

**Basic award criteria for the
quality hallmark pure life
for low-emission PU insulation**



Meets the QNG requirements for prevention of hazardous substances in insulants. "pure life" is a seal of approval issued by the ÜGPU association.

Fraunhofer WKI testing standard

WKI-PS-EPUD-001

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1 Preface

These basic award criteria for the quality hallmark **pure life** for low-emission PU insulation materials were compiled by the Fraunhofer Wilhelm-Klauditz-Institut (WKI) as part of a feasibility study by the ÜGPU (Überwachungsgemeinschaft Polyurethan-Hartschaum e.V., a German quality surveillance organization). With the quality hallmark **pure life**, only those insulating materials can be distinguished which fulfil the particularly stringent requirements concerning constituents (exclusion of materials) and the additional particularly strict emissions requirements. The use of low-emission insulation materials provides a major contribution towards good indoor air quality and a healthy living environment.

The basic award criteria describe a procedure in which a regular inspection and evaluation of the production plant and the in-house production control is performed, which includes the extraction and testing of an insulation material sample from each product group.

2 Applicability

The basic award criteria apply to insulation materials in accordance with DIN EN 13165 and DIN EN 14308 which are made of rigid polyurethane foam (PU, PUR, PIR).

3 Normative references and applicable documents

AgBB evaluation scheme	AgBB - Committee for Health-related Evaluation of Building Products, Requirements for the Indoor Air Quality in Buildings: Health-related Evaluation Procedure for Emissions of Volatile Organic Compounds (VVOC, VOC and SVOC) from Building Products. AgBB evaluation scheme with updated list of LCI values in the currently valid version.
DIN 18200	Assessment of conformity for construction products - Factory production control, third-party monitoring and certification.
DIN ISO 16000-3	Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air - Active sampling method.
DIN ISO 16000-6	Indoor air - Part 6: Determination of organic compounds (VVOC, VOC, SVOC) in indoor and test chamber air by active sampling on sorbent tubes, thermal desorption and gas chromatography using MS or MS FID.
DIN EN 16516	Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air.
DIN EN 13165	Thermal insulation products for buildings – Factory-made rigid polyurethane foam (PU) products – Specification.
DIN EN 14308	Thermal insulation products for building equipment and industrial installations - Factory made rigid polyurethane foam (PUR) and polyisocyanurate foam (PIR) products – Specification.
DIN EN ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories.
DIN EN ISO 16000-9	Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method.
DIN EN ISO 16000-11	Indoor air - Part 11: Determination of the emission of volatile organic compounds from building products and furnishing - Sampling, storage of samples and preparation of test specimens.
(EC) No. 1907/2006	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. Official Journal of the European Union, 29.05.2007.
(EC) No. 1272/2008	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances

and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Official Journal of the European Union, 31.12.2008.

MVV TB

Deutsches Institut für Bautechnik (German institute for building technology, DIBt), Model Administrative Regulation on Technical Building Regulations, Annex 8: Requirements for structural installations with regard to health protection (ABG).

4 Requirements of the quality hallmark **pure life**

In order to acquire the quality hallmark **pure life**, both very stringent material criteria (exclusion of substances) and additional very strict emission requirements must be fulfilled in order to avoid any possible effect on indoor air quality.

4.1 Material requirements

4.1.1 Exclusion of substances

(1) The components (substances or mixtures of substances) utilized in the manufacture of the insulation material must, in accordance with Sections 2 or 3 of the current safety data sheet and pursuant to Regulation (EC) No. 1272/2008 (CLP) and the respective valid amending Regulation (EU), not possess any of the following properties:

- Acutely toxic Cat 1 or Cat 2 or Cat 3 (H300, H301, H310, H311, H330 or H331)
- Carcinogen (Cat 1A, 1B) (H350),
- Mutagen (Cat 1A, 1B) (H340)
- Toxic for reproduction (Cat 1A, 1B) (H360)

Acutely toxic substances of Category 3 may be used if it is possible to substantiate that they do not pose a potential risk to human health when installed. This is the case when, for example, the substance has completely reacted to form another compound or is fully encapsulated or bound.

(2) Substances of very high concern in accordance with REACH Regulation (EC) 1907/2006 (so-called “substances of very high concern”, SVHC), which do not fall under clause 1, must not be added actively*) in order to achieve specific product properties.

(3) Organostannic compounds not covered by Section (1) must not be added actively*).

(4) Chlorinated paraffins (from C10) must not be added actively*).

(5) TCEP (tris(2-chloroethyl)phosphate) and TCPP (tris(1-chloro-2-propyl)phosphate) must not be added actively*). For TCPP, a transitional period applies until 31 December 2026.

