

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11035-01-00
according to DIN EN ISO/IEC 17025:2005

Period of validity: 13.02.2018 to 12.02.2023

Date of issue: 18.05.2018

Holder of certificate:

DMT GmbH & Co. KG
Product Assessment Refrigeration & Air Quality
Am Technologiepark 1, 45307 Essen, Germany

for its

Testing Laboratory for refrigeration, air conditioning and heating technology
Testing Laboratory for Air Hygiene
Measurement authority "workplace measurements"

Tests in the fields:

Testing laboratory for refrigeration, air conditioning and heating technology:
Determination of heating and cooling capacity of air conditioners, liquid chilling packages and heat pumps

Testing laboratory for Air Hygiene:
Determination of air filtration and aerosol separation performance

Measuring body "workplace measurements":
Determination of aerosols and fibrous dusts, inorganic and organic gases and vapors and selected parameters and/or in selected areas for workplace measurements in accordance with the ordinance on Hazardous Substances § 7, para. 10

Abbreviations used: see last page

**1 Testing Laboratory for refrigeration, air conditioning and heating technology:
Testing of ventilation and air conditioning systems**

DIN EN 14511-3
2013-12 Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling - Part 3: Test methods

DIN EN 14825
2016-10 Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space heating and cooling - Testing and rating at part load conditions and calculation of seasonal performance

2 Testing Laboratory for Air Hygiene: Testing of air filters and aerosol separators and equipped facilities

DIN EN 779
2012-10 Particulate air filters for general ventilation - Determination of the filtration performance
(withdrawn standard)

DIN 18869-5
2007-08 Equipment for commercial kitchens - Components for ventilation - Part 5: Aerosol separators, requirements and testing

E DIN EN 16282-6
2014-11 Equipment for commercial kitchens - Components for ventilation of commercial kitchens - Part 6: Aerosol separators; Design and safety requirements

DIN EN 60335-2-69
2015-07 Household and similar electrical appliances - Safety - Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush for commercial use

VDE 0700-69
Annex AA
2015-07 Annex AA: Particular requirements for vacuum cleaners and dust collectors for collecting hazardous dust

3 Testing of the measurement authority "workplace measurements"

| Group 1 Aerosols (without fibrous dust) | Title of standard | Standard release date | QM-Document | Comment / Location |
|---|---|--------------------------|--|---|
| <u>Subarea/ Component</u> | | | VA /AA | |
| <u>Dust mass determination</u> | | | | Analytics by accredited third- party laboratory |
| <u>Respirable dust content</u> | Respirable dust content | IFA 6068 2015-05 | MSA 1.2 / SOP A06 | |
| <u>Inhalable dust content</u> | Inhalable dust content | IFA 7284 2003-10 | MSA 1.1 / SOP A06 | |
| <u>Metals and metal compounds including chromium VI compounds</u> | Dust substances (Pb, Cd, Cr, Co, Cu, Mn, Ni, V, Zn) | IFA 7808 2013-12 | MSA 1.3 / AA 07-2-006 / AA 07-6-017 / AA 07-6-018 | |
| | Chromate | IFA 6665 2014-10 | MSA 1.4 / AA 07-6-012 | |
| <u>Simple organic ingredient</u> | Benzo[a]pyren | NIOSH 5506 1998-10 | MSA 1.7 AA 07-11338-2 | |
| <u>Crystalline fibrous dusts</u> | Quarz | IFA 8522 2005-04 | MSA 1.6 / SOP A04 / SOP A10 | |

| Group 2 Fibre dust | Title of standard | Standard release date | QM-Document | Comment / Location |
|-------------------------------|---|-----------------------------|--|---|
| <u>Subarea/ Component</u> | | | VA /AA | |
| <u>Asbestos fibre</u> | Method for the separate determination of respi- rable asbestos fibres and other inorganic fibres - SEM method | BGI/GUV-I 505-46 2014-02 | MSA 2.1 / UBO REM BGI - GUV-I 505.46 | Analytics by accredited third- party laboratory |
| <u>Other fibres</u> | Method for the separate determination of respi- rable asbestos fibres and other inorganic fibres - SEM method | BGI/GUV-I 505-46 2014-02 | MSA 2.1 / UBO REM BGI - GUV-I 505.46 | |

