MBDA Deutschland GmbH

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Document-No.: 60263148

Basic Quality Management Requirements for SUPPLIERS

(QM-0206)

Between MBDA Deutschland GmbH

(hereinafter referred to as „PURCHASER“)

and her subcontractor or supplier

(hereinafter referred to as „SUPPLIER“)

SUPPLIER:
Address:
Creditor-Nr.: (MBDA internal)

	Name	Org.Unit /Function	Date	Signature
Accepted: (SUPPLIER)				
Accepted: (MBDA)				

Document title:							Name:	
Basic Quality Management Requirements for SUPPLIERS							N/A	
CageCode:	Document-No.:	Part:	Version:	Class:	Typ:	Material-No.:	Created on:	Page:
C0415	60263148	000	04	TDO		N/A	01.12.2020	1 of 11

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Table of Contents

Page

1 General

Our suppliers make an important contribution to meeting the requirements of our customers and to guarantee the regulatory and legal requirements as well as the fulfillment of our quality standards.

This document represents an important step for the common and future business relationship between the PURCHASER and the SUPPLIER.

The highest goals are the safety of the products and their users and the satisfaction of our customers.

1.1 Change History

Version	Date	Reason of Change/-request	Changed Chapter	Processor
00	10.01.2019	new	n/a	
01	02.07.2019	Ascertainments	2.7; 2.8; 2.12; 2.13; 2.14; 2.17	QVB
02	25.03.2020	adjustment of version only	none	QVB
03	01.04.2020	Ascertainments due to feedback of several suppliers	2.2; 2.4; 2.8; 2.9; 2.12; 2.13; 2.17	QVB
04	01.12.2020	Precise lead time	2.13; 3	QVB

Table 1: Change History

1.2 Abstract

The decision to approve a supplier depends essentially on his quality capability.

The SUPPLIER is solely responsible for the conformity of the delivered products / services.

These quality assurance requirements (hereinafter: QAR) form the basis of a cooperation and are thereby an integral part of the procurement scope of the PURCHASER. They apply additionally to the quality requirements, specifications or other regulations of the PURCHASER which are included in the order and they supplement the appointments of the order / contract and the standards and regulations underlying the subject matter of the order.

The SUPPLIER shall be obliged to pass on the relevant claims from this document to his subSUPPLIERS and service providers which are required for the manufacturing and to monitor their compliance.

1.3 Referenced Documents (actual release only)

Doc. Nr. (if applicable)	**Titel**
ISO 9000	ISO 9000 Quality Management Systems – Fundamentals and vocabulary
EN 9100	Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations
EN 9102	Aerospace series - Quality systems - First article inspection
DIN EN ISO 9001	DIN EN ISO 9001 Quality Management Systems - Requirements
DIN ISO/IEC 27002	DIN ISO/IEC 27002 Information technology – Security techniques – Code of practice for information security management
AQAP 2110	NATO- Quality Assurance Requirements for Design, Development and Production
AQAP 2131	NATO Quality Assurance Requirements for Final Inspection and Test
AQAP 2210	NATO Supplementary software quality assurance requirements to AQAP 2110 or AQAP-2310
AQAP 2310	NATO- Quality Assurance Requirements for Aviation, Space and Defense Suppliers

Table 2: Referenced Documents

1.4 List of Terms and Abbreviations

Unless explicitly stated otherwise, terms are used as stated in ISO 9000 (see also the appendix).

Term/Abbreviations	**Meaning**
GQAR	Government Quality Assurance Representative
QM / QMS	Qualitymanagement System
FAI	first article inspection
COC	Certificate of Conformity
CP	Counterfeit Product
QSF/QMR	Qualitymanagement Requirements
OEM	Original Equipment Manufacturer
SUP	Suspected Unapproved Part
IPC	Association Connecting Electronics Industries

Table 3: Terms and Abbreviations

2 Basic Requirements

The SUPPLIER is responsible for all products and services (including those of his subSUPPLIERS), which he delivers to the PURCHASER.

2.1 Contract Review

The SUPPLIER checks the contract/order prior acceptance regarding:

- the product realization (development and/or manufacturability) under the requirements concerning quality, delivery date, costs (through experience of previous orders)
- formal and contentual aspects
- customer furnished documents

and confirms this with the order confirmation.

The SUPPLIER informs the PURCHASER about:

- possible obsolescence
- risks (including risks related to subSUPPLIERS) affecting deadlines, costs, quality, function, performance, lifetime, manufacturability.

2.2 Quality Management System

The SUPPLIER and his subSUPPLIERS and service providers should have introduced operational regulations that at least meet the requirements of ISO 9001 - preferably EN 9100. The SUPPLIER ensures that his subSUPPLIERS and service providers also have corresponding regulations (see also 2.4).

