

CARL BECHEM GMBH

Quality Assurance Guideline

1. Preamble

As one of the leading lubricant manufacturers, the BECHEM group has set itself the goal to help shape the global market and to be the first contact for tribological issues.

In order to meet this demand, pursue a structured and methodical quality process to safeguard our production and value-adding processes.

In cooperation with our suppliers we have a 0-defect objective.

Continuous improvement at all levels, a company-wide understanding of quality, and a willingness to be customer-oriented are utilized to meet this objective.

These quality assurance guidelines are intended to communicate our understanding of quality to all customers and partners and form the basis for smooth processes and successful cooperation.

2. General Requirements

2.1. Scope

The following provisions are to be identified as guidelines for quality assurance between CARL BECHEM GMBH, hereinafter referred to as BECHEM, and its customers. They define the internal quality standard of the organization and are valid for all locations in Germany with the following delimitation:

The locations Hagen as well as Gardelegen-Mieste fulfil the requirements of IATF16949 including the applicable documents. The location Kierspe satisfies the requirements of DIN EN ISO 9001. The latest revision of the requirements applies in each case.

Insofar as we have entered into contractual agreements with a customer or agreed our General Terms and Conditions of Sale and Delivery, these shall take precedence over the contents of these guidelines.

2.2. Quality targets

The 0-defect objective is the quality benchmark for all BECHEM sites in cooperation with our suppliers. PPM ratings as well as targets based on them are not suitable for process engineering products.

2.3. Management systems and certifications

2.3.1. Quality management system

BECHEM in Hagen is certified according to IATF 16949 and supports as central function the locations in Gardelegen-Mieste (IATF 16949) and in Kierspe (DIN EN ISO 9001) according to their certification standards.

2.3.2. Other management systems and certifications

BECHEM has a certified environmental management system according to DIN EN ISO 14001 for all locations of the GmbH. As occupational health and safety is an integral part of the management system, separate certification in accordance with OHSAS 18001/ISO 45001 is not required.

The preservation of morals and ethics within the organization as well as along the supply chain is self-explanatory for BECHEM and is ensured by the internal Compliance Officer with the help of the Code of Conduct.

To ensure the rights of all legal parties and persons BECHEM respects and complies with all aspects of the Data Protection Regulation (DPR).

Furthermore BECHEM is an authorized economic operator, authorized exporter and holds the authorization for simplified customs declaration. Additionally, the locations Hagen and Gardelegen-Mieste are approved as known consignors.

3. Advance quality planning

3.1. Project management

A multidisciplinary approach according to APQP is applied to the implementation of development projects based on the requirements of AIAG and IATF 16949. The fulfilment of the requirements according to the standards is based on the applicability of these in relation to product and process.

3.2. Product and process release procedures

Product and process release procedures are carried out for products that remain in the vehicle in accordance with VDA Volume 2. In addition, the procedure according to AIAG-PPAP is implemented in a customer-oriented manner.

3.3. Statistical capabilities

Statistical capabilities and characteristics according to CpK, CmK as well as PPM or SPC are not applicable in single batch production and are therefore not considered. Instead, 100% product control is performed.

Due to the non-existing suitability for process engineering products, no measuring system analyses according to AIAG-MSA or VDA 5 are carried out. Instead BECHEM participates in inter-laboratory tests and performs measuring system analyses according to ASTM-Standard D6299.

3.4. Audit management

BECHEM carries out internal system audits, production process audits, product audits, and self-assessments according to requirements via an annual audit program. Production process audits according to VDA 6.3 are carried out on the basis of product families in case of process uniformity.

3.5. Supplier management

The unrestricted passing on of the requirements of customers to our suppliers is not possible because BECHEM partly cooperates with suppliers who extract raw and natural materials and are at the beginning of the supply chain. Here only the approach of sustainable supplier development can be applied.

As a basis for the qualification as a supplier the certification proof according to DIN EN ISO 9001 must be provided and maintained.

3.6. Product safety and compliance officers (PSCR)

The responsibility of the "PSCR" according to the automotive standard includes all products and processes over the entire product life cycle, from project planning to EOP. The "PSCR" is supported to a significant extent by the departments of Product Safety (PS) and Health Safety Environment (HSE). The request for implementation is requested within the supply chain, if applicable.

3.7. Field failure process

The field failure process according to VDA is already applied in project management and is implemented on the basis of product families.