*)Active usage is the targeted usage of substances to achieve specific product properties. Substances which are present as impurities and/or as minor constituents in the product shall be regarded as not “actively used”. The active addition of these substances shall be assumed when the proportion of the said substances in the added component in accordance with the safety data sheet is each $\geq 0.1\%$. These requirements for the named substances are therefore considered to be fulfilled if the proportion of these substance groups is $< 0.1\%$.

Verification: Manufacturer’s declaration, see Appendix 1, Emissions testing

4.1.2 Halogenated propellants

During production, no halogenated propellants may be added to the insulation materials.

Verification: Manufacturer’s declaration, see Appendix 1, Emissions testing

4.1.3 Plasticizers

During production, no plasticizing substances of the class of phthalates may be added to the insulation materials. Impurities must not exceed a level of 0.1% . This requirement is therefore considered to be fulfilled if the proportion of plasticizing substances of the class of phthalates is $\leq 0.1\%$.

Verification: Manufacturer’s declaration, see Appendix 1, Emissions testing

4.2 Emissions requirements

The insulation material sample shall be analyzed regarding emissions within the scope of a test chamber examination: For the initial or routine test, air samples are taken from the chamber after 3 days (72h), 7 days and, if necessary, 28 days and subsequently evaluated. The evaluation of the 3, 7 and 28-day samples is carried out in accordance with the AgBB evaluation scheme and the updated list of LCI values in the currently valid versions.

For the initial or routine test, the limit value requirements in accordance with **Table 4.2-1** must be adhered to for the testing points of 3 days and 28 days. The emissions test can be terminated prematurely after 7 days and is considered passed if, at that time, the criteria for the 28-day test period have been fulfilled and there is no increase in concentration compared to the sampling from day 3 (72 hours).

The annual routine test is carried out as a 7-day measurement with an air sampling 3 days and 7 days after chamber loading and serves as documentation of the compliance with the results of the initial test. The routine test is considered passed if the limit value requirements stipulated for the point in time of the 3-day measurement are fulfilled and, simultaneously, the measured values of the remaining parameters exhibit no significant deviations from the results of the initial test both after 3 days and 7 days testing time. If, however, significant differences occur, the expert testing body may decide, in individual cases, to extend the test period to up to 28 days if necessary. If the limit value requirements for all the parameters are fulfilled for the 28-day point in time, the routine test is considered passed.

Table 4.2-1. Emissions requirements for the quality hallmark **pure life**

Parameter	Limit value requirements after 3 days (72h) test duration	Limit value requirements after 28 days test duration
	Concentration in mg/m ³	
Total VVOC, < C6, (TVOC) ^{*)}	≤ 3	≤ 1
Total VOC C6 – C16 (TVOC) ^{**))}	≤ 1.0	≤ 0.1
Total SVOC, >C16 – C22, (TSVOC) ^{***)}		≤ 0.02
R-value (VOC with LCI) dimensionless		≤ 1
VOC without LCI		≤ 0.05
CMR substances ^{****)}	≤ 0.010	≤ 0.001
Formaldehyde		< 0.010
Acetaldehyde		≤ 0.010
Styrene		≤ 0.010
Further individual substances		RW I ^{*****)}

^{*)} Total individual substances, quantified with original response

^{**))} Total individual substances in accordance with AgBB evaluation scheme; quantification with original response (LCI substances) and toluene response (non-LCI substances)

^{***)} Total individual substances in accordance with AgBB evaluation scheme, quantification with toluene response

^{****)} Substances which are classified in accordance with Regulation (EC) No. 1272/2008 and the respective currently applicable amending Regulation (EU) as carcinogenic (Category 1A, 1B), mutagenic (Category 1A, 1B) and toxic for reproduction (Category 1A, 1B)

^{*****)} In the case of guide value (GV) recommendations from the German Committee on Indoor Air Guide Values (AIR) existing for further individual substances identified during the emissions test, the GV I requirements must be fulfilled for these substances after a maximum of 28 days. The current GV I values are published on the website of the Federal Environment Agency (www.umweltbundesamt.de)

5 Certification

5.1 Factory inspection

The factory inspection includes the

- a) regular examination of the in-house production control and
- b) taking random samples at the factory for emissions testing in accordance with Sections 7 to 12
(at least once a year verification of adherence to quality criteria).

Factory inspections in accordance with these basic award criteria generally take place within the scope of the ÜGPU quality surveillance through the inspection body, e.g. the FIW München.

The emissions test is carried out by the accredited testing body (Fraunhofer WKI).

The factory inspections include initial, routine and special inspections.

For the purpose of planning the testing capacities, the inspection body responsible for the factory inspection shall inform the testing body regarding planned site visits at least 3 weeks in advance. The factory production control (FPC) shall be audited in accordance with DIN EN 13165 and DIN EN 14308. As proof of the factory inspection, the inspection body shall prepare an inspection report and submit this promptly to the certification body.

