



## Scope

between	<b>KESSEL AG</b> (or other KESSEL comp.) hereinafter referred to as "KESSEL"
and	<b>SUPPLIER</b> hereinafter referred to as the "SUPPLIER"

## 1. Field of application, definition, purpose

These general provisions contain the basic requirements for the initial sampling of all bought-in parts. They are a summary of the most important sampling requirements for the SUPPLIERS of KESSEL. Additional customer requirements may have to be taken into account depending on the specific product. Sampling aims to prove, before the start of serial production, that the quality requirements agreed in drawings and specifications are satisfied. Serial parts (initial samples) are parts that are manufactured in the production facility under serial conditions for series tools, gauges, processes, materials, personnel, environmental and process settings (speed, cycle time, pressure, temperature etc.). If production parts are manufactured from more than one mould, one tool, one die or one model, a complete dimensional evaluation of parts from each mould, each die etc. is needed. Representative parts from each position of a multi-part mould, die, design, tool or model have to be tested and the measured values clearly assigned to the parts. The purpose of initial sampling is to determine whether all of KESSEL's specification requirements have been understood correctly and that the production department is able to manufacture products that satisfy these requirement during an actual series run with the target production figures.



## 2. Terminology

### 2.1 Abbreviations

<b>ISTR</b>	<b>I</b> nitial <b>S</b> ample <b>T</b> est <b>R</b> eport
<b>IMDS</b>	<b>I</b> nternational <b>M</b> aterial <b>D</b> ata <b>S</b> ystem
<b>CAD</b>	<b>C</b> omputer <b>A</b> ided <b>D</b> esign
<b>FMEA</b>	<b>F</b> ailure <b>M</b> ode and <b>E</b> ffects <b>A</b> nalysis
<b>SPC</b>	<b>S</b> tatistical <b>P</b> rocess <b>C</b> ontrol
<b>Cp- value</b>	<b>C</b> apability <b>P</b> rocess (measure of the scattering)
<b>Cpk value</b>	<b>C</b> apability <b>P</b> rocess (measure of the scattering and position)
<b>AG</b>	' <b>A</b> ktiengesellschaft' (stock company)
<b>8D report</b>	<b>8</b> <b>D</b> isciplines report

### 2.2 Definitions

#### 2.2.1 Prototype parts

A technical prototype is an operational, but often simplified, trial model of a planned product or component built for the respective purposes. It may simply look like the final product or be technically identical to this. A prototype often serves as preparation for series production. Prototypes are tested and approved by KESSEL's development and quality management departments.

#### 2.2.2 Field test parts

In production and process technology field test parts are the penultimate empirical test of product quality by KESSEL before the pilot series. These products are installed and tested in field tests on the premises of KESSEL customers under real conditions. The field test parts are also tested and approved by KESSEL's development and quality management departments.

#### 2.2.3 Initial sample parts

Initial sample parts serve to approve products and thus to approve the delivery of serial parts. Initial sample parts are parts that have been manufactured completely with standard equipment and under standard conditions. They are taken from a representative production process.

#### **Initial sample parts are manufactured:**

- At the final production site
- Typically from one hour to one shift
- In a quantity agreed with KESSEL
- Completely and under standard conditions



## This means:

- The tools, production and test equipment
- The processes and process settings (cycle time, temperature, speed, pressure etc.)
- The materials and material combinations
- The instructed personnel
- The ambient conditions

correspond to the final series standard

## 3. Performance of a sampling

### 3.1 Reason for a sampling

The SUPPLIER has a basic obligation to inform KESSEL in due time of events that are relevant for production and to carry out initial sampling under the following circumstances.

- For a new component or product (i.e. a specific component or material, or a specific colour that has not been supplied to KESSEL)
- If products are modified on account of a change in the specifications or materials
- If designs or materials are used that may be different to the those that were approved for the product
- If new or modified tools (except prototype tools), dies, moulds, models etc., including additional or replacement tools are used
- If the production site for a product is moved
- If production processes or methods are changed
- In the event of a change of supplier, services or materials (except generic goods, such as electronic components, identical raw materials or semi-finished products)

The SUPPLIER is always obliged to carry out and document an internal approval (e.g. in a parts history). All of the quality features agreed through a drawing or specification are to be sampled with respect to dimension, material, function, haptic, acoustics, process capability or any other specified requirements. The individual requirements on the SUPPLIER are marked in the test report and are to be agreed between the SUPPLIER and the quality management department at KESSEL. It is also necessary to assess and prove compliance with statutory regulations (e.g. environmental, hazardous substances regulations), and any constituents of bought-in parts. The SUPPLIER is responsible for the bought-in materials and services of their sub-contractors.



### 3.2 Requirements on the SUPPLIER

The sampling tests are based on the drawings and specifications agreed between KESSEL and the SUPPLIER. The test plan shall be prepared by the SUPPLIER and will be approved by KESSEL in agreement with the SUPPLIER. The correct documentation is just as important. This means that all of the documents (test reports, labels etc.) must be completed in full and kept safely. The checklist (**Enclosure 1.1**) that serves as a guideline for the sampling phase helps here and should also be completed by the SUPPLIER.

