Quality Assurance Requirements (QAR)

for Suppliers of

Raw Material- Automotive Applications

of

OTTO FUCHS KG

Derschlager Straße 26
58540 Meinerzhagen

- referred to as Buyer -
# Table of Contents

1. Preamble ......................................................................................................................... 3
2. Supplier Responsibility ..................................................................................................... 3
3. Supplier Management System .......................................................................................... 3
   3.1 Quality Management .................................................................................................... 3
   3.2 Management of Subcontractors .................................................................................. 4
3.3 Environment Protection, Energy Use and Work Place Safety ......................................... 4
4. Supplier Management of the Buyer .................................................................................. 4
   4.1 Supplier Qualification/ Supplier Approval .................................................................... 4
   4.2 Supplier Audits ............................................................................................................. 5
   4.3 Supplier Assessment and Classification ....................................................................... 5
   4.4 Supplier Development .................................................................................................. 6
5. Risk Management/ Contingency Plan ............................................................................... 6
6. Document Management and Data Protection ..................................................................... 6
   6.1 Order Documents and Technical Documents ............................................................... 6
   6.2 Archiving of Documents ............................................................................................ 7
   6.3 Data Protection ............................................................................................................ 7
7. Quality and Test Planning ............................................................................................... 7
   7.1 Risk Analysis / FMEA .................................................................................................. 7
   7.2 Control Plan .................................................................................................................. 7
   7.3 Inspection and Test Equipment .................................................................................... 8
   7.4 Organizational Knowledge/ CIP ................................................................................. 8
8. Maintenance ...................................................................................................................... 8
9. Product and Process Approval Procedure (PPAP) ............................................................. 8
   9.1 General ........................................................................................................................ 8
   9.2 Process Approval at Supplier ...................................................................................... 9
   9.3 Re-Qualification Inspection ........................................................................................ 9
10. Labeling, Traceability, Packaging, Storage .................................................................... 9
11. Serial Production / Complaints ..................................................................................... 10
12. Information Obligation .................................................................................................... 10
13. Escalation Procedure ..................................................................................................... 11
14. Warranty and Liability ................................................................................................... 12
15. Additional Regulations ................................................................................................... 13

Appendix 1: Customer- Specific Requirements on ISO/TS 16949 (CSR) .............................. 14

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OTTO FUCHS KG, P.O. Box 12 61, 58528 Meinerzhagen, Germany
Phone. +49 2354 73 0, Fax +49 2354 73 201, info@otto-fuchs.com, www.otto-fuchs.com
1. **Preamble**

These Quality Assurance Requirements (QAR) contain framework terms and conditions between Buyer and Supplier required to achieve the pursued zero defect objective. These QAR specify minimum demands on the Supplier’s management system for the metal formats (billets or bars). This is the raw material for the manufacturing of the Buyer’s products sold to automotive industry (possibly OEM).

Full acceptance of these QAR is a prerequisite to supplying any metal formats for automotive applications to the Buyer.

2. **Supplier Responsibility**

The Supplier is obliged to comply with the statutory and regulatory requirements that affect its business processes.

Continuous improvement of their processes, as well as 100%-reliability in terms of delivery schedules and quantities represent integral parts of the Supplier’s quality policy.

The QAR is an essential part of the contract as well as the terms and conditions of purchase between Buyer and respective Suppliers. The Supplier commits their subcontractors to also comply with these QAR.

Subcontracting to third parties is not permitted without explicit prior approval of the Buyer.

3. **Supplier Management System**

3.1 **Quality Management**

The Supplier commits themselves to permanently deploying an effective quality management system that has been put in place and certified in accordance with the up-to-date version of ISO/TS 16949 (resp. IATF 16949), VDA 6.1, or at least ISO 9001 based on their structure and size of company. The requirements of these international specification, as well as currently valid customer-specific requirements (CSR) in the automotive sector, are reflected in this QAR and must be implemented into the quality management system of the Supplier (see appendix 1 of these QAR; the list of CSR for information).

The Supplier is obliged to maintain the necessary qualification of the inspection personnel by regular trainings.