SUPPLIERS whose business is geared towards the aerospace industry are expected to receive EN9100 certification.

In the event that the status or content of his QM certificate changes (suspended, expired or changes of the stated standards or scope), the SUPPLIER shall inform the PURCHASER.

2.3 Information Security

In order to protect information - in particular intellectual property of the PURCHASER and his client including data u. Requirements - and in order to safeguard the related customer interests, the supplier must use procedures and means to ensure the security of information. The guidelines of DIN ISO / IEC 27002 can be used as a guide.

2.4 Requirements concerning subSUPPLIERS

The supplier shall:

- maintain a directory of his Suppliers, indicating the status and scope of the approval. This also includes contract manufacturing, design offices and software companies.
- provide precise requirements when submitting verification activities to his subSUPPLIER. He shall also maintain a list of delegated verification activities.

The SUPPLIER is responsible for the availability, actuality and feasibility of the documents specified in the order. The SUPPLIER must ensure within his organization and that of his SubSUPPLIER and service providers that unintentional use of documents that have become invalid is excluded (see also 2.8).

If procurement or subcontracting of processes, products and services is foreseen, the risks must be determined and managed with regard to supplier selection / change of supplier and the specific contract order.

Product requirements, as well as product-specific quality assurance requirements, are specified in the documentation (e.g. drawings, specifications, instructions). All relevant requirements also apply to the respective SubSUPPLIERS and service providers involved in the performance of the contract and shall be passed on to them.

2.5 Traceability

The SUPPLIER shall establish and apply a process that ensures the traceability within the entire supply chain (from production to final assembly) of manufacturing and testing processes including the material of the delivery item to the original manufacturer (OEM / OCM) (excluding standard parts).

This traceability method and documentation shall clearly identify the name and location of all of the supply chain intermediaries back to the original manufacturer and shall include the item identification and the corresponding date codes, lot codes, heat codes, serializations, unique item identifiers, or batch identifications (excluding standard parts).

2.6 Counterfeit Parts

The SUPPLIER shall ensure that only new and authentic materials are used in materiel delivered to the PURCHASER.

If traceability is not clearly possible, the components intended for delivery must be examined by a certified laboratory. As a result of this examination a written proof of the technical data according to the specification / data sheet has to be submitted to MBDA Deutschland GmbH before delivery and has to be accepted by it.

The supplier must ensure that there are effective mechanisms so that no counterfeit parts enter the supply chain and the risk is manageable. Each occurrence of such components must be notified to the PURCHASER immediately in writing; the affected components are to be quarantined.

If counterfeit deliveries or suspected counterfeit deliveries have been delivered under the contract, these deliveries can be confiscated. The SUPPLIER must immediately replace these deliveries with deliveries that are acceptable to the PURCHASER.

The PURCHASER may refer counterfeit deliveries to the local or international governmental authorities for investigation and reserves the right to withhold payments as long as the results of such investigations are available.

2.7 Verification in case of an ordered development and/or production

The verification in development and production shall be planned and presented to the client.

The supplier shall document (internal) evidence that all manufacturing and testing operations were performed as planned (in accordance with the manufacturing and testing instructions).

2.8 Documentation

The SUPPLIER shall comply with the following requirements for documented information created and / or stored by him in order to ensure control:

- Prevent the unintended use of outdated documented information by removal or appropriate marking or steering
- Suitable protection of documented information that is processed electronically (e.g. protection against loss, unauthorized changes, unintended changes, damage, physical damage)

- Records must be kept in compliance with legal requirements but at least for a period of 10 years (unless otherwise agreed in the contract) from the end of the calendar year in which production ceases.

2.9 Measuring / testing equipment

The SUPPLIER shall ensure that the measuring and test equipment used by him are suitable and calibrated either by the manufacturer or by an accredited laboratory in order to ensure the product quality of the delivery item. Measuring and test equipment shall be controlled.

If a deviation is detected during a calibration, the SUPPLIER shall evaluate the validity of the tests carried out with the measuring equipment concerned. The Purchaser has the right to request a repetition of the measurements made.

This requirement has to be passed to all subSUPPLIERS if applicable.

2.10 Operational planning

The supplier shall plan, implement and control the processes for the fulfillment of the product requirements and services in order to meet the requirements with an acceptable risk within resource-related and deadline restrictions.

Note: FMEA (Failure Mode and Effect Analysis) may be used as state of the art method.

2.11 Non-conformities / error messages / error cause analysis

The SUPPLIER shall provide an in time reporting of defective products that have already been delivered to the PURCHASER, especially those that may affect their functionality and safety. The report must contain a precise description of the fault with details of the parts concerned, part numbers, number of affected parts and delivery data.

