

Vehicle component testing



Testing of Interior/Exterior Components

ISO TS 16949, which is commonly used in the automotive industry, recommends that „DIN EN ISO 17025“ accredited testing laboratories be commissioned for analyses. This condition is met by our laboratories. Especially for automotive suppliers in the fields of plastic construction, coating protection systems, electronic components, battery, engine, and transmission components, we carry out tests according to automotive standards.

Testing of material properties

Do the plastics and metals required to produce a component fulfill the necessary properties to meet the automotive industry specification?

Our material experts check the quality of your products and compliance with normative requirements – from hardness to flexural strength, from tensile testing to impact strength, from burning behavior to media resistance.

Emission and odor behavior of components

With new user interfaces, new materials, and corresponding customization options, the importance of material quality and processing in the vehicle interior is increasing. The emission of volatile organic compounds (VOC) and the proportion of condensable substances (FOG) from vehicle interior parts are therefore of corresponding importance. They influence the quality of indoor air in vehicles and are relevant for health and driving comfort.

Using test chamber measurements, odor measurements, and pollutant analyses, automotive interior parts can be tested accordingly and the emission behavior evaluated. The DEKRA test laboratory offers comprehensive measurement and analysis procedures for test chamber measurements, VOC screenings, and single substance analysis.

Environmental simulation and corrosion testing

How resistant are products to thermal and climatic loads? How quickly does the chrome surface of a radiator grille corrode in salt spray? How do chrome-plated plastic door handles change during continuous use in different climates?

During their service life, parts, assemblies, or technical products are exposed to various environmental influences and must function perfectly. Environmental influences include any form of chemical, physical, or other environmental impact on the product. We simulate these climatic conditions in advance and use different stress tests to check whether the function of the products is affected.

Surface testing

We carry out surface tests both to characterize surfaces and their properties and to check the protective function of the surface coating (for example, corrosion protection, UV/light protection, mechanical stress, media resistance, coating thickness).

For the characterization of surfaces, their coatings, and properties, for the determination of surface defects and surface durability, we offer selected tests according to OEM specifications.



Damage investigations in case of field failures according to VDI directive 3822

As a central laboratory service at DEKRA, we offer you interdisciplinary materials expertise to carry out root cause analysis in the event of complaints about component parts.

Microscopic fracture testing with complementary testing capabilities around product property, manufacturing process, and

material specification, combined with our materials know-how, are our services for successful complaint processing. We help you to implement the findings from the damage analysis on your component in production!

DEKRA's range of services for testing specific requirements in the automotive industry

Material testing according to OEM requirement	Component testing according to OEM requirement	Assembly testing according to OEM requirement
<ul style="list-style-type: none"> > Material identification DSC, IR, TGA, OES, EDX analysis > Material requirement VW 2.8.1/VW 50123/VW 50125/ VW 50133/VW 44045/Porosity/ TL 52231/TL 52388/TL 52704/ DBL 5410/DBL 5562/GS 93010/ ISO 1133/ISO 1172/ISO 1183-1/ ... > Mechanical properties ISO 527/ISO 6892/ISO 178/ISO 179/ ISO 180/DIN 53452/ISO 306/ ISO 34-1/ISO 815/ISO 6506-1/ ISO 6507-1/ISO 6508-1/ISO 48/ ISO 2039-1 > Burning behavior TL 1010/PTL 8501/DBL 5307/ GS 97038/DIN 75200/FMVSS 302/ GB 8410/UL 94/ ... 	<ul style="list-style-type: none"> > Surface testing TL 226/GS 97034/GS 94007/TL 211/ PTL 4025/DBL 7384/PV 1309/ PV 3906/3932/TL 52447/PV 3905/ PV 3966/PV 3952/PV 3974/ ISO 20567-1 > Emission behavior BSDM 0503/BSBM 0505/DBL 5430/ DIN 75201/GS 97014/PN 780/PV 3015/PV 3341/PV 3900/PV3925/PV 3942/VW 50180/VW 96043/VDA 270/VDA 275/VDA 276/VDA 278 > Climate & corrosion testing PV 1200/Kalahari & Florida PV 3929 & 3930/PV 1303/PV 1306/PTL 8140/ PR 303.5/PV 1209/PV 1210/Ozone testing/heat aging/ DBL 9202/ ... > Media durability testing 	<ul style="list-style-type: none"> > Component chamber measurements PN 780/VW 50180/GS 97014/ DBL 5430/DIN ISO 12219/PV 3942/ VDA 276 > Climate & corrosion testing PV 2005/GS 95024/DIN 75220/ PTL 10105/ISO 9227/ISO 4892-2/ VDA 621-415/ISO 6270-2/ ... > Functional testing of electrical components VW 80000/GS 95003/vibration/ mech. shock/IPX testing/ ... > Technical cleanliness VDA 19/DBL 6516/PV 3347/ VW 96006/ ...

Further measurements according to OEM-specifications on request.

Do you need our know-how for your research and application projects in the automotive and electromobility sector? Our complete portfolio for automotive standards testing can be found at: k-labor.de/en/automotive-e-mobility

For specific inquiries of tests not listed, questions regarding implementation, or assistance with interpretation of results, our laboratory experts will be happy to help you.

DEKRA Automobil GmbH

Laboratory for Materials Testing & Damage Analysis

Unidekstrasse 5

75015 Bretten

Telephone +49.7252.96552-0

Fax +49.7252.96552-29

k-labor@dekra.com

k-labor.de/home-en



On the safe side.