The Supplier shall appoint a product safety representative (PSB).
The Supplier regularly examines the effectiveness of their manufacturing process by performing annual internal audits in accordance with VDA 6.3 and VDA 6.5. The results of these internal audits shall be reported to the Buyer upon request. In case the Supplier obtains a quality classification „C“ by the customer of the Buyer (OEM), or loses their certification ISO/TS 16949 (resp. IATF 16949), VDA 6.1 or ISO 9001, the Buyer is to be notified thereof immediately.

3.2 Management of Subcontractors

The Supplier is responsible for passing on any information required along the supply chain (incl. the scrap metal retailer) from Buyer to Subcontractor. Upon demand, the Supplier is to provide the Buyer with documented evidence of effectiveness checks of Subcontractors’ quality management systems. The Supplier commits to enabling the Buyer to carry out an audit at the respective Subcontractors’ on the above-mentioned conditions, as well as to concluding a contract with their Subcontractors which authorizes the Supplier to do so. The Supplier commits their Subcontractors to pursuing the objectives in order to achieve the quality of products agreed upon with the Buyer.

3.3 Environment Protection, Energy Use and Work Place Safety

The Supplier is obliged to comply with the applicable national legal requirements regarding environment protection, energy use and work place safety valid in the country of manufacture. Workplaces and processes are to be designed such that inadmissible effects on employees and products are impossible. The certification or at least the implementation of management systems for environmental / energy/ occupational health and safety are mandatory for the Supplier.

4. Supplier Management of the Buyer

4.1 Supplier Qualification/ Supplier Approval

The Buyer maintains a list of approved Suppliers that have been qualified according to the approval procedure of the Buyer.
4.2 Supplier Audits

The Supplier grants the Buyer, customers of the Buyer as well as responsible authorities, the right of examining their quality management system and processes at their production sites by performing audits during their working hours. For this purpose, auditors are granted free access to those sites of the Supplier that are involved in planning, development and manufacturing of material to be supplied to the Buyer. The Buyer shall accept reasonable restrictions of this right in order for the Supplier to safeguard their corporate secrets.

At such quality audits, the Supplier commits to providing the Buyer with any documents and information required. Process audits may be extended according to VDA 6.3 by procedural or customer-specific demands on the manufacturing process. Results as well as respective improvement measures required are recorded. The implementation of the audit measures shall be monitored by the Supplier.

Reasons for Supplier audits may be the following:

- Supplier approval procedure
- Awarding of new products
- Launch of production (inspection and approval of serial production)
- Changes to facilities or of production sites (relocation)
- Scheduled Supplier monitoring
- Ongoing escalation procedure on behalf of Buyer, or customer of Buyer

4.3 Supplier Assessment and Classification

The annual classification of the Supplier (A, AB, B or C acc. to VDA 6.1) is generated by means of five assessment criteria – quality, delivery and quantity reliability, price level, service, environmental record of Supplier.

The quality of the material delivered is continuously assessed by Goods Incoming inspection at Buyer’s production site. These assessments are rated with a quality weighted figure; this figure can be negatively affected by results of a process audit performed by the Buyer, or by an initiated escalation process with the Buyer.
4.4 Supplier Development

The Buyer is prepared to continuously develop the quality management system of their Suppliers based on ISO/TS 16949 (resp. IATF 16949) and additional customer-specific requirements. For this purpose, any information required shall be passed on to Suppliers. Supplier audits also assist in helping the exchange of experience between Buyer and Suppliers.

5. Risk Management/ Contingency Plan

The Supplier must ensure that all risks that could adversely affect his ability to deliver within the supply and process chain are identified and assessed independently and managed by a risk management. Such risks may be e.g. machine failure, staff shortage, loss of subcontractor, power failure. The appropriate preventive measures should be fixed in a contingency plan. This plan shall be submitted to the customer on request. The Supplier is to take out adequate insurance against damages the Buyer suffers as a result of the Supplier’s inability to deliver as well as against product liability cases.

6. Document Management and Data Protection

The quality management system of the Supplier is required to contain procedures for control of quality requirements documents as well as for archiving of quality records for evaluation. These are to be allocated to respective products and processes.