If requested by the PURCHASER, the supplier applies the 8D method. Processing time generally: 30 working days. For safety-critical components: 5 working days for an interim report. Missing a deadline shall be requested in writing before the deadline.

The supplier is responsible for the root cause analysis and the correction of nonconformities.

The supplier shall create and maintain instructions to ensure that

- a product that does not meet the specified requirements is excluded from unintended use or assembly
- a nonconforming product is clearly marked
- nonconformance's of already delivered products are reported immediately to the PURCHASER

Deliveries of non-compliant products shall be approved by the PURCHASER. For this purpose, the nonconformity shall be documented in a concession/waiver (MBDA form QM-0214, download in the supplier portal: www.mbda-procurement.de) and submitted to the PURCHASER for approval before delivery.

Approved concessions/waiver shall be included in the delivery documentation.

2.12 Information Obligation

In case of development and/or production commissioned by the PURCHASER, the SUPPLIER shall inform the PURCHASER in advance in the following cases:

- Planned relocation of the production site (also temporary)

- Planned manufacturing process change
- Planned changes of subSUPPLIERS (also temporary)
- First article inspection according to DIN EN 9102
- Before starting work, if a subcontract or order involves or causes concern regarding:
  - a critical item,
  - significant work content and/or design,
  - immature technical solutions

The SUPPLIER shall inform the PURCHASER if an externally provided product (in connection with the fulfillment of the related contract) is rejected, reworked, or repaired which has been

- identified as involving risk or
- supplied by a subSUPPLIER whose selection or subsequent performance has been identified as involving risk.

2.13 Monitoring

The SUPPLIER enables the PURCHASER to convince himself of the implementation of the planned QM measures.

Therefore, he grants the PURCHASER to the affected areas of all facilities - after prior appointment - access to documentation, production and testing stations and provides a qualified employee for support free of charge. However, this does not relieve the supplier of the responsibility for the quality of his delivery nor does it preclude subsequent rejection by the PURCHASER or its customers.

The following monitoring events are included:

- audits (system, process and product)
- First Article Inspection
- Production line release
- Clarification of Nonconformities
- Final product test or formal acceptance test

Therefore the SUPPLIER and his subSUPPLIERs shall

- grant access to all facilities in which the contracted work is carried out,
- provide information concerning the fulfillment of the contractually agreed requirements,
- grant possibility to control of the fulfillment of the requirements by the SUPPLIER and his subSUPPLIER

to the PURCHASER.

In the case of a order/contract according to AQAP-2110; AQAP 2131or AQAP-2310, the right of access is extended to the GQAR.

The SUPPLIER will be notified in advance of any official quality assurance measures to be carried out.

If national regulations (e.g. “US-eyes only”) or other contractual confidentiality obligations prevent acces, an alternative possibility to monitor is to be agreed with the PURCHASER.

2.14 First Article Inspection

For drawing parts and assemblies of the PURCHASER, a first article inspection shall be carried out in accordance with EN 9102 if ordered/commissioned. The PURCHASER reserves the right to accompany a FAI at the SUPPLIERs site and must therefore be invited with the following lead time:

- 2cw for SUPPLIERS from Europe

- 3cw for SUPPLIERS outside Europe

The results of the first article inspection must be recorded for all specified properties with target and actual values; any deviations shall be clearly identified.

The first article test report must be made available to the PURCHASER at the latest when the goods are first delivered.

Serial deliveries may only be made after approval of the first article test report by the PURCHASER.

Changes that affect processes, production facilities, tools and CNC programs must be evaluated and documented within a FAI or Delta FAI according to EN 9102.

2.15 Delivery Documentation

The delivery documentation is included in the scope of delivery and, if incomplete, leads to the rejection or blocking of the delivery.

The following proofs shall be provided as part of the delivery documentation:

- Copies of approved deviations (if any)
- Certificates (e.g. CoC, test certificates in accordance with DIN EN 10204)

2.16 Employee Qualification

The SUPPLIER ensures that only sufficiently qualified personnel are involved in the execution of activities. Therefore he

- determines the required competence for persons who perform activities under his supervision.
- makes sure that these people are competent based on appropriate training, education or experience.
- where appropriate: he initiates actions to acquire the required competence and assess the effectiveness of the measures taken
- maintains adequate documented information as proof of competence

This includes, for example: Employees

- with soldering activities and with optical inspections of solder joints shall be qualified by regular soldering training (e.g. in accordance with the IPC standard).
- with welding activities shall have a valid certificate for the respective welding process.