In the case of outsourced services, it is a requirement that the certification body is able to submit legally enforceable agreements (co-operation contracts) with the involved parties (in this case: inspection body, testing body).

5.2 Initial inspection

As part of the initial certification, an initial inspection of the insulation material must be carried out with regard to the emission behavior (duration up to 28 days). This emissions test is carried out when a product is certified for the first time or its composition/properties are altered significantly. A significant alteration in the product can be a process or formulation change which leads to a change in the properties, e.g. altered thermal conductivity level, nominal pressure resistance/stress or fire classification. After 5 years, a renewed initial inspection is carried out.

5.3 Routine inspection

Within the framework of subsequent certification, the annual routine tests are undertaken as 3-day emissions tests in which the conformity with the results of the initial test is documented.

5.4 Special inspection in the case of non-fulfilment of the **pure life** criteria

In the case of the factory inspection or the emissions test resulting in a non-compliance or partial non-compliance with the requirements, the certification body shall demand that the manufacturer rectifies the notified deficiencies within a reasonable period of time, but within a maximum of 6 months. After expiration of this period, a special inspection shall take place. The certification body shall be informed accordingly. Special inspections may also be initiated by the certification body if the body determines deviations from these basic award criteria. The sampling of the insulation material(s) shall be performed by an inspection body, e.g. FIW München, the subsequent testing by the accredited testing body (Fraunhofer WKI). If the period of 6 months is not complied with through the fault of the manufacturer, the certificate shall be revoked by the certification body and declared invalid.

6 Conformity evaluation and certification

6.1 General procedure

At the beginning of a calendar year or after certification commissioning through a manufacturer, the certification body shall submit to the inspection body the documents for the execution of factory inspections (see Section 5). For this, the appropriate sampling protocols with manufacturer and product data shall be provided.

For the verification of compliance with material requirements, the manufacturer must sign a statement in accordance with Section 4.1 and Appendix 1 and submit this to the certification body within the framework of the application process.

6.2 Certification

Following execution of the factory inspection, the inspection body shall submit an inspection report to the certification body for final assessment. Based on the submitted report and the results of the emissions tests carried out on random samples, the certification body shall reach a decision regarding the granting or upholding of the certificate. The basis for the assessment is hereby formed by the "Checklist for conformity evaluation in accordance with WKI-PS-EPUD-001", which can be found in Appendix 3.

The certification of the products is usually initiated by the manufacturer. Where the product is marketed under various trade names, it is possible to certify those trade names. Subject to the manufacturer's approval, this may also be carried out by a dealer; the certification body then issues a dealer certificate. The dealer bears the associated costs.

Verification: Form for recording trade names, see Appendix 4

6.3 Validity of the certificate

The certificate is valid for an indefinite period following issuance, provided that the conditions for the manufacture of the insulation material are not significantly altered and the certification body does not declare it invalid.

The certification body shall confirm the validity of already-issued certificates annually within the framework of the subsequent certification through statements following examination of the submitted reports.

In the case of the submitted reports revealing non-compliance or partial non-compliance with the requirements, the certification body is obliged to refrain from issuing a certificate or to declare an already-issued certificate invalid.

7 Extraction of insulation material samples for emissions testing

7.1 General procedure

The insulation material samples shall be extracted at the manufacturing plant in accordance with the points described below, cut to size, packed and then sent to the investigating institution (expert testing body). During the sampling of the insulation material, the sampling protocol shown in Appendix 2 must be filled out.

The procedure described below also corresponds to the general requirements of the DIBt (German Center of Competence for Construction) in the context of emissions tests for the health assessment of building products.

7.2 Type of sample, product grouping

Insulation materials are distinguished by means of their facing in accordance with DIN EN 13165 and DIN EN 14308: e.g. "without" (block foam), mineral fleece, "aluminum". Test results for insulation boards with glued-on strips or additional layers also apply to similar products without strips or additional layers.

If a manufacturer has differing insulation materials with varying facings in the product range, these shall be examined and evaluated individually.

Within a product group with the same facing according to DIN EN 13165 and otherwise the same formulation, an insulation panel in the thickness range of between 60 and 160 mm shall be selected as representative of this product group. If the product group only includes panel thicknesses of less than 60 mm, the respective thickest panel produced shall be tested. In the case of block foam, the manufacturer cuts an insulation board out of the block for emissions testing. Products with the same facing according to DIN EN 13165 but with varying formulations shall be examined separately, provided that the formulation differences are emissions-relevant.

7.3 Sample age

The insulation samples shall be extracted from the manufacturing plant after attaining the earliest merchantability, cut to size and then packed in low-emission material. The earliest merchantability is the earliest date on which the product may be placed on the market. For insulation samples, this point is generally reached eight days after production at the latest.

After being cut to size, the samples shall be packaged and then sent without delay to the testing body.