#### 3.2.1 Scheduling

The SUPPLIER agrees on a sampling schedule with KESSEL and/or the responsible department at KESSEL.

#### 3.2.2 Test devices and methods

The SUPPLIER must use test devices and methods that allow to perform a problem-oriented check of components and assemblies for compliance with the given specifications. Different test methods or uncertainties with respect to test methods are to be clarified between the SUPPLIER and KESSEL before the initial sample test report is prepared. If the tests require special test equipment that the SUPPLIER does not have, a reliable other test centre must be commissioned with the work. In any case the responsibility remains with the SUPPLIER.

#### 3.2.3 Drafting the Initial Sample Test Report (ISTR) (Enclosure 1.3)

The tests with respect to the agreed drawings, specifications and test plans are performed on the SUPPLIER's premises. A corresponding initial sample test report must be prepared before each sampling. Samples must be clearly identified so as to guarantee the assignment to the individual measured values. The source from either individual or multi-part tools may have to be included in the identification. All of the features are to be marked clearly and listed individually with target values, tolerances and actual values. If the SUPPLIER discovers that actual values are outside the tolerances when preparing the test report, countermeasures to ensure that fixed specifications are observed must be taken before the sample parts are presented to KESSEL. The SUPPLIER must inform KESSEL of these measures immediately. If the SUPPLIER still submits NOK parts deliberately, KESSEL will charge a processing fee of € 50.

The SUPPLIER guarantees that in the event of planned or foreseeable changes to or a replacement of product components obtained by the SUPPLIER from third parties, samples will be sent to KESSEL in due time to allow the performance of all necessary tests by KESSEL, and KESSEL then has the opportunity of a so-called last call with respect to the original components. The last call must be able to cover at least the annual requirements of KESSEL.



## 3.2.4 Documents necessary for sampling

The initial sample test report shall be used as a standard for all necessary information between the SUPPLIER and KESSEL. All valid drawings and specifications with the corresponding consecutive numbers must be presented together with the initial sample test report. All of the dimensions, properties and comments listed in the drawings must be documented in the test report. The additional requirements on the SUPPLIER are noted in the test report. These must be enclosed with the test report as an Enclosure.

The test report consists of the cover sheet, test results sheet, details of the contents and any additionally required Enclosures. The cover sheet contains all of the necessary characteristics for sampling and the summarised decisions.

### **Addendum: the following target and actual values must be proven for the process capability analysis:**

- Sample size
- Tolerance limits
- Mean value
- Standard deviation
- Cp value
- Cpk value

In case of a note for a process capability analysis the statistical characteristics must be specified for agreed features and entered in the enclosed Excel file "SPC analysis".

### **Addendum: the following test conditions must be proven in addition to the target and actual values for the material test:**

- Material regulation (specification / date)
- Type of test
- Test device or equipment
- Test parameters

### **Addendum: the following test conditions must be proven in addition to the target and actual values for the functional test:**

- Test regulation (specification / date)
- Tested quantity
- Test frequency
- Test conditions
- KESSEL for its part assesses the samples and notes the results



- At least 3 samples from each tool cavity must be supplied to KESSEL with every sampling as agreed separately. Further samples will be kept by KESSEL.
- Moreover, the documents contain all records from KESSEL and the SUPPLIER (drawings, specifications, all technical change documents approved by KESSEL)
- Special test devices or equipment (certain attachment clamps, models, templates etc.) for the submitted sample that have been used during sampling or in the tests also have to be declared (documentation)

### 3.3 Reporting / forms

All of the documents provided by KESSEL must be completed in full as a standard for all necessary information between the SUPPLIER and KESSEL. The details must be complete to ensure a smooth course of events. The SUPPLIER's department responsible for quality signs to report to confirm:

- The acceptance of the valid drawing and specifications, that the samples have been manufactured and tested completely with standard equipment and under standard conditions.
- That the sample tests and their representation in the test report have been carried out correctly
- That an approval does discharge the SUPPLIER from their responsibility to deliver in accordance with the currently valid drawing, specifications and details in the test report
- That the samples and respective packagings have been labelled correctly with the existing labels
- That the checklist has been completed in full and conscientiously

KESSEL for its part assesses the samples and notes the results. KESSEL sends the amended copy of the test report back to the SUPPLIER. The procedure is such that the signed copies remain with the SUPPLIER and KESSEL.

## 4. Assessment by KESSEL

Following submission of the sample and presentation of the test reports, KESSEL performs tests at its own discretion within the scope of the agreed drawing and specifications. The completely filled out test report with test results as well as any additional Enclosures that are demanded must be presented by the SUPPLIER at all times on request. If necessary, KESSEL will perform an installation test with the involvement of the SUPPLIER's pertinent department.



## 5. Decision

**Following an assessment of the test results, the features:**

- Dimension (includes the results of the dimensions test in the form of a variance comparison)
- Process (includes the process capability results)
- Material (includes the material test results / IMDS data)
- Function (includes the functional test / additional requirements)
- Optical quality features

will be awarded one of the following overall grades.

