Instructions for sending samples

for technical cleanliness testings

DEKRA

General

These instructions are intended for sending component samples to the DEKRA laboratory for technical cleanliness testings. They must be followed in order to fulfill normative requirements regarding sample shipment and to avoid discrepancies in test results.

They refer to the following test methods:

- ISO 16232:2018-12 Road vehicles - Cleanliness of components and systems
- VDA 19-1:2015-03 Testing of technical cleanliness - Particle contamination of functionally relevant automotive parts

In addition, the respective customer specifications must be followed.

Deviations from these instructions have to be discussed with the DEKRA laboratory in advance and also have to be documented.

Minimum sample size

A minimum surface area of 200 cm^2 per sample is required for testing. If the surface area of a test specimen is less than 200 cm^2, several test specimens of a component are required. These are combined into one test lot and examined together as one sample.

Please inform us about the exact size of the component area to be tested (A = … cm^2), in order to calculate and determine the required number of test specimens.

For very large components weighing more than 50 kg and/or dimensions more than 90 cm/66 cm/70 cm, please contact us!

Additional components for determining the extraction curve

The determination of the extraction curve is used to elaborate and validate the extraction procedure and is required by the common standards for the initial testing of components. The efficiency of the extraction procedure determines whether the cleanliness of a component can be correctly assessed. Therefore, it must be demonstrated within the scope of a declining measurement that soluble dirt particles are extracted completely from the test component.

To perform an extraction curve, we require an additional test lot (requirements see minimum sample size).

For recurring tests of a component, the results of the obtained declining measurement can be used, as well as for the testing of construction-like parts. When testing construction-like parts, the extraction curve is usually performed on the largest component and the obtained extraction parameters are adopted for all further parts to be tested.

Necessary customer information for testing in the DEKRA laboratory

The following information must be provided by the client when placing the order:

- applicable customer-specific test method with current date of issue
- cleanliness specification (e. g. entry on component drawing)
- for cleanliness specification with area reference: component area in cm^2 as well as test lot size (number of components to be tested per sample) and number of samples (number of test lots to be tested)

Sample labeling and cover letter

Each specimen must be labeled with a unique sample designation. The sample label must be attached to the outside of the sample packaging. When sending samples, please always enclose our sample accompanying sheet (enclosed with the offer) – this will help us to avoid delays.

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Packing and transport

The packaging must be designed in such a way that the protection of the components to be tested from contamination by the packaging material during transport is safely ensured. Foils and bags that come into direct contact with the test component must be unused and clean (disposable packaging). Cardboard boxes are unsuitable as direct outer packaging for test objects, as particles can detach from them and contaminate the specimen. Reusable packaging must be cleaned before use.

If several components are packed together and loose, e. g. in a bag, there is a risk that they will grind against each other during transport (material abrasion) and that particles will become detached. It is therefore recommended that components are packed separately and protected from vibration (e. g. encased in foam).

Sample storage after completion of the test

The standard storage period for material samples after completion of the tests is six months. The test samples are then disposed of.
Longer storage periods or return shipment (with costs) only by arrangement.

Additional requirements from customer specifications

In addition to the general test methods described in VDA 19, for example, there are a large number of customer-specific test methods and cleanliness requirements. These can also be tested accordingly in the DEKRA laboratory. For the testing of your components, please inform us according to which customer specification we should test and assess your components. We require the respective specification from you in the currently valid version.

Laboratory address:
Please contact the DEKRA laboratory before sending samples. We will be happy to coordinate with you regarding sample shipment:

DEKRA Automobil GmbH
Laboratory for Environmental and Product Analysis
Sample receipt
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