

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11075-02-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 05.08.2020

Date of issue: 05.08.2020

Holder of certificate:

**Bundesanstalt für Materialforschung und -prüfung (BAM) (Federal Institute for
Materials Research and Testing)
Department 4 Materials and the Environment
Unter den Eichen 87, 12205 Berlin**

Tests in the fields:

**fitness for purpose of materials and biocides against biogenic attack, identity of reference
organisms;**

**Within the given testing field marked with *), the testing laboratory is permitted, without being
required to inform and obtain prior approval from DAkkS GmbH, the free choice of standard or
equivalent testing methods.**

**The listed testing methods are exemplary. The testing laboratory maintains a current list of all
testing methods within the flexible scope of accreditation.**

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of
accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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Biodeterioration and reference organisms

Testing in the areas of fitness for purpose of materials and biocides against biogenic attack and identity of reference organisms

1 Determination of the fitness for purpose of materials (textiles, wood, plastics, metals, insulating materials and other renewable resources as well as petroleum and derived products) using biological test systems with insects *

ISO 3998 1977-07	Textiles - Determination of resistance to certain insect pests
DIN EN 49-1 2016-11	Wood preservatives – Determination of the protective effectiveness against <i>Anobium punctatum</i> (De Geer) by egg-laying and larval survival – Part 1: Application by surface treatment (laboratory method)
DIN EN 49-2 2015-10	Wood preservatives – Determination of preventive action against <i>Anobium punctatum</i> (De Geer) by egg-laying and larval survival – Part 2: Application by impregnation (laboratory method)
DIN EN 21 1990-04	Wood preservatives – Determination of toxic values against <i>Anobium punctatum</i> (De Geer) by larval transfer (laboratory method) <i>(standard withdrawn)</i>
DIN EN 46-1 2016-11	Wood preservatives – Determination of the preventive action against recently hatched larvae of <i>Hylotrupes bajulus</i> (Linnaeus) – Part 1: Application by surface treatment (laboratory method)
DIN EN 46-2 2016-11	Wood preservatives – Determination of the preventive action against recently hatched larvae of <i>Hylotrupes bajulus</i> (Linnaeus) – Part 2: Ovicidal effect (laboratory method)
DIN EN 47 2016-11	Wood preservatives – Determination of the toxic values against larvae of <i>Hylotrupes bajulus</i> (Linnaeus) (laboratory method)
DIN EN 48 2005-07	Wood preservatives – Determination of eradicator action against larvae of <i>Anobium punctatum</i> (De Geer) (laboratory method)

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DIN EN 117 2013-01	Wood preservatives – Determination of toxic values against <i>Reticulitermes</i> species (European termites) (laboratory method)
DIN EN 118 2014-03	Wood preservatives – Determination of preventive action against <i>Reticulitermes</i> species (European termites) (laboratory method)
DIN EN 370 1993-05	Wood preservatives; determination of eradicant efficacy in preventing emergence of <i>Anobium punctatum</i> (De Geer)
DIN EN 1390 2006-09	Wood preservatives – Determination of the eradicant action against <i>Hylotrupes bajulus</i> (Linnaeus) larvae – Laboratory method
StAA-QMH-4.1-3-101 2015-09	Determination of the resistance of insulating materials to textile insects
StAA-QMH-4.1-3-138 2017-03	Determination of the resistance of plastics to subterranean termites of the species: - <i>Reticulitermes</i> spec. - <i>Coptotermes</i> spec. - <i>Mastotermes darwiniensis</i>
CUAP, Annex D 2003-06	Factory-made thermal insulation material and/or acoustic insulation material made of vegetable or animal fibres
StAA-QMH-4.1-3-131 2017-01	Transfer of clothes moths <i>Tineola bisselliella</i> and determination of vitality after return of samples
StAA-QMH-4.1-3-132 2017-01	Transfer of furniture carpet beetles <i>Anthrenus flavipes</i> and determination of vitality after return of samples
StAA-QMH-4.1-3-133 2017-01	Transfer of test specimens with live larvae of <i>Anobium punctatum</i> and determination of vitality of the larvae after return of test specimens
StAA-QMH-4.1-3-134 2017-01	Transfer of test specimens with live larvae of <i>Hylotrupes bajulus</i> (house longhorn beetle) and determination of vitality of the larvae after return of test specimens
StAA-QMH-4.1-3-135 2017-01	Transfer of test specimens with live larvae of <i>Lyctus brunneus</i> and determination of vitality of the larvae after return of test specimens

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2 Determination of the fitness for purpose of materials (textiles, wood, plastics, metals, insulating materials and other renewable resources as well as petroleum and derived products) using biological test systems with microorganisms *