**An assessment with grade 1 “Approved” means,**

that the product satisfies all of the specifications and requirements. For this reason, the SUPPLIER is entitled to supply KESSEL with production quantities of the product according to a credible purchase order.

**An assessment with grade 3 “Approved with measures/conditions” means,**

That the delivery of serial parts is allowed for a certain time, quantity or on conditions specified by KESSEL through a credible purchase order. If the measure relates to the SUPPLIER, the correction must be carried out for the next delivery, unless otherwise agreed between the SUPPLIER and KESSEL. A re-sampling for all rejected points and measures affected by a change must always be carried out by the SUPPLIER, unless otherwise agreed between the SUPPLIER and KESSEL.

**An assessment with grade 6 “Rejected, corrective measures necessary” means,**

that KESSEL's requirements have not been met and the existing deviations are unacceptable. The SUPPLIER must initiate corrective measures immediately so as to prove satisfaction of the requirements during re-sampling by a date to be set by KESSEL. In exceptional cases, a one-off approval may be granted for a limited quantity. After approval of the test report, the SUPPLIER is responsible for ensuring that the future production continues to satisfy all of the requirements. An approval of the sample by KESSEL does not discharge the SUPPLIER from their responsibility for the quality of their products. The approval does not represent a delivery order. The delivery may only be made after an approval has been granted. If no test report approval has been granted by quality management, an application for approval must be issued to the responsible department. If re-sampling is necessary, all of the quality features agreed through drawings or specifications must be assessed by the SUPPLIER.





## 6. Retention of records and samples

The SUPPLIER must retain all records of the test report and one sample each with identification for each sampling, including any additionally noted requirements. It is at KESSEL's discretion to retain reference samples from samplings.

## 7. Dispatch of initial samples

The respective packaging must be labelled with the packaging labels provided (**Enclosure 1.2.1**), which also have to be completed in full. The contact person at KESSEL must also be specified.

Sample parts must be labelled with the parts labels provided (**Enclosure 1.2.2**), which also have to be completed in full. A delivery note as well as the original test report must also be enclosed with the sample parts.

		<b>Erstmusterteile</b> (sample parts)		
<b>Packaging label</b> (packaging label)	<b>Empfänger:</b> (recipient)	<b>Artikelnummer KESSEL:</b> (article number KESSEL)		
	<b>KESSEL AG</b> Bahnhofstraße 31 85101 Lenting / Germany	<b>Artikelbezeichnung KESSEL:</b> (article description KESSEL)		
	<b>Ansprechpartner:</b> (contact person)	<b>Produktionsdatum:</b> (date of production)		
	<b>Absender:</b> (consignor)	<b>Zeichnungsstand / - Datum:</b> (drawing status / - date)		
		<b>Bestellabruf-Nr. / - Datum:</b> (order call no. / - date)		
		<b>Stückzahl:</b> (quantity)	<b>Grund der Lieferung:</b> (reason for delivery)	
	<input type="checkbox"/> Erstbemusterung (initial sampling) <input type="checkbox"/> Nachbemusterung (re-sampling) <input type="checkbox"/> Sonstiges (others)			
<b>Teileaufkleber</b> (part label)	<b>Grund der Lieferung:</b> (reason for delivery)			
	<b>Lieferant:</b> (supplier)			
	<b>Artikelnummer KESSEL:</b> (article number KESSEL)			
	<b>Artikelbezeichnung KESSEL:</b> (article description KESSEL)			
	<b>Produktionsdatum:</b> (date of production)			





## 8. Other applicable documents

Other specific documents from KESSEL (specifications, standards, etc.).

## 9. Documents for initial sampling

The SUPPLIER must obtain the documents needed for initial sampling from the central purchasing department at KESSEL.

- Drawings / specification
- CAD data (CatiaV4, CatiaV5, IGES etc.)
- Standards
- Specifications
- Documents (test report template, checklist for sampling, etc.)

## 10. Series production

Following a successful sampling phase, the start of deliveries will then be agreed between the SUPPLIER and the purchasing or material planning department at KESSEL. Only products that have been approved by KESSEL may be used for series deliveries. In cases in which it is necessary to use a product without an adequate approval status for series orders, KESSEL reserves the right to control this by means of a deviation authorisation. The SUPPLIER will be informed of the issue of a deviation authorisation for series production in writing.

### 10.1 Deviation authorisation

A deviation authorisation is an internal KESSEL document and describes a reason for a deviation from the series standard. Quality management assesses the deviations by means of a risk analysis and issues or refuses the deviation authorisation.

### 10.2 Complaints procedure

If KESSEL discovers a quality defect in a product or products delivered by the SUPPLIER, the SUPPLIER will be informed of this in a complaint.

*Detailed information can be found in the terms and conditions of purchase in the delivery contract or in the quality assurance agreement.*



### 10.3 8D report (Enclosure 1.4)

The statement on the complaints must be made in the 8D report template provided by KESSEL.

The 8D method ensures a systematic procedure for complaints. The consistent documentation of the corresponding steps towards a solution and the strong orientation on facts guarantees a thorough investigation, and hence the permanent elimination, of errors in the product or system. The SUPPLIER has an agreed period in which they can comment on a complaint after its receipt.