7.4 Sample size

For the test chamber investigation, a test specimen with a surface (unilateral) of 1.0 m² shall be used. At the manufacturing plant, two sections with the dimensions of length = 1.0 m and width = 0.5 m shall be cut from the extracted insulation sample.

7.5 Packaging

Packaging and transportation of each sample shall be carried out in compliance with DIN EN ISO 16000-11 and the following instructions: The sample must be meticulously protected against external contamination. For this, the two sections of a sample shall be wrapped immediately after cutting in aluminum foil and then sealed into a non-printed, air-tight polyethylene bag. Alternatively, aluminized packing material can be used. In order to avoid contamination from outside, the packaging must be sealed as airtight as possible, using either a vacuum sealer or low-emission adhesive tape. Samples which are to be analyzed separately must also be packed separately from one another.

7.6 Designation of the sample

As part of the extraction, a sampling protocol shall be created in accordance with Appendix 2 and enclosed with the samples during shipping. The samples must be labeled with precise details of the type of product as well as the date of manufacture and/or an identification or batch number.

For the identification of the sample, no solvent-based writing materials may be used. Suitable for the purpose are self-adhesive labels, inscribed with ballpoint pen and applied to the reverse side (outside) of the test specimen. The test specimens themselves and the wrapping must be marked identically with the designations stated in the sampling protocol.

7.7 Transport, shipment, storage

The dispatch of the samples to the testing body must take place via parcel and courier service immediately following extraction. During transportation, it must be ensured that the samples are not stored in the vicinity of solvent-based materials (such as fuel canisters).

The samples shall be tested for completeness after arrival at the testing body and stored in their packaging under normal room air conditions at $23\text{ °C} \pm 2\text{K}$ until the start of the actual emissions test. Care must be thereby taken to ensure a contamination-free environment.

Emissions testing must begin no earlier than 21 days (three weeks) and no later than 56 days (eight weeks) following extraction.

7.8 Sources of appropriate packaging material (examples)

Aluminum foil extra strong	Aluminum composite foils
Fa. Neolab http://www.neolab.de http://mercateo.com	W. Bosch GmbH & Co. KG Papier und Folienwerke http://www.w-bosch.de

8 Sample preparation for insulation samples for emissions testing

Immediately prior to beginning the emissions test, the sample shall be unpacked and prepared for the emissions investigation. For the emissions investigation, a test specimen with a surface (unilateral) of 1.0 m^2 shall be used, see Section 7.4 Sample size.

The precise cutting to size can take place at the testing body premises if necessary. The open edges and the reverse side shall be masked with aluminum foil and low-emission adhesive tape. The test specimens produced in this way shall then be placed immediately in the test chamber.

9 Emissions testing

The emissions testing shall be performed in a 1 m³ emission test chamber in accordance with DIN EN ISO 16000-9 under the following boundary conditions (DIN EN 16516):

- Test chamber: 1 m³ with walls made from stainless steel or glass
- Air exchange: 0.5 per hour
- Loading: 1.0 m²/m³
- Area-specific ventilation: 0.5 m³/(m² h)
- Temperature: 23 °C ± 1 K
- Rel. humidity: 50 % ± 5 %
- Air velocity: 0.1 – 0.3 m/s

The boundary conditions for the emissions test with a load factor of 1.0 m²/m³ and an area-specific ventilation of 0.5 m³/(m² h) correspond to the scenario “wall” in the DIN EN 16516. As, generally, a maximum of two exterior walls are insulated, this loading represents the worst case which covers the scenarios ceiling, roof or floor.

The duration of the emissions test (initial and routine test) is up to 28 days. The specimens remain in the test chamber over the entire period. 3 days (72h), 7 days and, if necessary, 28 days after chamber loading, air samples shall be taken from the test chamber atmosphere and analyzed. In accordance with DIN EN 16516, the time of sampling should thereby be in the middle of the planned sampling period, i.e. in the case of sampling after 3 days (72h) and one-hour sampling, within a time window of 71.5h to 72.5h. In the case of sampling after 28 days, within a time window of ± 6h. The emissions test can be terminated prematurely after 7 days and is considered passed if, at that time, the criteria for the 28-day test period have been fulfilled and there is no increase in concentration compared to the sampling from day 3 (72h).

The annual routine test is carried out as a 7-day measurement with air sampling 3 days and 7 days after chamber loading and serves as documentation of the compliance with the results of the initial test. The routine test can, in individual cases, be extended to up to 28 days: see Emissions requirements, Section 4.2.

10 Determination of VVOC, VOC and SVOC

The test chamber atmosphere shall be examined for possible emissions in accordance with DIN EN 16516.

For the determination of the substance groups of VVOC, VOC and SVOC, air samples are taken from the test chamber atmosphere and analyzed. The sorbent media to be used for the detection of the substance groups are shown in **Table 10-1**. The air samples are taken in duplicate in each case.