3.8. Conformity with law and regulations

BECHEM ensures the worldwide regulatory and normative requirements.

Furthermore, the raw materials used as well as the products of Carl Bechem GmbH comply with the requirements of the REACH regulation (Regulation (EC) No. 1907/2006) and the RoHS directives (2011/65/EU) taking into account the guidelines of the Organization for Economic Co-operation and Development (OECD) for the handling of so-called Conflict Minerals.

On request BECHEM provides material safety data sheets and technical data sheets for each product, as well as material data on request according to IMDS or CAMDS.

4. Order fulfilment

General

According to the core processes at BECHEM the order fulfilment includes the following areas:

- 4.1. Creation of orders via the sales department
- 4.2. Incoming goods inspections of raw materials and materials
- 4.3. Production of orders
- 4.4. Inspection of product quality by the QA department
- 4.5. Filling & storage
- 4.6. Logistic provision & dispatch

For raw materials, auxiliary materials and other materials used, as well as for the measuring and testing equipment in use, traceability applies in accordance with the standard requirement.

These so-called operating resources are controlled in accordance with the requirements and are only systemically accessible when released.

Accordingly, equipment that is being checked, is faulty or suspected of being faulty cannot be used systemically. The same applies to all products and their labels.

The combination of points 4.1 to 4.6 can be traced back at any time by means of a unique numbering and batching system.

4.1. Creation of orders via the sales department

4.1.1. Order acceptance

Orders are usually received via our internal sales department. The order placement has to be done here in written form. Due to the provision of additional resources for the administration of various systems, customer portals can only be served after appropriate coordination.

4.1.2. Cancellations and changes of orders

Cancellations and changes of orders and contracts must be made in accordance with the provisions of § 5 of the GCS.

4.1.3. Prices and pricing

BECHEM cannot comply with the demand for fixed prices. Since prices depend among other things on the conditions on the procurement markets, price fluctuations customary in the industry cannot be excluded according to our general terms and conditions of sales and delivery. In such cases, this information will be communicated to the customer in a timely manner.

4.1.4. Information provided by the company

In order to fulfil the order, basic information must be provided by the customer. Information may include, among other things: address of the Company; delivery address; contact persons; the company data; and bank data.

4.1.5. Delivery dates

BECHEM maintains minimum and safety stocks for its products and continuously optimizes them in order to act in a customer-oriented and cost-efficient way.

Notwithstanding this, delivery dates have to be coordinated and harmonized with the organization and are only binding for BECHEM with written confirmation. Exceptions to this rule are mutually agreed contractual bases.

4.1.6. Product availability

BECHEM aims to supply the contract products for the period of at least 15 years. Decisive factors are the availability and the pricing on the international raw material market. Therefore, a blanket delivery guarantee for the desired period cannot be given.

The process engineering units required for product manufacture are in some cases special designs which are renewed or replaced in line with the state of the art as required. Written approval for scrapping or sale of equipment to customers is not provided.

4.2. Incoming goods inspection of raw materials and materials

Incoming raw materials, auxiliary and operating materials with an effect on the product and process conformity are subject to an incoming goods inspection at BECHEM. Externally provided certificates as well as quality relevant records are archived in the course of the obligation to keep documents.

4.3. Production of orders

BEICHEM's production processes are defined and ensure a stable product within its defined performance range at constant raw material quality.

In order to maintain the supply chain BEICHEM has implemented an emergency management process to ensure the delivery security to the customer. There is no 24 hour on-call service. This concept is reviewed annually for functionality, effectiveness and efficiency. Furthermore, redundant process technologies at several locations ensure the delivery performance.

4.3.1. Production, tests during production, approval

To ensure a compliant product, the core processes are audited in an annually coordinated routine according to VDA 6.3 (see chapter 3.5).

Documentation on these processes as well as all relevant records are archived for at least 15 years. This also includes the archiving of quality-relevant records and measurements from the quality control during production as well as the outgoing goods (release) control. For the traceability of the product quality BEICHEM maintains warehouses where samples of all batches are stored for a defined period of time in accordance with the granted shelf life.

4.3.2. Maintenance

Another essential aspect for ensuring the conformity of products and production processes are the maintenance procedures. Targeted preventive and predictive maintenance increases plant availability to a maximum and reduces the number of unplanned shutdowns to a minimum.