DIN EN ISO 846 1997-10	Plastics – Evaluation of the action of microorganisms
DIN EN 113 1996-11 +B1 2014-04	Wood preservatives – Method of test for determining the protective effectiveness against wood destroying basidiomycetes – Determination of the toxic values
DIN EN 152 2012-02	Wood preservatives – Determination of the protective effectiveness of a preservative treatment against blue stain in wood in service – Laboratory method
ISO 16869 2008-06	Plastics - Assessment of the effectiveness of fungistatic compounds in plastics formulations
ISO 22196 2011-08	Measurement of antibacterial activity on plastics and non -porous surfaces
DIN EN 15457 2014-11	Paints and varnishes – Laboratory method for testing the efficacy of film preservatives in a coating against fungi
DIN EN 15458 2014-11	Paints and varnishes – Laboratory method for testing the efficacy of film preservatives in a coating against algae
DIN V ENV 12038 2002-07	Durability of wood and wood-based products – Wood-based panels – Method of test for determining the resistance against wood-destroying basidiomycetes
DIN CEN/TS 12404 2015-05	Durability of wood and wood-based products – Assessment of the effectiveness of a masonry fungicide to prevent growth into wood of Dry Rot <i>Serpula lacrymans</i> (Schumacher ex Fries) S.F. Gray – Laboratory method
DIN EN 839 2015-01	Wood preservatives – Determination of the protective effectiveness against wood destroying basidiomycetes – Application by surface treatment
CUAP, Annex C 2003-06	Factory-made thermal insulation material and/or acoustic insulation material made of vegetable or animal fibres

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ASTM G-21-09 2015-01	Standard practice for determining resistance of synthetic polymeric materials to fungi
ASTM G-29-16 2016	Standard practice for determining algal resistance of plastic films
ASTM C 1338-14 2014	Standard test method for determining fungi resistance of insulation materials and facings
AATCC Test Method 30 2004	Antifungal activity, Assessment on textile materials - Mildew and rot resistance of textile materials
MIL-STD 810, Ausgabe D-G D - 1983-07 E - 1989-07 F - 2000-01 G - 2008-10	Test of resistance to fungal infestation – Method 508.6 (only visual assessment of colonizability)
DIN EN 330 2015-01	Wood preservatives – Determination of the relative protective effectiveness of a wood preservative for use under a coating and exposed out-of-ground contact: L-joint method
DIN CEN/TS 12037 2004-05	Wood preservatives – Field test method for determining the relative protective effectiveness of a wood preservative exposed out of ground contact – Horizontal lap-joint method
VW TL 523 34 2003-10	Cellular polyurethane – Component requirements – Microbial test
DIN ISO 9022-11 2016-02	Optics and photonics – Environmental test methods – Part 11: Mould growth
DIN EN 15101-1 2013-12	Thermal insulation products for buildings – In-situ formed loose fill cellulose (LFCI) products – Part 1: Specification for the products before installation (Annex F)
DIN EN 60068-2-10 2006-03	Environmental testing – Part 2-10: Tests – Test J and guidance: Mould growth
GAM - EG - 13 1986-06	Basic environmental testing procedures, method 13 “Mildew”
JIS Z 2801 2010	Antibacterial products - Test for antibacterial activity and efficacy

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RTCA DO-160G 2014-12	Environmental Conditions and Tests Procedures for Airborne Equipment, Section 13 (only visual assessment of colonizability)
StAA-QMH-4.1-3-130 2016-06	Transfer of test specimens with living infestation by true dry rot and re-isolation of the fungus after return of samples

3 Determination of the fitness for purpose of materials (textiles, wood, plastics, metals, insulating materials and other renewable resources as well as petroleum and derived products) in ground contact *

EN ISO 11721-1 2001-04	Textiles – Determination of resistance of cellulose-containing textiles to microorganisms – Soil burial test – Part 1: Assessment of rot-retardant finishing
DIN EN 252 2015-01	Wood preservatives – Field test method for determining the relative protective effectiveness of a wood preservative in ground contact
DIN EN 12225 2000-12	Geotextiles and geotextile-related products – Method for determining the microbiological resistance by a soil burial test
DIN V ENV 807 2001-12	Wood preservatives – Determination of the effectiveness against soft rotting micro-fungi and other soil inhabiting micro-organisms
DIN ISO 11274 2014-07	Soil quality – Determination of the water-retention characteristic – Laboratory methods

4 Preparation and conditioning of test specimens

4.1 Method for preparation and conditioning of test specimens by impregnation

DIN EN 84 1997-05	Wood preservatives – Accelerated ageing of treated wood prior to biological testing – Leaching procedure
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4.2 Method for preparation and conditioning of test specimens by surface treatment *

DIN EN 73 2014-12	Wood preservatives – Accelerated ageing of treated wood prior to biological testing – Evaporative ageing procedure
DIN CEN/TS 15397 2006-08	Wood preservatives – Method for natural preconditioning out of ground contact of treated wood specimens prior to biological laboratory test

Abbreviations used:

AATCC	American Association of Textile Chemists and Colorists
ASTM	American Society for Testing and Materials
BAM	Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing)
CEN/TS	Unchanged German adoption of a European Technical Specification
CUAP	Common Understanding of Assessment Procedure
DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
EN	European standard
GAM – EG	French National Defence Standard/Basic Environmental Test Procedures
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
JIS Z	Japanese Industrial Standard
MIL-STD	Military Standards
QMH	Quality management manual
RTCA DO	Radio Technical Commission for Aeronautics Document
StAA	In-house method of BAM
VW TL	Volkswagen Technische Lieferbedingungen (Volkswagen technical terms of delivery)