Annex to the accreditation certificate D-PL-11035-01-00

| Group 3 Inorganic gases and vapors | Title of standard | Standard release date | QM-Document | Comment / Location |
|--|--|--|--------------------------|---|
| <u>Subarea/ Component</u> | | | VA /AA | |
| <u>Hydrogen halides and other inorganic acids</u> | Volatile inorganic acids: Hydrogen bromide Hydrogen chloride Nitric acid | IFA 6172 2007-04 | MSA 3.1 / AA 07-6-027 | Analytics by accredited third- party laboratory |
| | Particulate inorganic acids: Phosphoric acid Sulfuric acid | IFA 6173 2016-05 | MSA 3.1 / AA 07-6-027 | |
| | Fluorides and hydrogen fluoride | IFA 7512 2006-05 | MSA 3.7 / AA 07-6-035 | |
| <u>Other volatile hydrides</u> | Ammonia | NIOSH 6016 1996-05 | MSA 3.2 / AA 07-6-029 | |
| <u>Non-metallic oxides (semi-quantitativ)</u> | Ozone | Manual by Dräger | MSA 3.6 | |
| <u>Continious measuring technology (semi-quantitativ)</u> | Continious measurement of inorganic gases and vapors (CO, CO ₂ , NO, NO ₂) | IFA 9070 2014-12 IFA 9050 2013-12 | MSA 3.5 / SOP A12 | |

Annex to the accreditation certificate D-PL-11035-01-00

| Group 4 Organic gases and vapors | Title of standard | Standard release date | QM-Document | Comment / Location |
|--|---|--|---------------------------|---|
| <u>Subarea/ Component</u> | | | VA /AA | |
| <u>Aliphatic and aromatic hydrocarbons</u> | Hydrocarbons, aliphatic (for example Heptane) | IFA 7732 2011-11 | MSA 4.3 / AA 07-6-007 | Analytics by accredited third- party laboratory |
| | Hydrocarbons, aromatic (for example phenyl methane or Benzene or Styrene) | IFA 7733 2005-04 IFA 6265 2013-10 | MSA 4.1 / AA 07-6-001 | |
| | Hydrocarbons aromatic (Styrene) | IFA 8635 2011-05 | AA 07-6-013 | |
| <u>Volatile halogenated hydrocarbons (LHKW)</u> | Hydrocarbons, chlorinated (for example Dichloromethane) | IFA 6600 2006-10 | MSA 4.1 / AA 07-6-001 | |
| <u>Ketones and esters</u> | Ketones (for example Acetone) | IFA 7708 2005-04 | MSA 4.9 / AA 07-6-009 | |
| | Acetic acid (for example Ethylacetate) | IFA 7322 2009-05 | MSA 4.6 / AA 07-6-005 | |
| <u>Alcohol</u> | Alcohol (for example 2-Propanol) | IFA 8415 1997-04 | MSA 4.5 / AA 07-6-004 | |
| <u>Aldehyde</u> | Aldehyde (for example formaldehyde) | IFA 6045 2009-11 | MSA 4.2 / AA 07-6-003 | |
| <u>Phenol</u> | Phenol, cresols, furaldehyde | IFA 8330 2010-12 IFA 7540 2010-08 | MSA 4.8 / AA 07-6-008 | |
| <u>Glycol and their derivatives</u> | Glycol esters, glycol ethers, tetrahydrofuran | IFA 7569 2013-04 IFA 7335 2009-05 | MSA 4.7 / AA 07-6-006 | |
| <u>Amines</u> | Amines (for example Diethylamin) | IFA 6072 2014-04 | MSA 4.10 / AA 07-6-011 | |
| <u>Organic acids</u> | Organic acids (for example acetic acid) | IFA 7320 1993-10 | MSA 4.13 / AA 07-6-020 | |

| Group 5 Selected parameters | Title of Standard | Standard release date | QM-Document | Comment / Location |
|--|--------------------------|--------------------------|--------------------------|---|
| <u>Subarea/ Component</u> | | | VA /AA | |
| Multi component systems | Solid cooling lubricants | IFA 7750 1997-11 | MSA 5.1 / AA 07-6 014 | Analytics by accredited third- party laboratory |
| Diesel engine emissions (DME) | Diesel engine emissions | BGI 505-44 1995 | MSA 1.5 / SOP A01 | |
| Further subareas / components | Diisocyanates | MDHS 25/3 1999 | MSA 5.2 SOP A 05 | |

The listed procedures are in accordance with the requirements applying for determination of concentrations of hazardous substances. The competence for determination and evaluation of concentrations of hazardous substances in the air at work areas according to § 7, cl. 10 of Hazardous Substances Ordinance (GefStoffV) is confirmed related with the examination of sufficiently reports for

Group 1

Group 2

Group 3

Group 4

Group 5 (cooling lubricants, DME, Diisocyanate)

The analytic measurements are performed by accredited third-party laboratories.

Person in charge: Mr. M. Sc. Björn Dorn

Deputy person in charge: Mr. Dr. Renschen

abbreviations used:

BGI Trade association information
 DIN German Institute for Standardisation
 EN European Standard
 IFA Institute for Occupational Safety
 NIOSH National Institute for Occupational Safety and Health
 VDE Association of German Electrical Engineers
 (today's designation: Association for Electrical, Electronic and Information
 Technology)