Table 10-1. Sorbent media for the investigation of VVOC, VOC and SVOC

Parameter	Definition	Retention range ^{*)}	Collection phase
VVOC	Very volatile organic compounds	< C6	Activated charcoal ^{**)}
VOC	Volatile organic compounds	C6 – C16	Tenax® TA
SVOC	Semi-volatile organic compounds	> C16 – C22	Tenax® TA
C1-C4 aldehydes	Low-molecular aldehydes		DNPH

^{*)} GC column with 5% phenyl, 95% dimethyl polysiloxane

^{**)} For the determination of VVOC, a suitable collection phase, such as activated charcoal, must be selected, as significantly false-low results can be expected with single enrichment on Tenax® TA.

Analysis of the substance groups VOC and SVOC shall be carried out by thermal desorption/gas chromatography/mass spectrometry (TD/GC/MS; DIN ISO 16000-6). The identification of the individual substances shall be carried out by means of mass spectra and retention indices.

Furthermore, the test chamber atmosphere shall be analyzed for formaldehyde and other volatile aldehydes through sampling on DNPH-coated cartridges and subsequent analysis by means of high performance liquid chromatography (HPLC/DAD) (DIN ISO 16000-3).

11 Evaluation in accordance with **pure life** criteria

The evaluation of the emissions is carried out in accordance with the so-called AgBB evaluation scheme and the LCI-value list in the respective valid versions. In order to fulfill the **pure life** criteria, further and more stringent threshold value requirements must, however, be fulfilled: see Section 4.2 Emissions requirements. For the quantification of the LCI substances, these are calibrated with original standard reference material. The non-LCI substances are quantified against toluene. VVOC are quantified based on their original responses. For all substances, as far as is technically feasible, concentrations above 1 µg/m³ are specified. The summation for TVOC and TSVOC is carried out in accordance with the AgBB evaluation scheme with a consideration limit of 5 µg/m³. Analogously, a TVVOC value is determined. The analysis results are given as a reference room concentration pursuant to DIN EN 16516 and compared against the **pure life** criteria in order to achieve an evaluation: see **Table 11-1**. The emissions test can be terminated prematurely after 7 days and is considered passed if, at that time, the criteria for the 28-day test period have been fulfilled and there is no increase in concentration compared to the sampling from day 3 (72h).

Table 11-1. Evaluation of the emissions in accordance with criteria for the **pure life** quality hallmark

Parameter	Measured value	Limit value requirements	Measured value	Measured value (optional)	Limit value requirements
	after 3 days (72h) test duration		after 7 days test duration	after 28 days test duration	
	Concentration in mg/m³				
Total VVOC, < C6 (TVVOC)		≤ 3			≤ 1
Total VOC C6 – C16 (TVOC)		≤ 1.0			≤ 0.1
Total SVOC, > C16 – C22 (TSVOC)					≤ 0.02
R-value (VOC with LCI) dimensionless					≤ 1
VOC without LCI					≤ 0.05
CMR substances		≤ 0.010			≤ 0.001
Formaldehyde					< 0.010
Acetaldehyde					≤ 0.010
Styrene					≤ 0.010
Further individual substances					RW I
Criteria fulfilled	+/-		+/-	+/-	

For the granting of the **pure life** quality hallmark, the 3-day and 28-day requirements must be fulfilled.

12 Compliance with additional emission requirements (quality label)

Compliance with the emissions requirements for the **pure life** quality hallmark simultaneously includes compliance with other emissions requirements in accordance with the following list. Compliance with the respective criteria is verified during every emissions test and reported separately in the test report.

- National emissions requirements in Germany
 - Committee for Health-related Evaluation of Building Products (AgBB)
 - Deutsches Institut für Bautechnik (German institute for building technology, DIBt), Model Administrative Regulation on Technical Building Regulations, Annex 8: Emissions requirements (ABG)
- National emissions requirements in France (Décret No. 2011-321, ordinance DEVL1104875A), best emissions class A+ (Émissions dans l'air intérieur A+)
- National emissions requirements in Belgium (Royal Decree, 2014)
- Quality seal "Nachhaltiges Gebäude" (sustainable building, QNG), QNG catalog of requirements, annex document 313, items 1 (overarching requirements) and 12 (insulation materials and in-situ foams)
- Requirements in accordance with DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen e.V), Criteria Set New Construction Buildings, Version 2023, 4th Edition, Annex 1 Criteria matrix, Category 40, Quality levels 1-4
- Requirements in accordance with BREEAM (Building Research Establishment Environmental Assessment Method) New Construction International, Version 7, HEA 04, Indoor air quality, emission criteria by product type

Upon fulfillment of the certification requirements according to the **pure life** criteria for low-emission insulation materials, products can be hallmarked with the product label shown in Appendix 6.

