

## **QAA Suppliers**

### **1. Foreword**

Our prestige and position on the market are decisively influenced also by the quality of our products. The quality of your supplies has a direct influence on our products. Our suppliers are responsible as our partners for the quality of their products.

The present QAA Suppliers (Quality Assurance Agreement with Suppliers) is intended to implement a joint quality strategy based on the following regulations in order to ensure smooth processes between our suppliers and Kunststoff Schwanden (KS-AG) and to minimize costs.

Within the entire delivery organization a comprehensive philosophy of continuous improvement (CIP) must be introduced. This applies in particular to:

- Quality
- Costs
- Deadlines
- Products and procedures

A further important contribution to the security of supply is an effective environmental management, which ensures compliance with the respective national environment regulations and continuously and efficiently improves the suppliers' environmental situation.

**[This QAA/QR guideline is part of the KS-AG General Terms and Conditions of Purchase.](#)**

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## **Section 1**

### **General requirements**

#### **1.1 Quality Management System**

An effective and certified Quality Management System in compliance with the IATF 16949 / (VDA 6.1 / QA 9000 / or at least ISO 9001) regulations is a basic prerequisite for a supplier relationship with KS-AG .

The following are guaranteed by the effectiveness of the QM System:

- Continuous and provable improvement of the processes, procedures and products
- Quality of the delivered goods
- Delivery reliability
- Effectiveness and efficiency of the implementation of corrective measures
- Communication at all levels
- Content and scheduling of new and change projects

Existing suppliers without proof of a certification must obtain certification at least according to EN ISO 9001 and submit proof of this.

The purpose of this Quality Management System is to meet the mutual objective a zero-defect quality.

KS-AG reserves the right to audit the Quality Management System, processes and products of the supplier or to have them audited by thirds. The KS-AG representatives shall be granted access within the normal business hours, subject to prior agreement on the date.

The points listed above are for purpose of clarification and not represent any limitations of the above mentioned regulations!

#### **1.2 Business language**

Business language is the language of the country of the ordering works, alternatively English.

#### **1.3 Quality objectives**

To measure and assess the quality achieved, the supplier defines internal and external quality goals. In this context, the following minimum requirements apply:

- Determination of the internal and external error rates on the basis of PPM (parts per million).
- Determination of the internal and external error costs.
- KS-AG may, jointly with the supplier, agree on quality targets for the products to be defined, whereby measures to be implemented in case of non-achievement may also be defined.

The supplier's liability for deficiencies or for claims for damages due to nonconforming supplies remains unaffected.

## **1.4 Environment / Health protection / EU standards / regulations**

It is recommended that the environmental situation be continuously and efficiently improved in line with international environmental management standards such as the EC Eco Audit Regulation or ISO 14001.

It is recommended on the basis of ISO 45001, that occupational health and safety management be set up and appropriately certified in order to prevent all types of accidents, downtimes and protect the health of employees.

### **1.4.1 Conformity of raw material, components, packaging and equipment**

#### **EU Directives**

On request the supplier is obliged to certify compliance with the following guidelines:  
EU Directive 2011/65 / EU and applicable also 2015/863 / EU RoHS Restriction of hazardous substances

EU Directive 2000/53 / EC End-of-Life Vehicle Directive

EU Regulation 2011/10 on plastic materials and articles intended to come into contact with food, including amendments 2019/37 and 2019/1338

#### **Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)**

KS-AG expects that all samples and products delivered are fully in compliance with the current legal regulations and standards. If required, such declarations must be registered by the supplier or its upstream supplier directly.

## **1.5 Project planning**

Comprehensive planning is required to meet the high quality requirements of our customers. For this reason a systematic, order-related planning must be a main component of the QM System.

Within the framework of a Project Management, project planning in compliance with the requirements as per section 2 of the present QAA/QR must be implemented to guarantee the product quality and delivery times for all new or modified products. This applies also to commissioned subcontractors, if any.

Project progress reports must be submitted in coordination with KS-AG. The name of the person in charge of the project must be communicated to KS-AG.

