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**Appendix 1: Excerpts from definitions and certificates of material deliveries  
in accordance with EN 10204 / January 2005**

### Foreword

The quality and position of our products on the world market are directly affected by the quality of our purchased parts.

These guidelines are intended to aid both the Moog GmbH purchasing department as well as suppliers in observing and fulfilling the conditions and requirements for purchased parts (raw materials, parts, assemblies etc.) and the associated quality assurance guidelines.

## 1. General

### 1.1 Area of application

This guideline for the quality assurance of purchased parts is to be used by the Moog GmbH purchasing department as well as the selected or designated suppliers with whom the application of these guidelines was agreed.

### 1.2 Quality requirements

The quality requirements which are binding for the supplier are:

- Moog order (form) including the regulations, standards, technical delivery conditions and Moog drawings mentioned therein;
- separately agreed testing procedures and testing regulations;
- additional specifications arising from the order and general conditions.

If certificates for materials, assemblies or individual parts are requested in the purchase order, they must fulfil the requirements specified by EN 10204, Item 2.1, 2.2 or 3.1 (see Appendix 1: Work instruction AA-QA 024 - Excerpts from definitions and certificates of material deliveries in accordance with EN 10204 / January 2005).

The supplier is to examine the documents sent to him for completeness and actuality. If documents are missing or not clearly specified, the Moog GmbH purchasing department is to be informed immediately.

### 1.3 Requirements / limitations

The following limitations are binding specifications for the supplier:

- No glass beads may be used for blasting during the production or processing of parts, components, assemblies or products which are delivered to Moog GmbH.
- For elastomer parts, the remaining shelf life on the day of delivery should be greater than 50 %. The supplier is to specify the manufacturer name, the trade name of the elastomer part, the batch number, the production- or cure-date and the specific density for each delivery lot.
- Appropriate measures for ESD protection are to be taken for all electronic components.
- The following information must be included in the delivery papers for electronic components (e.g. transistors, integrated components, connectors etc.) which are ordered according to military specifications:
  - the manufacturer of the component
  - the lot number or,
  - alternatively, the production date for each component.

## 2. Supplier Quality Ability

### 2.1 Quality Ability Assessment

The Moog GmbH Purchasing department will include the questionnaire „Supplier Self Assessment“ (Form QAF093) with each written inquiry for a quotation to every supplier whose quality management system we are not familiar with. This is to be completed by the supplier and is used by our purchasing and quality assurance departments as a basis for evaluating the supplier's ability to deliver high-quality products.

In exceptional cases, the supplier evaluation can be performed directly onsite with the supplier in the course of an audit performed with the involvement of our purchasing and quality assurance departments (Form QAF068). For this purpose, Moog places requirements on our supplier's QM system which are appropriate for the size of the company as well as for the type and scope of the planned delivery.

### 2.2 Quality Management Assessment

If the supplier is audited by the Moog GmbH purchasing and quality assurance departments, the audit is performed in accordance with the DIN ISO 9001 requirements.

In exceptional cases, the NATO requirements (AQAP) may also be referred to.

If determined to be in compliance with these standards the supplier is added to the internal file of qualified suppliers as a possible provider and informed of the decision.

## 3. First article inspection

### 3.1 Possible reasons for first article inspection

For the approval of a series delivery, the supplier is to present marked first article.

Parts / products which are affected by this include those which:

- are ordered for the first time;
- are ordered for the first time following a change;
- are reordered following an interruption in production longer than 2 years;  
In case of EX-Proof parts an interruption longer than 1 year is not allowed.
- are produced for the first time after cancelling of a delivery block;
- are produced using new or changed production methods;
- are produced using new or changed moulding equipment (moulds, dies, compression moulds etc.).

With part families (i.e. rotor shafts) produced by the same manufacturer it's not necessary to perform for each dash no. or variant a first article inspection.

### 3.2 First article inspection

First articles are produced by the supplier under the conditions of series production and are subjected to the first article inspection (all dimensions).

Quantity of units affected by first article inspection and quantity of parts to be delivered are defined in the purchase order by the purchaser.

For this purpose, the first article inspection report from the supplier's quality assurance department, which is listed as an applicable document, or an equivalent report is to be completed and sent to the purchaser at Moog GmbH together with the appropriately marked first article.

Every product criteria defined in drawings or specifications have to be checked during first article inspection as far as appropriate and not agreed in another way.

Special requirements have to be agreed together with the supplier and documented in the purchase order.