6.1 Order Documents and Technical Documents

The Supplier shall be responsible for executing the order in compliance with the specifications according to the technical requirements of the Buyer. The Supplier is obliged to examine the documents in terms of completeness and consistency regarding their production process and, if required, to request further information from the Buyer in order to ensure correct execution of the order. The requirements of the Buyer on the product are fixed in the order and in the OTTO FUCHS material specification (OFWN). The Supplier confirms in writing to adhere to these requirements.
6.2 Archiving of Documents

The Supplier shall refer to legal as well as customer- and business-specific regulations on archiving of quality requirements documentation and quality records. A process for handling special characteristics must be implemented (see VDA Volume 1 + VDA publication “Product Creation - Process Description Covering Special characteristics SC”). Documents with reference to special characteristics shall be archived for a period of at least 15 years after the end of series production. This includes the evidences and reports on the annual self-audit concerning the critical product / process characteristics too (e.g. VW Group D / TLD self-audit or ZF self-audit on products with critical characteristics; these audit questionnaires are to be requested from the Buyer if necessary).

Upon request of the Buyer, the Supplier is to allow inspection of these audit reports by the Buyer.

6.3 Data Protection

Any information, documentation or any other knowledge must not be passed on to third parties. The Supplier commits to keeping all information of the Buyer resp. confidential as well as the Buyer’s customer by signing the confidentiality agreement (see download in the Supplier portal of the Buyer).

7. Quality and Test Planning

7.1 Risk Analysis / FMEA

The Supplier shall apply adequate preventive methods of quality planning and fault prevention („Core tools“- FMEA, MSA, SPC, PPF/PPAP, APQP), if relevant. A procedure of the FMEA must be defined and correspond to the AIAG or VDA method. Characteristics with particular requirements on documenting and archiving specified by the Buyer (s. OFWN) are to be adhered to by the Supplier. The Supplier may add critical characteristics from their own production process (s. Sec. 6.2).

7.2 Control Plan

The Supplier shall determine a Control plan (incl. the manufacturing steps and inspections) in order to reach the specifications and targets agreed. The Supplier shall be responsible for testing the products according to specifications agreed.
The Supplier shall keep records of the results of quality monitoring, quality inspections as well as actions carried out in order to correct faults; such records have to be designed such that they allow systematic evaluation.

An inspection certificate type 3.1 acc. to EN 10204 for each material delivery (content is defined in OFWN) is to be made available to the Buyer in electronic form, preferably in advance to the physical material delivery (mailbox: SupplierCertificate@otto-fuchs.com).

7.3 Inspection and Test Equipment

The Supplier shall administrate and control any testing and measuring devices. This includes the regular calibration of the inspection and test equipment and the statistical determination of the measurement uncertainty (capability) of the measuring systems referred to in the Control plan.

In case the Supplier is provided with testing and measuring devices on behalf of the Buyer or the Buyer’s customer, such equipment shall also be administrated and controled by the Supplier.

7.4 Organizational Knowledge/ CIP

The Supplier defines continuous improvement as a holistic approach to its quality management system. The summarized experiences from previous projects and quality issues are to be used for development of a knowledge management system (lessons learned).

8. Maintenance

In order to minimize downtime of machinery, facilities and tools, the Supplier shall implement preventive and predictive maintenance methods when defining the maintenance plans.


9.1 General

Prior to start of serial production the product and process approval procedure (material qualification incl. the PPAP- documentation) is to be carried out by Supplier.

The metalurgical requirements on the material qualification and the content of the PPAP-documents are defined by the Buyer.
9.2 Process Approval at Supplier

With an internal inspection and approval of process the Supplier proves they are capable of producing products of required quality and quantity in a controlled and capable process under serial conditions. The Buyer may participate in the approval of the manufacturing process at the Supplier's production site.