## **1.6 Particular characteristics**

In principle, all product and process characteristics are important and must be maintained. Particular characteristics, i.e. quality characteristics of functionally important and critical for the processes as well as attributes subject to a particular duty of proof, require special attention, since any deviations may significantly affect not only the suitability for assembly, the function or the quality of subsequent production operations, but also the compliance with legal requirements. Particular characteristics are defined by KS-AG and its customers and/or result from the supplier's design and/or process FMEA.

### **1.7 Products and characteristics subject to a particular duty of proof**

Concerned here are products whose characteristics have a significant influence on the safety of a vehicle or the compliance with legal requirements. A corresponding risk must be expected in this area in the context of product liability. Products falling in this category and their characteristics are suitably identified in the technical documentation of KS-AG and its customer.

The supplier undertakes to install an appropriate system for the treatment of products and characteristics subject to a particular duty of proof.

Submission of proof must meet the requirements of VDA volume 1 as regards contents and be of a nature to enable proof of applied diligence in an event of damage (evidence for the defence).

Traceability must be set up in such a way that an unambiguous assignment is guaranteed from the suppliers to the production and inspection lots. A derivation system working down to subcontractor level must be guaranteed.

### **1.8 Subcontractors – change of subcontractor**

The supplier is responsible for the development of its subcontractors (sub-suppliers / suppliers) according to the requirements stated in section 1.1. If the supplier places orders with subcontractors, the requirements of this guideline must also be met by the subcontractors. In this context please refer to the section 6.1 Presentation stages (position 12).

**KS-AG must be notified in good time of a planned change of subcontractor and the change needs the prior approval of KS-AG. A release by KS-AG of both production process and products is mandatorily required.**

KS-AG reserves the right to audit also subcontractors. Such audits, however, shall not relieve the supplier of its responsibilities towards the subcontractor and KS-AG.

### **1.9 Release of process and product**

The process and product release shall be effected in accordance with the production process and product release procedure (PPF) of VDA volume 2 or according to the production part acceptance procedure of QS 9000 (PPAP).

Series supplies may only be effected after a process and product release has been obtained from KS-AG. The process and product release comprises i.a.

- Release of first samples of the products
- Release of quality planning
- Proof of the corresponding presentation stages

Complete payment of the mould costs will only take place after process and product release.

### **1.10 Changes to product or process**

Changes to both product and process are subject to approval by KS-AG. They must be documented in a permanently updated product and process record.

### 1.11 Treatment of complaints / warranty

If the KS-AG lodges any complaints, error prevention measures shall be initiated and documented immediately, and to be notified in writing within 48 hours. In addition an 8-D report shall be submitted to KS-AG within 2 working days.

In addition to the fees listed below, all costs and reimbursement costs incurred in connection with the error message as well as expenses internally and also at the end customer are borne by the supplier.

<b>Gebühren / Fees</b>	
Bearbeitungsgebühr / Handling Fee	EUR 300 / CHF 350
Keine Reaktion innerhalb 48h / No answer within 48 hrs	EUR 300 / CHF 350
1.Mahnstufe: Keine Reaktion innerhalb 5AT / 1. Reminder: no answer within 5 days	EUR 1'000 / CHF 1'100
2.Mahnstufe: Keine Reaktion innerhalb 10AT / 1. Reminder: no answer within 10 days	EUR 2'000 / CHF 2'000

If necessary, KS-AG might verify the effectiveness of the the initiated measures taken by the supplier.

If the supplier can not provide a compliant product or sorting service within 4 hours in case of imminent machine or assembly stoppage, the resulting costs will be charged to the supplier.

### 1.12 Supplier assessment / escalation levels

At defined intervals, in principle once per year, the purchaser KS-AG informs the supplier of the supplier's classification as regards quality (achievement of the objectives), deadlines and service. The classifications defined below are hereby used and substantiated with additional demands as required.

#### **Classification A**

##### No measures required

The supplier is requested to constantly pursue the objectives of our mutual QAA (target = 0 ppm) and to keep the achieved quality position stable.

#### **Classification B**

##### Plan of action required

Information to the Management of the supplier, requesting it to implement a mutually agreed plan of action in order to reach the classification of an A-supplier again within a reasonable period.

#### **Classification C**

##### Immediate action required

Information to the Management of the supplier, requesting it to mandatorily initiate immediate measures, which must be implemented successfully within a specified period and whose effectiveness must be proven.

