

Guidelines for sampling matrix

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| 0 | Cover sheet for PPA report As cover the latest version must be used according to VDA Volume 2. |
| 1.1 | Geometry, dimension check All requirements contained in drawings and specifications has to be checked and documented. All features must be clearly marked. The entry of setpoints must comply with the permissible min. / max. Values by default (also applies to features without direct tolerance indication) effected. For each pattern of the determined value must be documented and must be made an assessment of whether the specification has been met. Referencing the documented values for sample part must be given. Bracketed features are "Behelfsmaße" and are not separately in the test report indicate. |
| 1.2 | Function check If specified (eg electronic components) the specification and the test results are required. |
| 1.3 | Material check If specified (eg surface hardness) must be accompanied by the test results. |
| 1.4 | Haptic check If the test and the test results are specified, ist has to be attached. |
| 1.5 | Acoustics check If the test and the test results are specified, ist has to be attached. |
| 1.6 | Odor check If the test and the test results are specified, ist has to be attached. |
| 1.7 | Appearance check If the test and the test results are specified, ist has to be attached. |
| 1.8 | Surface check If the test and the test results are specified, ist has to be attached. |
| 1.9 | ESD test If specified (eg electronic components) the test procedure and the test results are required. |
| 1.10 | Reliability tests Confirmation of all the tender documents and if necessary on the drawing named functional requirements, and life test, or resistance tests for surfaces by the supplier. Test results must be accompanied in accordance with the specification. (A specification is the HOERBIGER construction approvals usually denoted by HEX and a four-digit number plus index). The requirement specification is sent to the supplier in connection with the approved drawings by the purchase of HOERBIGER. Possibly are on the drawings specified additional rules, if not available, obtain from the supplier at HOERBIGER. |
| 2 | Samples Samples are products and materials that have been completely manufactured with series operating equipment under series production conditions (as part of the PPF). The number of sample parts is the HOERBIGER order defines (minimum 3 parts per cavity) and must be marked with a tag "Initial sample" or the band "Initial Samples". The sample parts shall be marked with appropriate referencing to the dimension report. |
| 3 | Technical specifications (eg. customer drawings, specifications, CAD data, specifications, approved design changes, Short circuit protection, voltage protection, Functional Safety (FUSI)) |
| 4 | Product- FMEA For suppliers with design responsibility or development peripheries a product - FMEA have to be created and must be available for inspection at the supplier. The FMEA must be held at all times up to date and in case of changes from the Specification is this update. The FMEA must be a reference to the current HOERBIGER ID number have to index. In the first article inspection is to confirm that the FMEA was performed. |
| 5 | Design release When transferring development responsibilities to the supplier must prove that the relevant approvals in accordance requirements. (eg from Hoerbiger released design drawings) |
| 6 | Compliance with legal requirements |