4.3.3. Labelling

BEICHEM labels its products according to the legal requirements of the country of destination as text form as well as bar code with the following contents:

- a) Information about the product: product name, article text, part number, batch number.
- b) Information on the contents: quantity, hazard information including pictograms.

In the case of deviating and customer-specific labelling specifications, the feasibility must be agreed in advance.

4.4. Product quality check by QM

BEICHEM carries out quality controls to verify the product quality on plant level in own testing laboratories. The laboratories meet the requirements of the standard IATF 16949 resp. DIN EN ISO 9001. Accreditation in accordance with ISO/IEC 17025 is not planned for the internal laboratories.

5. Complaints

5.1. Processing of complaints

Received complaints from customers are processed with priority and intensity at BEICHEM. With the approach of continuous improvement of processes and products BEICHEM always strives to bring about optimizations and to act in a customer-oriented way.

By applying the 8D-system the causes for possible non-conformities are analyzed and measures against recurrence are derived and implemented.

BECHEM informs in writing about the receipt of the complaint and the start of the processing. A 3D report is provided on request regarding the status of the first measures. In order to be able to analyze quality defects of the product comprehensively, it is often necessary to provide a sample of the complained batch. For this reason, the timing of the 8D report is coordinated with the customer on a case-by-case basis.

6. Recycling

A take-back system exists exclusively for drums and containers that have to be reprocessed due to the adhesion of residual substances. In this case the collection is carried out by the GVÖ take-back system (fee-based take-back of containers of the mineral oil industry for emptied small containers which were filled with oil or grease).

Other types of containers are not taken back by BECHEM. A general charging of disposal costs by the customer cannot be agreed.

7. CIP and Lessons Learned

In the course of continuous improvement BECHEM conducts routine quality meetings at all levels.

In these circles sometimes daily and strategic aspects are discussed, analyzed and examined. With the aim of increasing the effectiveness and efficiency in all our actions and activities, measures are derived from this, which are primarily intended to force the satisfaction of the interested parties. For this purpose, the methods of root cause analysis, such as 5 Why, Ishikawa, fault tree analysis and the 8D system are used as standard.

Ideally, the associated risks are evaluated and the transferability to other products and processes is checked.

8. Other applicable documents

MD_002-36_General conditions of sale and delivery
MD_002-35_Shipping and packaging guideline

If provisions of the Guide conflict with provisions of individual contractual agreements, the General Terms and Conditions of Sale and Delivery or the Shipping and Packaging Directive, the following hierarchy of standards results:

Individual contractual agreements
General Conditions of Sale and Delivery of CARL BECHEM GMBH
Shipping and Packaging Guideline of CARL BECHEM GMBH
Quality Assurance Guideline of CARL BECHEM GMBH

9. List of abbreviations

AIAG.....	<i>Automotive Industry Action Group</i>
APQP	<i>Advanced Product Quality Planning</i>
ASTM	<i>American Society for Testing and Materials</i>
CAMDS.....	<i>China Automotive Material Data System</i>
CmK	<i>Short-term capability index</i>
CpK	<i>Process capability index</i>
DIN EN ISO 19011.....	<i>Guideline for the auditing of management systems</i>
EOP.....	<i>End of Production</i>
IATF	<i>International Automotive Task Force</i>
IMDS	<i>International Material Data System</i>
ISO	<i>International Organization for Standardization</i>
ISO/IEC 17025	<i>General requirements for the competence of testing and calibration laboratories</i>
KVP	<i>Continuous improvement process</i>
MSA	<i>Measurement Systems Analysis</i>
MTBF	<i>Mean Time Between Failures</i>
MTTR.....	<i>Mean Time to Repair</i>
OHSAS	<i>Occupational Health and Safety Assessment Series</i>
PPF	<i>Production process and product release</i>
PPM	<i>Parts Per Million</i>
PSCR.....	<i>Product Safety and Conformity Representative</i>
REACH	<i>Registration, Evaluation, Authorisation and Restriction of Chemicals</i>
RoHS	<i>Restriction of (the use of certain) Hazardous Substances in Electrical and Electronic Equipment</i>
SPC.....	<i>Statistical Process Control</i>
TPM.....	<i>Total Productive Maintenance</i>
VDA.....	<i>Automotive Industry Association</i>
VDA Band 2	<i>VDA 2 Assurance of the quality of deliveries</i>
VDA 5.....	<i>Testing process suitability</i>
VDA 6.3	<i>Process audits</i>

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