At the same time, KS-AG will investigate alternative suppliers in order to be able to react if necessary.

C-Suppliers are generally blocked for new enquiries.

## **Section 2** **Planning**

As a matter of principle we demand from our suppliers a systematic planning according to VDA volume 4 or alternatively QS 9000 APQP within the framework of a project management.

This planning shall not only comprise the parts produced by the supplier, but also the parts purchased by him.

### **1.13 Suppliers of direct parts**

Direct parts are products that have been directly specified and commercially negotiated between the customer of KSAG and the sub supplier of this product. In this case, the QAA of KSAG is an integrating and binding part to the existing quality agreement between the customer and the sub supplier.

If, contrary to expectations, no QAA has been agreed between the customer of KSAG and the sub supplier, the conditions of the QAA of KSAG automatically apply as part of the contractual relationship between KSAG and the sub supplier.

### **2.1 Feasibility**

The declaration of feasibility must be submitted with the quotation.

### **2.2 Scheduling**

KS-AG shall notify the supplier of the project-related deadlines. From these the supplier shall establish a detailed time schedule containing all necessary activities. This time schedule shall be coordinated with KS-AG at an early stage.

### **2.3 Planning contents**

The minimum requirements and processes/procedures to be applied must be looked up in the regulations.

### **2.4 Project evaluation**

Project progress reports are the basis for a regular project evaluation and have to be submitted to KS-AG. KS-AG reserves the right to verify how the project progress.

### **2.5 Project release**

Approval to commence production may only take place after positive inspection of all activities planned in the project.

On the part of the supplier this release shall be documented by all persons in charge of Quality Assurance, production and planning as well as other departments if applicable, with date and signature.

### **2.6 Prototyping**

For prototype parts, a prototype report shall be submitted with the first supply and after each change (index / subject number).



### **Section 3**

#### **Process and product release**

##### **3.1 First samples**

First samples are products made and inspected under mass production conditions (machines, plant, operating devices, inspection equipment as well as processing conditions).

The inspection and test results of all characteristics shall be documented in a first-sample inspection report. The number of parts to be documented must be agreed with KS-AG. The first samples, together with the first-sample inspection report and the documents as per the presentation levels (see section 6), shall be delivered to the purchaser on the agreed date. The clear identification as first samples is required and the place of production must be stated. Identical numbers must be used in the first-sample inspection report and the current, KS-AG released drawing (to be enclosed with the report) to ensure correct identification of the characteristics.

Subassemblies manufactured on the basis of a KS-AG design including the individual parts, must be subjected to a first-sampling procedure and submitted to KS-AG.

Where products of the supplier's own design are concerned, the supplier shall sample the subassembly and submit the results to KS-AG. First sampling must also be carried out on individual parts and if appropriate sub-subassemblies. This documentation shall be made accessible to KS-AG on request.

Deviations from KS-AG specifications, which were not established during process and product release, entitle KS-AG to lodge a complaint at a later date, provided that the individual positions were not clearly declared as accepted by KS-AG in the first-sample inspection report.

##### **3.2 First sample documentation**

The first-sample documentation must be delivered together with the first samples. A missing first-sample documentation leads to a negative assessment of the supplier. Unless accompanied by the first-sample documentation, first samples cannot be processed.

##### **3.3 Reasons for first samples**

In compliance with the mentioned regulations first samples are required as follows:

- When a product is ordered for the first time.
- After a change of subcontractor by the supplier.
- After a product change on all affected characteristics.
- After a change of the drawing index, in respect of all affected characteristics.
- After a delivery block.
- After delivery interruption of more than one year.
- For modified production processes.
- After the introduction of new/modified moulding devices (moulds, in case of multi-cavity moulds of each individual cavity).
- After a relocation of production facilities or use of new or moved machines and / or equipment.
- After the introduction of alternative materials and designs.

Exceptions in procedure and scope are only admissible by agreement with KS-AG, in the following cases:

- Delivery interruption for more than one year
- Very small series, customer service parts
- Standard and catalogue part

### **3.4 First samples according to data records**

Measurements must be made against the valid 3-D data model. The number of measuring points must be selected so that all geometries are safely determined.