9.3 Re-Qualification Inspection

The requalification test (product / process) by the Supplier must be defined in the Control plan and carried out at least once a year. In order to ensure the raw material and the component part characteristics, the Supplier is obliged to monitor the following special characteristics and to retain the corresponding data acc. to VDA 1:

- Chemical analysis of the casting charge
- Homogenization parameters
- US test results of the bars or billets according to OFWN

The measured values / test results have to be analyzed at least once a year (failure frequency, fault cause, improvement measures) and evaluated.

Upon request, re-qualification documents are to be submitted to the Buyer within two working days.

10. Labeling, Traceability, Packaging, Storage

Production flow and procedures for handling products are to be defined such that damage and impairment of quality are prevented. In particular, this applies to transport, storage, packaging, conservation and shipping. Identification of raw material is to be in accordance with the technical requirements of the Buyer (s. OFWN).

In order to ensure traceability the Supplier shall implement an identification system that fulfills the Buyer’s requirements for metal formats as ordered. Traceability of process and product data of a production batch up to the primary materials used is to be ensured.

Storage conditions of products at the Supplier’s site are to be such that loss, theft, damage and change of material properties caused by environmental impact are impossible.

Special packaging regulations of the Buyer are to be observed (s. OFWN).
11. Serial Production / Complaints

The Supplier is obliged to deploy steering actions appropriate for monitoring serial production. In case of process disruptions or quality defects with the Supplier, root causes are to be analysed, improvement measures are to be initiated and their effectiveness is to be verified.

By delivering of products to the Buyer, the Supplier confirms to have fulfilled all requirements on the product ordered. Should, in exceptional cases, products have been produced for the Buyer that do not meet specifications, the Supplier is obliged to issue a deviation request and to obtain special approval from the Buyer before material delivery. The special approval shall be submitted with the inspection certificate type 3.1 according to EN 10204 for the material supplied. The Buyer is to be informed without delay about deviations that the Supplier detected only after delivery.

During incoming material inspection, the Buyer inspects the products and delivery documents received from the Supplier regarding quantity and identity requirements as well as any transport and packaging damage visible on the outer packaging. The Supplier shall be notified immediately of any complaints resulting from this inspection. In addition, the Buyer shall inspect the goods delivered by the Supplier in the course of the manufacturing process according to orderly business practice and inform the Supplier of defects detected in writing by means of a Complaint Report (8D-report). The Supplier must provide information on the initiated immediate corrective measures regarding the complaint within two working days in an 8D-report (acc. to the AIAG or VDA method).

If the production of the Buyer (and the Buyer’s customer respectively) is threatened to stand still as a result of faulty deliveries, the Supplier is to take remedial action promptly, and the Buyer – upon written consent and at the expense of the Supplier – is permitted to take the required actions (e.g. sorting and reworking, material testing) respectively. All direct and indirect costs of the Buyer (and Buyer’s customer respectively) incurred by complaints that are evidently caused by the Supplier, are to be absorbed and accepted by the Supplier.

12. Information Obligation

In case it becomes noticeable that agreements made e.g. on quality characteristics, schedules, delivery volumes cannot be fulfilled, or in case the Supplier detects a decline in quality, the Supplier is obliged to inform the Buyer thereof as well as about detailed circumstances promptly and to initiate corrective actions. The Supplier is obliged to disclose respective process documentation and manufacturing data.
The Supplier shall inform the Buyer timeously before any changes of manufacturing processes and test methods with influence on the product quality, changes of the product or relocation of production sites. The Buyer shall then decide whether the planned changes require new qualification (PPAP). Any changes on product and production process are to be recorded in a product history.

13. Escalation Procedure

With serious deviations from quality requirements the Buyer reserves the right to initiate an escalation procedure with the Supplier.

Triggers for initiating an escalation procedure may e.g. be the following:

- repeated faulty deliveries despite completed problem solving (8D)
- repeated disruptions of Buyer´s production caused by faulty deliveries
- repeated/ critical complaints by customers of Buyer, caused by faults of Supplier
- field failures and recall actions respectively, by customers of Buyer, caused by faults of Supplier
- insufficient complaint management of Supplier
- impending stoppages of Buyer’s production and their customers’ production respectively, caused by faults of Supplier
- significant exceeding of target agreements (e.g. ppm) with Suppliers
- critical action out of Supplier audit not implemented
- unsatisfactory project management of Supplier
- special status of Supplier with customer of Buyer (e.g. controlled shipping level 1-2-3; C category, etc)
- Loss of Supplier’s QMS certificate (ISO 9001, VDA 6.1, ISO/TS 16949 resp. IATF 16949)
The Buyer has implemented a three-stage escalation procedure.
By means of a structured escalation procedure with Suppliers, a smooth run of production as well as project shall be ensured, arising problems shall be solved sustainably.