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| | Proof of compliance with legal requirements (eg. As the environment, safety, recycling, länder- specific certificates) |
| 7 | <p>Material data sheet / IMDS and certificate in submission level 0, 1, 2 & 3</p> <p>The Constituents of Purchased Parts are completely and in accordance with the "IMDS Recommendations" of IMDS Committee to enter by supplier in the International Material Data System and to provide HOERBIGER available. (Automotive Comfort Systems Boleslawiec ID-Adresse: 529; Micro Fluid GmbH Barbing ID-Adresse: 16847).</p> <p>The material data sheet is along the real supply chain, regardless of the contractual constellation submitted via IMDS. For metallic products the "Abnahmeprüfzeugnis 3.1" is mandatory for the initial sample to EN10204. For non-metallic materials is the Werkszeugnis 2.2 sufficient. These test certificates must be submitted with the sampling documents.</p> <p>Certificate in submission level 4</p> <p>For metallic products the "Abnahmeprüfzeugnis 3.1" is mandatory for the initial sample to EN10204. For non-metallic materials is the Werkszeugnis 2.2 sufficient. These test certificates must be submitted with the sampling documents.</p> |
| 8 | <p>Software Test Report</p> <p>If required, this to create in accordance with Appendix 6 of the VDA Volume 2.</p> |
| 9 | <p>Process FMEA</p> <p>A process - FMEA must be created and must be available for inspection. The FMEA must be held at all times up to date and in case of changes from the specifications or complaints, this must be updated. The FMEA must be a reference to the current HOERBIGER ID number have to index. In the first article inspection is to confirm that the FMEA was performed.</p> <p>Process FMEA level 4</p> <p>A risk analysis must be generated. The result has to be documented. If necessary, actions to reduce the risk must be implemented. The result of the risk analysis has to be documented.</p> |
| 10 | <p>Process flow chart</p> <p>Graphic depiction of the entire process flow from incoming goods, production to shipping. The process flow diagram must include a reference to the current HOERBIGER ID number have to index. It is also a supplier of internal index to perform.</p> |
| 11 | <p>Control plan in submission level 0, 1, 2 & 3</p> <p>The Control Plan (see ISO/TS16949) describes the system of inspection of parts and processes. It describes the required actions at each stage of the production process including incoming inspection, and periodic inspections to confirm that all processes are under control. The Control Plan is required throughout the life of a product, ie both in the prototype, pre-series and the series production phase. He remains a "living document" that reflects the methods of testing, inspection frequency, documentation and measurement systems used. The Control Plan contains all the "special characteristics", which are illustrated in the drawings and specifications as well as internally by the supplier (eg in the context of an FMEA) classified as critical features. A requalification of all product properties must be listed in the Control Plan. The control plan must include a reference to the current HOERBIGER have part number with index.</p> <p>Control plan in submission level 4</p> <p>In case of Level 4 a Control Plan reduced to the test steps is sufficient. The measuring equipment used must be part of the control plan. All "special characteristics" must be part of the control plan</p> |
| 12 | <p>Confirmation of process capability</p> <p>The requirements for special characteristics can be found in the HOERBIGER document "5823_033 Besondere Merkmale Lieferant D_E" and have to be followed. If this document is not present on the side of the supplier , it must be obtained from suppliers from the purchase of HOERBIGER.</p> |
| 13 | <p>Achievement of special characteristics</p> <p>Evidence of protection must be made for all on the drawing and possibly in the specifications "special characteristics" defined in accordance with the HEX5372. Basically, special features have in the FMEA in the work, testing and Control Plans are considered and labeled as such. For special characteristics, the respective measurement means in the Control Plan and in the of test equipment is listed.</p> |
| 14 | <p>Test/inspection equipment list</p> <p>A current list of test equipment with respect to the control plan must be submitted.</p> |
| 15 | <p>Capability study testing equipment</p> <p>For all listed in the Control Plan measuring instruments, which are used for monitoring of "special characteristics", a measurement capability needs to be created.</p> |

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| 16 | <p>Tooling list</p> <p>Proof must be given with what number of tools (origin and forming) the specific product is made or how many nests contain a multi-tool (eg injection molding of small parts).</p> |
| 17 | <p>Confirmation of agreed capacity</p> <p>In the context of process validation under production conditions is necessary to demonstrate that the required quality and quantity according to the max. contractual capacity can be ensured. Proof may, for example, by a production test (Run @ Rate) done. To confirm can be used the HOERBIGER form "Prozessabnahme".</p> |
| 18 | <p>Written self-assessment</p> <p>The self-assessment confirms the supplier that the product and process according to the defined criteria meet all requirements and an internal release has been carried out. To confirm can be used the HAKS form "Prozessabnahme".</p> |
| 19 | <p>Part history</p> <p>In part history all changes to the product and the production process must be documented.</p> |
| 20 | <p>Confirmation of suitability of transport</p> <p>It is necessary to demonstrate that the proposed storage and the charge carriers are used, cause no impairment of the deliverable component.</p> |
| 21 | <p>PPA status of the supply chain</p> <p>The supplier is responsible for the release of all components, subsystems and services in its supply chain. The PPF status (process release, product release, total / series Delivery Release) of the supply chain must be documented - Dealing with ropes Sets (prescribed by the customer parts / suppliers) must be agreed with the customer.</p> |
| 22 | <p>Approval of coating systems</p> <p>As a rule, when the surface-coated components complete systems from substrate including surface coating according to customer requirements released (z. B. Ensuring paint adhesion).</p> |
| 23 | <p>Others / emergency plan</p> <p>Emergency plan (measures to maintain the ability to deliver on machinery, employees or computer failure). The emergency plan must include at least all the steps contained in the process flow diagram and produktionslenkungsplan and include the sub-suppliers. The emergency plan must be accompanied by the sampling.</p> |