13 Test report

The test report must meet the general requirements of the DIN EN ISO/IEC 17025 and must contain, where relevant, the test report elements listed in the DIN EN 16516.

Appendix 1 Manufacturer's declaration concerning the exclusion of constituents

Product group: ☐ Al/Al-composite ☐ mineral fleece ☐ block foam

Precise product/commercial designation of the insulation material

We confirm that:

(1) In accordance with Sections 2 or 3 of the current safety data sheet and pursuant to Regulation (EC) No. 1272/2008 (CLP) as well as the respective currently applicable amending Regulation (EU), the components (substances or mixtures of substances) utilized in the manufacture of the insulation material do not possess any of the following properties:

- Acutely toxic Cat 1 or Cat 2 or Cat 3 (H300, H301, H310, H311, H330 or H331)
- Carcinogen (Cat 1A, 1B) (H350)
- Mutagen (Cat 1A, 1B) (H340)
- Toxic for reproduction (Cat 1A, 1B) (H360)

Acutely toxic substances of Category 3 may be used if it is possible to substantiate that they do not pose a potential risk to human health when installed. This is the case when, for example, the substance has completely reacted to form another compound or is fully encapsulated or bound.

(2) So-called "substances of very high concern" (SVHC) in accordance with REACH Regulation (EC) 1907/2006 which do not fall under Section (1) must not be added actively*) in order to achieve specific product properties.

(3) Organostannic compounds not covered by Section (1) must not be added actively*).

(4) Chlorinated paraffins (from C10) must not be added actively*).

(5) TCEP (tris(2-chloroethyl)phosphate) and TCPP (tris(1-chloro-2-propyl)phosphate) must not be added actively*). For TCPP, a transitional period applies until 31 December 2026.

*)Active usage is the targeted usage of substances to achieve specific product properties. Substances which are present as impurities and/or as minor constituents in the product shall be regarded as not "actively used". The active addition of these substances shall be assumed when the concentration of the said substances in the added component in accordance with the safety data sheet is at least 0.1 %. These requirements for the named substances are considered to be fulfilled if the concentration of these substance groups is ≤ 0.1 %.

We confirm that

- During production, no plasticizing substances of the class of phthalates are added. No more than 0.1 % mass are present in the product as impurities.
- No halogenated propellants are added.

Manufacturer, full address:

Date, name in block capitals

Legally binding signature

Company stamp

Appendix 2 Sampling record: Extraction of insulation material samples

Company name of the applicant (Address/stamp):		Product manufacturer (if different from applicant):	
Contact partner: Telephone: E-Mail:		Certification number:	
Factory, in which the sample will be extracted:		Sampler (name, company, telephone):	☐ certification body ☐ FIW ☐ other
Sample designation:		Product group/ Facing:	☐ Al/Al-composite ☐ mineral fleece ☐ block foam Products with membranes, additionally laminated are included
Date of production: Batch:		Batch no.:	
Board thickness of the insulation material sample[mm]:		Grammage surface layer, unilateral [g/m²]:	
Date of sampling, cutting, packing:		Time:	
Sample will be extracted:	☐ from stock ☐ other	How was the product stored prior to sampling?	☐ open ☐ packaged
Place of storage:		Type of packaging and material:	
Special features/comments (formulation alterations, possible negative influences through emissions at sampling location, ambiguities, questions, etc.):			
Through the extraction of the test specimen, the manufacturer agrees to the testing through the testing body and to the assumption of the testing costs.			
Foreseen tests: ☐ pure life , initial certification, ☐ pure life , subsequent certification ☐ pure life , special inspection			
Confirmation The undersigned herewith confirms the accuracy of the information provided above. The sample was personally selected, extracted and packaged by the Sampler, in accordance with the sampling instructions, during the factory inspection.			
Date:	Inspection body, name in capital letters		Signature
Date:	Manufacturer, name in capital letters		Signature
Shipping address	Fraunhofer WKI, Material Analysis and Indoor Chemistry (MAIC) Riedenkamp 3, 38108 Braunschweig/Germany		

Appendix 3 Checklist for conformity evaluation in accordance with WKI-PS-EPUD-001

Monitoring period:_____

Manufacturer of the insulation material (Address)	Product groups	Certificate No.
	1.	
	2.	
	3.	

1. Verification of the in-house production control (WPK)

☒	Basic requirements	Comments
☐	Has a representative for the WPK been named by the management?	
☐	Will the WPK be examined by the management regarding suitability and effectiveness?	
☐ ☐ ☐ ☐ ☐ ☐	Does a quality manual for the WPK exist which regulates at least the following procedures? – organization of the quality assurance – examination of raw materials as regards specified parameters – description of the WPK (sampling, testing methods, frequency of testing, records) – introduction of additional tests – packaging and storage of the products – identification of the products	
☐ ☐ ☐	Have the personnel and equipment requirements been fulfilled as regards: – sufficient personnel trained in WPK procedures – suitable, functional and calibrated testing equipment – suitable premises for the production, testing and storage?	
☐	Is the examination of the raw materials carried out with respect to specified parameters?	
☐	Are the WPK tests carried out with the required frequency?	
☐	Do the records for the WPK include all the required information and thereby enable a traceability back to the raw materials?	
☐	Are the limit values for the WPK tests being complied with?	
	Is the procedure for handling non-compliant products being correctly implemented?	