Details of the measurements must be coordinated and agreed with Quality Assurance / Measuring Technology KS-AG.

### **3.5 Material data collection**

Recording of material data is a firm part of sampling. The data must be entered in the International Material Data System (IMDS) in coordination with the purchaser.

### **3.6 Release status / approval with reservations**

If the supplier's PPAP cannot be released due to deviations or if only a limited approval (yellow release) is granted, the supplier is obliged to re-sample and re-present all non-conforming positions within 4 weeks accordingly.

In a case of limited release (yellow release) scenario, KS-AG is allowed to block the remaining payments until sufficient proof of rectification is provided by the supplier.

## **Section 4** **Further requirements**

### **4.1 Retention periods for quality-relevant documents and records**

The supplier must define the retention periods during which documents and records of relevance to quality will be kept, whereby the following minimum requirements will be met. Should longer storage obligations arise from customer requirements, these will be notified separately, otherwise the following conditions apply exclusively.

#### **15 years for:**

- Documents and records concerning products with particular submission of proof
- Records of special inspections and tests

#### **3 years for:**

- Records of quality performances without particular submission of proof (Q-control cards, inspection and test results, PPM charts, etc.)
- Records of QM evaluations, internal audits, etc.

#### **1 year after product expiry for series and spare parts requirements:**

- Material inspection reports, sales contracts, supplements to these, etc.
- Records of process and product releases.

The retention periods start running on the date the records are established. These definitions do not substitute any legal requirements.

#### **4.2 Special inspections**

Special inspections are inspections which extend beyond the usual series inspections. Among them are e.g. strain tests, reliability tests and technically elaborate inspections. The supplier has to carry out special inspections on the occasion of first sampling in accordance with the specifications of KS-AG, and as to continue the ongoing production monitoring with the jointly determined number of parts and the inspection frequency. The parts to be tested must originate from the current mass production and the inspection results must be traceable to the production lots.

In case of negative test results the supplier must immediately stop any further deliveries of products, determine the cause of the nonconformity, initiate suitable corrective measures and document these.

KS-AG must be notified without delay (Purchasing and Quality Assurance). Further action must be agreed with KS-AG.

#### **4.3 Release of work stations**

A formal workstation release of all production and assembly stations must be granted before mass production is started. All working steps in production and assembly must be included in this. All the results have to be documented. The persons responsible to implement stopping and improvement measures must be nominated and deadlines must be set for the finalisation of such measures.

A renewed inspection (KVP) taking into account the deviations revealed beforehand must be carried out after completion of the specified measures. The result shall again be documented in writing.

#### **4.4 Product audits / process audits**

By means of product and process audits carried out at regular intervals (as per audit schedule and event-related) the supplier must ensure that all specifications applicable to supplies (production, inspection, identification, preservation, cleanliness, packaging, delivery documents, etc.) are complied with. The results are to be documented, including the measures introduced. Proof of the effectiveness of the measures must be submitted. The product audits can also be carried out and substantiated by „families of products“.

#### **4.5 Capability factors**

The methods to determine the capability factors must be looked up in the applicable trade publications of VDA volume 4 part 1 (Quality Assurance prior to series deployment) or QS 9000.

The following minimum requirements apply:

- Short-time process capability      Cm, Cmk      equal or > 2.00
- Long-time process capability      Cp, Cpk      equal or > 1.67

#### 4.6 Centered production

A centered production must be aimed at where characteristics are controllable.

For the special characteristics, a mastered and capable process must be maintained and documented by means of statistical process control (SPC) on the basis of ongoing systematic evaluations of the test results in accordance with the regulations.

Uncontrollable special characteristics such as e.g. mould-related characteristics and special characteristics without process capability require a restriction of the work tolerance taking into account all general conditions of statistical process control such as e.g. machine/process, measuring processes, uncertainty of inspection, measuring and test equipment, and a corresponding definition of the intervention limits.

A sorting outside these intervention limits must be avoided. In case of characteristics without process capability the 100% inspection must also be documented by statistical methods.

#### 4.7 Approval of deviations

In case of deviations from technical documents of KS-AG, a release for delivery must be obtained from KS-AG prior to delivery as a matter of principle.

In case the goods are already delivered, KS-AG must be notified immediately so that further action can be specified.

