ACPS-TMP-S-023 Index: 35 Dated 2024-05-22

## **ACPS Automotive PPAP Requirements**

## **ACPS** AUTOMOTIVE

|                | Dated 2024-05-22  |                                      |  | -  |   |
|----------------|---|--------------------------------------|--|--|---|
|                |   | Commodity number                     | All  | 502  | V = Documets which must be submitted for PPAP approval  NDT = Non destructive test - N/A = Not applicable |
| VDA<br>numbers | Requirements  | Prototypes,<br>FOTP,<br>Sample parts | Requalification  | Wiring harness   | Remarks / Agreements ACPS / Supplier  |
| 0.1            | Cover Sheet (Evaluation)  |                                      | V  | V  |   |
| 0.2            | Self-assessment for product, process, SW (if appl.)   |                                      | N/A  | V  |   |
| 1.             | Deliverables of product development   |                                      |  |  |   |
| 1.1            | Technical specifications<br>(ACPS Automotive Drawing)   |                                      | V  | V  |   |
| 1.2 / 1.3      | Design release  |                                      | N/A  | N/A  |   |
| 1.4            | Material data sheet / IMDS<br>for all materials (packaging/wrapper & printed<br>materials) which stay in the car  |                                      | V<br>IMDS IDs:<br>HUK = 80908<br>DEI / DES = 237<br>MXQ = 185340                     | V<br>IMDS IDs:<br>HUK = 80908<br>DEI / DES = 237<br>MXQ = 185340 |   |
| 1.5            | Product FMEA  |                                      | N/A  | V  |   |
| 2.             | Deliverables of production process development  |                                      |  |  |   |
| 2.1            | Process flow chart  |                                      | V  | V  |   |
| 2.2            | Process FMEA  |                                      | N/A  | V<br>minimum required is the Cover                               |   |
|                |   |                                      | ·  | Sheet  |   |
| 2.3            | Control plan  |                                      | V  | V  |   |
| 3.             | Deliverables of the validation of the product   |                                      |  |  |   |
| 3.1            | Geometry, dimension check   | V                                    | V  | V  |   |
| 3.2            | Material check  | Material<br>Certificate (3.1)        | Material Certificate (3.1)<br>according to DIN ISO 10204<br>see drawing requirements | v  |   |
| 3.3            | Function check  |                                      | V  | V  |   |
| 3.4            | Haptic check  |                                      | If requested by ACPS<br>N/A  | N/A  |   |
| 3.5            | Acoustics check   |                                      | N/A  | N/A  |   |
| 3.6            | Odour check   |                                      | N/A  | N/A<br>N/A   |   |
| 3.8            | Appearance check Surface check  |                                      | N/A<br>N/A   | N/A  |   |
| 3.8.1          | Approval of coating   |                                      |  |  |   |
| 3.8.2          | Technical cleanliness   |                                      | N/A  | N/A<br>N/A   |   |
|                | recinical cleaniness  |                                      | V  | V  |   |
| 3.10           | Reliability tests   |                                      | As defined on drawing or<br>specification  | As defined on drawing or<br>specification                        |   |
| 3.11           | Resistance to electrostatic discharge (ESD) Electrical safety / high-voltage safety   |                                      |  | V<br>N/A   |   |
| 3.13           | Electromagnetic compatibility (EMC)   |                                      |  | N/A  |   |
|                | APQP Tracking Sheet completed for RC1 and RC2 parts   |                                      | N/A  | V  |   |
| 4.             | Deliverables of the validation of the production process  |                                      |  |  |   |
| 4.1            | Achievement of special characteristics (Quantity of measured parts CmK 50 and CpK 125) SC-S> CmK >= 2,0 / CpK >= 1,67<br>SC-FF> CmK >= 1,67 / CpK >= 1.33 |                                      | v  | V  |   |
| 4.1.1          | If there are no SC on the drawing, confirmation of process capability of three dimensions defined by supplier CmK >= 1,33 / CpK >= 1,0                    |                                      | If there was a dimensional complaint last year                                       | V  |   |
| 4.2            | Laboratory qualification (ISO/IEC 17025 or national equivalent) accredited by an body of ILAC MRA   |                                      | V  | V  |   |
| 4.3            | Measured Samples<br>(marked/ numbered and packed in separated boxes)  | due to PO                            | N/A  | V<br>(at least 5 pcs)<br>If requested by ACPS                    |   |
| 4.4            | Master sample   |                                      |  | 1 sample   |   |
| 4.5.1          | Confirmation of agreed capacity (SLA)  Capacity evaluation R@R  |                                      |  | V<br>V   |   |
| 4.6            | Capacity evaluation New York Tooling list and Inventory Protokol if tool is owned by ACPS or QEM acc. ACPS-TMP-S-016                                      |                                      | N/A  | V  |   |
| 4.7            | Annual quality self audit D351144   |                                      | V  |  |   |
| 5.             | General deliverables  |                                      |  |  |   |
| 5.1            | Compliance with legal requirements  |                                      | N/A  | N/A  |   |
| 5.2            | PPA status of the supply chain  |                                      | List of parts used and approval<br>status  | List of parts used and approval<br>status                        |   |
| 5.3            | Test/inspection equipment list  Measuring system analysis for used production and   |                                      | V  | V  |   |
| 5.4            | lab equipment (MSA)   |                                      | V  | V  |   |
| 5.5            | Part history (for electronics also for SW) Evidence of suitability of the employed load carriers  |                                      | V  | V  |   |
| 5.6            | including storage - SLA   |                                      | N/A  | V  |   |
| 5.8            | Documentation of the requalification agreement  |                                      | N/A  | V  |   |
| 6.             | Deliverables for software   |                                      |  |  |   |
| 6.1            | Software release  |                                      | N/A  | N/A  |   |
| 7.             | Customer spezific requirements  |                                      |  |  |   |
|                |   |                                      | V  | V  |   |
| 7.1            | WEB 2020 Initial Material Sampling_Mercedes-Benz<br>Cars TESLA IMDS requirements  |                                      | only for Mercedes-Benz<br>ACPS products<br>V   | only for Mercedes-Benz<br>ACPS products<br>V                     |   |
| 7.2            | PLM D263835  CAMDS requirements   |                                      | only for TESLA<br>ACPS products  | only for TESLA<br>ACPS products                                  |   |
| 7.3            | (For asian customers)   |                                      | V  | V  |   |

| PPAP Kick off date                         |   |
|--|---|
| ACPS-SQ representative  Name and Signature | Supplier representative<br>Name and Signature |
|  |   |

| Part number / Drawing index / Part index<br>Part Name |
|---|
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