2. Annual routine test on a random sample

☒	Basic requirements	Comments
☐	Was a random sample taken from each certified product group?	
☐	Was the random sample correctly packaged and identified for shipment?	
☐	Do the test results fulfill the requirements of the basic award criteria?	

3. Summarized evaluation by the certification body

The certification shall be continued: ☐ yes ☐ no
--

Place/date

Signature
Head of certification body

Appendix 4 Form for recording trade names (for the issuance of „pure life“-duplicate certificates)

Dealer details

Dealer name:	
Address:	Billing address: (if different)
Contact person: - Name: - Telephone number: - E-mail address:	
Trademark/Product name:	

We, as the retailer, hereby confirm that the product marketed under our private label was manufactured by the manufacturer named below and corresponds to the specified certified product. No modifications or further processing of the product are carried out.

Date	Signature, Dealer representative / Company stamp
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Manufacturer details

Manufacturer of the product:
Manufacturer's address:
Product group:
Product name: (as stated in the certificate)
Thickness range:
Certificate number:

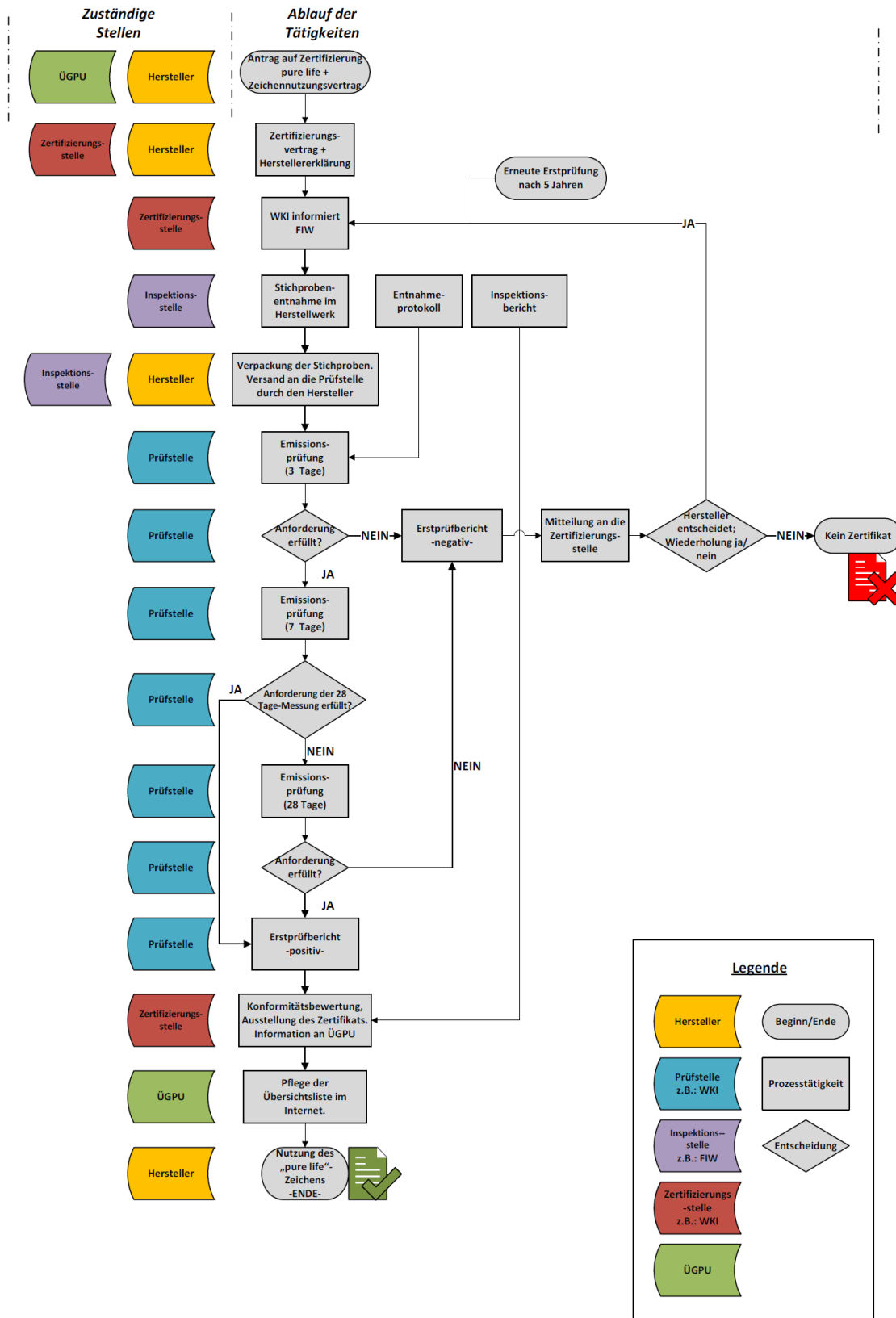
As the manufacturer, we hereby declare our consent for the aforementioned distributor to place the certified product on the market under the specified brand name. The product placed on the market under the trade name remains identical to the product specified in the certificate.