2.17 Special Processes

If special processes are applied, they shall be qualified by the SUPPLIER. The qualification including the significant process parameters and the approval shall be documented by the SUPPLIER and – in the case of development and/or production commissioned by the PURCHASER – approved by the PURCHASER (e.g. as part of an FAI or production line release). Significant processes and parameters of specific processes shall be guided by documented procedures.
These include e.g.:

- glueing
- riveting
- soldering and machine soldering
- painting
- welding and laser welding
- additive manufacturing processes (such as 3D printing)

3 Appendix

Definitions

Counterfeit Product (CP):
Collective term for fake, recycled components which have been fraudulently put into circulation. For easier handling, no distinction is made between CP and SUP. i.e. "Parts of dubious origin / Suspected Unapproved Products (SUP)" are included in CP.

An unauthorized copy, imitation, substitute, or modified part (e. g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer.

Fraudulent component:
Electronic component manufactured or distributed under infringement of law.

These include stolen components, components selected by the original equipment manufacturer (OEM) or a user, disassembled components that are recycled and resold as new components, counterfeit components, imitations, replicas, full or partial substitution of trademarks, designs, utility models, patents, Software or copyrights, e.g. for example: components whose manufacture and distribution are not controlled by the original manufacturer, unlicensed imitations of a design, disguised components (original name, reference date / abbreviation or other identifying information, etc. of the original manufacturer), components without silicon chip inside or with a replaced silicon chip that does not match the silicon chip of the original manufacturer.

Parts of doubtful origin / Suspected Unapproved Products (SUP)
Designate aviation and aerospace components and equipment that may not be usable (if applicable) as there is a need for clarification with regard to the requirements of aviation law or their implementation for development, production, maintenance or documentation.
In the vast majority of cases, existing doubts can be eliminated by means of a separate clarification. So SUP does not mean a part that is not allowed from the outset, since it is forged or not manufactured according to legal requirements, etc., but at the moment there is a need for clarification.

Identity:
Describes all information relating to the characteristics or characteristics of supplies, such as on:

- the original manufacturer or supplier,
- trademarks or other intellectual property rights,
- part numbers, date codes, lot numbers,
- applied test methods and results,
- documentation, warranties, origin, changes, manipulation, recycling, packaging,
- physical condition, prior use and rejection

Traceability:
Ability to have an electronic component with full traceability to the original manufacturer.

This traceability implies that each supplier in the supply chain is prepared to declare in writing and in a legally binding manner that he knows and can state his source of supply to the original manufacturer and confirm that the electronic components are brand new and with the appropriate precautionary measures regarding electrostatic discharge (ESD) and Moisture Sensitivity (MSL). This confirms that the electronic components to be supplied are unused and brand new and free of ESD, moisture or other damage. This ensures that the electronic components are protected by manufacturers' warranties, have their entire service life and function according to the manufacturer's published data sheet, with the expected component life in the application for which the reliability predictions and product warranties are provided of the OEM.

Critical items

Those items (e. g., functions, parts, software, characteristics, processes) having significant effect on the provision and use of the products and services; including safety, performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples of critical items include safety critical items, fracture critical items, mission critical items, key characteristics, etc.

Key characteristic:

Critical items Those items (e. g., functions, parts, software, characteristics, processes) having significant effect on the provision and use of the products and services; including safety, performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples of critical items include safety critical items, fracture critical items, mission critical items, key characteristics, etc.

Special processes:

Processes whose result cannot be verified by subsequent monitoring or measurement without destroying the component.

Shall: The word “shall” expresses a mandatory requirement.

Should: The word “should” is used to express that an action is to be performed generally. Nonconformance is acceptable if justified.

May: The word “may” expresses permissible practice or action. It does not express a requirement of a specification.

Special approval / construction deviation (significant / minor):

The special release is usually limited to the delivery of the product that has defective characteristics for an agreed period or an agreed quantity within defined limit values (ISO 9000).

The special release by means of a construction deviation (BA) is to be classified as "significant" if it affects at least one of the following properties:

- INTERCHANGEABILITY, SECURITY,
- STRENGTH,
- POWER,
- MAINTENANCE,
- LIFESPAN.

Significant BA require the approval of the PURCHASER and are to be classified as "to be entered" when using the QM-0214 (field 8a).

Deviations are to be classified as "minor" if the deviation has no effect on the properties mentioned under significant BA.

Change request (major / minor):

The change request is to be classified as "significant" if at least one of the fields 20 - 49 (see according to KM-0107) is affected by the change. Significant changes require the approval of the PURCHASER.

All other changes are to be classified as "minor" and are to be submitted to the PURCHASER for information only.