**Escalation Stage 1:**
At the first escalation stage (solving of problem by Supplier has not been successful) the Supplier is invited to a meeting in order to discuss the problem with the Buyer and to schedule the agreed corrective actions.

**Escalation Stage 2:**
Escalation to stage 2 (outside assistance required for solving of problem at Supplier´s) follows in case result of stage 1 is unsatisfactory.

Escalation stage 2 provides for a root cause analysis that may take place on-site at the Supplier´s, or at the Buyer’s facility. This analysis may be performed by the Buyer as a process audit. The action plan agreed is to be executed by the Supplier in the stipulated period.

**Escalation Stage 3:**
An unsatisfactory result to escalation stage 2 leads to the initiating of stage 3 (Supplier is not suitable) or even to removing the Supplier as a Supplier to the buyer and their customers.

The Buyer’s customer shall be involved in escalation stage 3 in case the Supplier has been selected by the Buyer’s customer or in case of any risk to the customer.

**De-escalation:**
In the case where effectiveness evaluation at the respective escalation stages show positive results, the Supplier shall be notified of the lifting of escalation procedure (de-escalation). The de-escalation procedure shall be dealt with step by step.

**14. Warranty and Liability**
These quality assurance requirements (QAR) do not limit the Supplier’s obligations regarding warranty and liability resulting from the supply contract and legal regulations.
15. Additional Regulations

Unless otherwise specified in these quality assurance requirements or elsewhere, the Buyer’s general terms and conditions of purchase apply.

In case of a dispute the German wording of QAR shall be valid.

These quality assurance requirements (QAR) shall be valid until replaced by a revision. The up-to-date issue of these QAR incl. Appendix 1 (CSR) is to be found on the Supplier portal of the Buyer at www.otto-fuchs.com.
## Appendix 1: Customer-Specific Requirements on ISO/TS 16949 (CSR)

Update: January 2017

Basic documents for the QAR Raw-Material Automotive (informative)

<table>
<thead>
<tr>
<th>OEM (Buyer’s customer)</th>
<th>CSR on ISO/TS 16949</th>
<th>Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>VW/ Bentley</td>
<td>Formel Q- Concret</td>
<td>April 2015</td>
</tr>
<tr>
<td></td>
<td>Formel Q- Capability</td>
<td>June 2015</td>
</tr>
<tr>
<td></td>
<td>Formula Q- New Parts Integral</td>
<td>December 2014</td>
</tr>
<tr>
<td>Audi</td>
<td>Quality Specification Audi AG LAH 893 010</td>
<td>March 2016</td>
</tr>
<tr>
<td>Porsche</td>
<td>Quality Management Agreement btw. Porsche AG and Suppliers</td>
<td>Update 2011</td>
</tr>
<tr>
<td>Daimler</td>
<td>MB Special Terms 2016</td>
<td>December 2015</td>
</tr>
<tr>
<td>TRW- THK ZF</td>
<td>Global Supplier Quality Manual (GSQM) – TRW Automotive QR83</td>
<td>April 2010 Update 2011</td>
</tr>
<tr>
<td>Bosch</td>
<td>QAR</td>
<td>May 2013</td>
</tr>
<tr>
<td>Continental</td>
<td>GQA- General Quality Agreement</td>
<td>July 2012</td>
</tr>
<tr>
<td>Renault</td>
<td>Renault CSR for use with ISO/TS 16949</td>
<td>März 2012</td>
</tr>
<tr>
<td>Getrag Ford Transmissions</td>
<td>GCG 904404</td>
<td>December 2007</td>
</tr>
</tbody>
</table>