity, Prevention and Detection scores are consistent with the AIAG Manual; c) Analyze whether there are recommended actions within the deadline; d) If the Severity scores are =>7, it should be identified as a special feature. NOTE1: FMEAs can be done by part families.	R	R	S	*	R
Control Plan	a) It must show the controls and characteristics from the receipt of the raw material to the shipment of the product (described in the Process Flow Diagram/FMEA). If any critical or safety characteristic is identified in the MANGOTEX drawing/specifications, these must be identified. b) Control Plan must be in accordance with the AIAG Manual	R	R	S	*	R
Material and Performance Test Results	a) The approved product tests (according to the Control Plan or Product Design) must be included; b) Must include: date and revision of the drawing, product number/code, date of the test and the quantity tested, name of the material supplier; *when requested by the customer: the supplier code (seller) c) Where applicable, raw material certificate must also be included.	R	S	S	*	R
Laboratory Documentation	a) Must be accredited by: RBLE and/or RBC and/or ISO/IEC- 17025 and/or ANFAVEA Group; b) Must have the Scope, demonstrating that the laboratory is qualified for the type of measurement or testing	R	S	S	*	R
Initial Process Studies	a) They must be performed for all special characteristics identified in the Control Plan / FMEA. b) Must cover a significant batch of one to eight hours of production, of a minimum total of 300 successive pieces; c) Criteria: Cp/CPK=>1.33 and Pp/PPK =>1.67 (Where the minimum capability index is not achieved, it is necessary to adopt 100% inspection until corrective actions are implemented and their effectiveness proven)	R	R	S	*	R
Product Sample	a) Must provide samples of identified product b) Verify component assembly prior to PPAP approval, if applicable.	R	S	S	*	R
Standard Sample	a) A standard sample must be retained for the same period as the PPAP; this is also valid for parts with multiple cavities, mold; b) Photo of standard sample must be part of PPAP	R	R	R	*	R
Certificate of Submission of Part (PSW)	a) The PSW must be completed and signed by the supplier b) An individual PSW certificate for each part number; If multiple parts per cavity, molds, must be listed in the appropriate field of the PSW; c) Analyze whether the drawing revision date in the PSW is consistent with the Drawing.	S	S	S	S	R

S: Supplier must submit to MANGOTEX and retain a copy of the records or documentation items in appropriate locations;

R: Supplier must retain MANGOTEX in appropriate locations and keep it readily available whenever requested;

*: Supplier must retain in appropriate locations and submit to MANGOTEX whenever requested.