#### 4.8 Requalification

At the request of KS-AG the supplier undertakes to voluntarily submit KS-AG a requalification of all products prior to delivery. The requalification includes complete proof of dimensions of all drawing specifications as well as associated requirements. The proofs shall be submitted in written form at the request of KS-AG. By written agreement with KS-AG it is possible to limit the requalification to characteristics critical for the functions.

### **Section 5** **Bibliography**

Associated documents VDA / QS 9000 / DIN EN ISO

Quality Management in the automotive industry:

A)

**VDA regulations**

Volume No. 1	Submission of proof
Volume No. 2	Quality Assurance for deliveries to the automotive industry
Volume No. 4	Quality Assurance prior to series deployment
(parts 1-3)	
Volume No. 6	QM System audit
(part 1)	
ISO/TS 16949	Quality Management Systems
	Special requirements in case of application of ISO 9001 for series and spare-parts production in the automotive industry
Volume No. 6	Product audit at automotive producers and subcontractors
(part 5)	
Volume No. 6	Process audit
(part 3)	



B) **QS 9000 Regulations**

QA 9000	PPAP
QA 9000	APQP
QA 9000	SPC
QA 9000	MSA
QA 9000	FMEA

**Section 6**  
**Appendices and documentations**

6.1	Presentation stages	(chart 6.1)
6.2	Form:	Feasibility analysis
6.3	Form:	QM plan
6.4	Form:	Application for design deviation
6.5	Form:	8-D report

**Note:**

Forms are included in the QAA / QR as reduced samples. All required forms can be downloaded from the internet free as WORD file under [www.ks-ag.ch](http://www.ks-ag.ch).

**6.1 Presentation stages**

Presentation stage 3 applies in principle provided that no deviating written demands of KS-AG or written agreements exist for individual components.

**Requirements / presentation stages**

	<b>Presentation stages</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Cover sheet first-sample inspection report	X	X	X	X	X
2	Inspection results					
2.1	Dimensions, materials, constituents, etc.	V	X	X	X	X
2.2	Proofs of machine capability (MFU) Proofs of process capability (PFU)	X	X	X	X	X
2.3	Proofs of functioning and reliability	X	X	X	X	X
3	Sample parts	V	X	X	X	X
4	Design documents (customer drawings, etc.)	V	X	X	X	V
5*	Development release	V	X	X	V	V
6	<u>FMEA</u>					
6.1*	Design FMEA	E	E	E	E	E
6.2	Process FMEA	E	E	E	E	E
7.1	Process sequence diagr. (prod. inspection steps)	V	V	X	V	E
7.2	QM plan	V	V	X	X	E
8	Work (production) and inspection and test plan	E	E	E	V	V
9	List of inspection devices (product-specific)	V	V	X	V	V
10	Measurement System Analysis	V	V	X	V	V
11	Proof of compliance with legal and client-specific requirements. (E.g. environment, safety, recycling)	V	X	X	V	E
12	List of all commissioned subcontractors with assignment to the part and the process	V	X	X	V	V

**Legend:**

- X** Is submitted to the competent office/person at KS-AG, one copy to be kept at the supplier's (producer).
- V** To be kept at the supplier's (producer), must be submitted to KS-AG for insight at request of KS-AG .
- E** To be kept at the supplier's (producer), must be submitted to KS-AG for insight at request of KS-AG .
- \*** If the design responsibility lies with the supplier.

**6.2 Appendices / Form for manufacturability analysis  
Form 02.00.10**

To be obtained under [www.ks-ag.ch](http://www.ks-ag.ch)

**6.3 Appendices / Form QM-Plan  
Form 05.01.07**

To be obtained under [www.ks-ag.ch](http://www.ks-ag.ch)

**6.4 Appendices / Form Application for design deviation  
Form 02.00.09**

To be obtained under [www.ks-ag.ch](http://www.ks-ag.ch)

**6.5 Appendices / Form 8-D report  
Form 05.01.03  
Form 05.01.04 execution reference**

To be obtained under [www.ks-ag.ch](http://www.ks-ag.ch)

**Apart from the above, reference is made to our General Terms of Purchase:**

To be obtained under [www.ks-ag.ch](http://www.ks-ag.ch)