

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

CleanControlling GmbH
Labor für Technische Sauberkeit

at the locations

Gehrenstraße 11 a, 78576 Emmingen-Liptingen
Lockwitzgrund 100, 01257 Dresden

is competent under the terms of DIN EN ISO/IEC 17025:2018 to carry out tests in the following fields:

Examination of Technical Cleanliness on metallic and non-metallic materials, components, systems and fluids using the test methods of extraction, gravimetry, microscopical analysis, infrared spectroscopy and ion chromatography, Energy dispersive X-ray spectroscopy; Determination of surface energy of solid surfaces

The accreditation certificate shall only apply in connection with the notice of accreditation of 21.02.2022 with the accreditation number D-PL-18040-01. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 4 pages.

Registration number of the certificate: **D-PL-18040-01-00**

Berlin,
21.02.2022

Dipl.-Ing. Martin Kirbach
Technical Unit

Translation issued:
21.02.2022


Technical Unit

The certificate together with the annex reflects the status as indicated by the date of issue.

The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de/en/accredited-bodies-search.html>.

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf.

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-18040-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **21.02.2022**

Date of issue: 21.02.2022

Holder of certificate:

CleanControlling GmbH
Labor für Technische Sauberkeit

at the locations:

Gehrenstraße 11 a, 78576 Emmingen-Liptingen
Lockwitzgrund 100, 01257 Dresden

Tests in the fields:

Examination of Technical Cleanliness on metallic and non-metallic materials, components, systems and fluids using the test methods of extraction, gravimetry, microscopical analysis, infrared spectroscopy and ion chromatography, Energy dispersive X-ray spectroscopy; Determination of surface energy of solid surfaces

Within the scope of accreditation marked with *), the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

The testing laboratory maintains a current list of all testing within the flexible scope of accreditation.

The test procedures are identified with the symbols listed below for the locations at which they are carried out:

D= Dresden

E = Emmingen - Liptingen

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories. Laboratories that conform to the requirements of this standard, operate generally in accordance with the principles of DIN EN ISO 9001.

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The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de/en/content/accredited-bodies-dakks>.*

Abbreviations used: see last page

Page 1 of 4

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Examination of Technical Cleanliness with test methods of extraction, gravimetry, or microscopic analysis

ISO 16232 * 2018-12	Road vehicles - Cleanliness of components of fluid circuits (except: 9.3 - 9.4)	E, D
ISO 4405 * 1991-05	Hydraulic fluid power - Fluid contamination - Determination of particulate contamination by the gravimetric method	E, D
ISO 4406 * 1999-12	Hydraulic fluid power - Fluids - Method for coding the level of contamination by solid particles	E
ISO 4407 * 2002-04	Hydraulic fluid power - Fluid contamination - Determination of particulate contamination by the counting method using an optical microscope	E
VDA Band 19.1 * 2015	Inspection of Technical Cleanliness - Particulate Contamination of Functionally Relevant Automotive Components (except: 8.3 - 8.4)	E, D
AA 25-118 2021-05	Suction extraction according to VDA19.1 (2015) and ISO 16232 (2018)	E, D

Examination / identification of unknown substances in organic or inorganic materials with infrared spectroscopy (FTIR)

ASTM E 1252 * 2013	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis	E
VDA Band 19.1 * 2015	Inspection of Technical Cleanliness - Particulate contamination of functionally relevant automotive components (here: Chapter 8.3.5 IR (infrared spectroscopy))	
ISO 16232 * 2018-12	Road vehicles - Technical Cleanliness of components and systems (here: Chapter 9.3.5 IR (infrared spectroscopy))	

Examination of components with test methods of ion chromatography

DIN EN ISO 14911 * 1999-12	Water quality - Determination of dissolved Li ⁺ , Na ⁺ , NH ₄ ⁺ , K ⁺ , Mn ²⁺ , Ca ²⁺ , Mg ²⁺ , Sr ²⁺ and Ba ²⁺ using ion chromatography - Method for water and waste water	E
DIN EN ISO 10304-1 * 2009-07	Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate	E
IPC-TM-650 2.3.25 * 2012-11	Detection and Measurement of Ionizable Surface Contaminants by Resistivity of Solvent Extract (ROSE)	E
IPC-TM-650 2.3.25.1 * 2000-09	Ionic Cleanliness Testing of Bare PWBs	E
IPC-TM-650 2.3.28 * 2012-11	Ionic Analysis of Circuit Boards, Ion Chromatography Method	E
IPC-TM-650 2.3.28.2 * 2009-12	Bare Printed Board Cleanliness by Ion Chromatography	E
AA 25-116 2021-05	Determination of residual foreign matter in heat exchangers	E

Material characterization using Energy dispersive X-ray spectroscopy (EDX)

VDA Band 19.1 * 2015	Inspection of Technical Cleanliness - Particulate contamination of functionally-relevant automotive components (here: Chapter 8.3.2 REM/EDX)	E
ISO 16232 * 2018-12	Road vehicles - Cleanliness of components and systems (here: Chapter 9.3.2 REM/EDX)	E

Determination of the surface free energy of solid surfaces

DIN EN ISO 19403-2 * 2020-04	Paints and varnishes - Wettability - Part 2: Determination of the surface free energy of solid surfaces by measuring the contact angle (ISO 19403-2:2017); german version EN ISO 19403-2:2020	E
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Abbreviations used:

AA	Standard Operating Procedure/Inhouse Procedure of the CleanControlling GmbH
ASTM	American Society for Testing and Materials
IPC	Association for standardization of electronic equipment
ISO	International Organization for Standardization
VDA	German Association of the Automotive Industry