The following requirements for performing the first article inspection are applied here:

- the measurements are to be performed with appropriately calibrated test equipment;
- for each criterion to be tested, representative nominal/actual values are to be stated which includes the following as necessary:
  - dimensions,
  - surface quality,
  - material quality,
  - electrical values, etc.;
- if certain tests cannot be performed by the supplier, this must be noted on the report;
- discrepancies which affect function, exterior dimensions, interfaces or other requirements (e.g. resistance to corrosion), approval is to be obtained from Moog GmbH prior to delivery;
- the first article inspection report issued by the supplier is to be signed off by the responsible person in the quality assurance department.

### 3.3 First article inspection by Moog GmbH

Final series approval is granted after Moog GmbH has received the first article and it has been inspected for compliance with the specifications.

The first article is inspected by product support or engineering and quality assurance.

The purchasing department then:

- approves series deliveries
- or in the case of claims returns the first article to the supplier for corrective actions.

In any case, the supplier is informed of the result of the first article inspection by the responsible purchaser.

If first articles which have not been approved are returned for corrective actions, new first articles are to be provided by the supplier.

Without approval of the first article by the Moog GmbH quality assurance department, series approval is not possible.

## 4. Series deliveries

### 4.1 Delivery papers

If no special agreements have been made for series deliveries, the delivery papers are to include, at a minimum, the data listed below:

- Moog order number;
- Moog part number;
- Quantity;
- Description.

#### **4.2 Receipt of goods**

In deviation from §377 of the German Commercial Code (HGB), Moog GmbH notify the supplier of defects within 14 days upon acceptance of goods or upon discovery of hidden defects.

Upon delivery, Moog GmbH inspects the supply objects only with regard to identity and quantity as well as externally detectable transport damages.

#### **4.3 Receiving inspection**

Purchased parts are qualitatively inspected against the required specifications by the supplier within the framework of the agreement. Moog GmbH, however, retains the right to perform a more detailed sampling inspection in individual cases. Depending on the conformance of the inspected goods with the agreed quality, the deliveries are then

- approved,
- approved conditionally or
- rejected.

Moog GmbH is not obligated to perform any tests which are further reaching than those specified above or to disclose information in greater detail than specified above.

#### **4.4 Discrepancy from the specifications**

If parts are either accepted conditionally or rejected, the supplier is informed in writing in any case (supplier discrepancy note).

On the basis of the detected defects, the supplier is obligated to investigate their causes and to initiate corrective actions to prevent further derogations.

The Moog GmbH quality assurance department is to be informed of the corrective actions within 15 work-days.

#### **4.5 Quality documents**

The supplier is obligated to document and keep on file agreed-upon or legally required quality records, provided it is not contractually agreed that these documents be included with the deliveries.

Upon request, these records can be viewed by Moog GmbH.

### **5. Other applicable documents**

- QAF93 Questionnaire "Supplier Self Assessment"
- QAF48 First Article Inspection Report
- QAF68 Questionnaire "Quality Assurance Procurement"

**Excerpts from definitions and certificates  
of material deliveries in accordance with  
EN 10204 / January 2005**

**MOOG**

AA-QA 024

*Work instruction*

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## **Definitions**

### ***Non-specific test:***

Tests performed by the manufacturer using a procedure deemed appropriate by him which is intended to determine whether products which are manufactured in accordance with the same product specifications and using the same procedure fulfil the requirements defined in the order.

The tested products need not necessarily to be from the delivery itself.

(e.g. 2.1 and 2.2)

### ***Specific test:***

Tests which are performed prior to the delivery according to the product specifications on the products to be delivered or on test units, of which the products are a part, in order to determine whether the products fulfil the requirements defined in the order.

(e.g. 3.1)

## **Certificates**

### ***Declaration of compliance with the order according to 2.1:***

Certificate in which the manufacturer confirms that the delivered products fulfil the requirements of the order; this certificate does not include details of test results.

### ***Test report according to 2.2***

Certificate in which the manufacturer confirms that the delivered products fulfil the requirements of the order; this certificate includes results from non-specific tests.

### ***Inspection certificate according to 3.1***

Certificate issued by the manufacturer in which he confirms that the delivered products fulfil the requirements defined in the order; this certificate includes the test results.

The test unit and the execution of the test are defined in the product specifications, the legally stipulated regulations and technical rules and/or in the order.

The certificate is to be confirmed by an inspector selected by the manufacturer who is independent of the production department.