Date	Signature, Dealer representative / Company stamp
------	--

Appendix 5 Flow chart for the certification

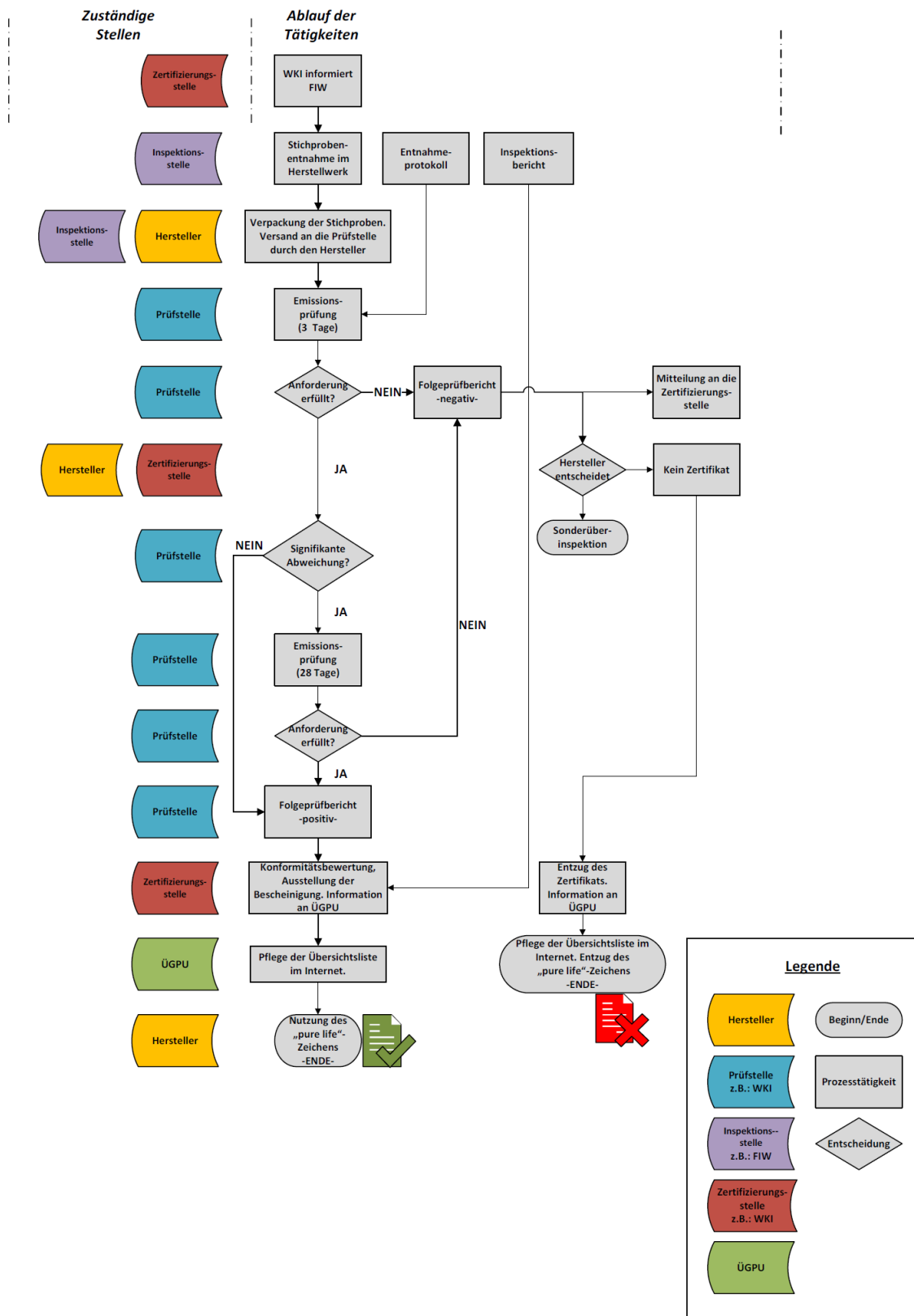
„pure life“ - Erstzertifizierung (Erstprüfung)

Stand: 24.03.2016



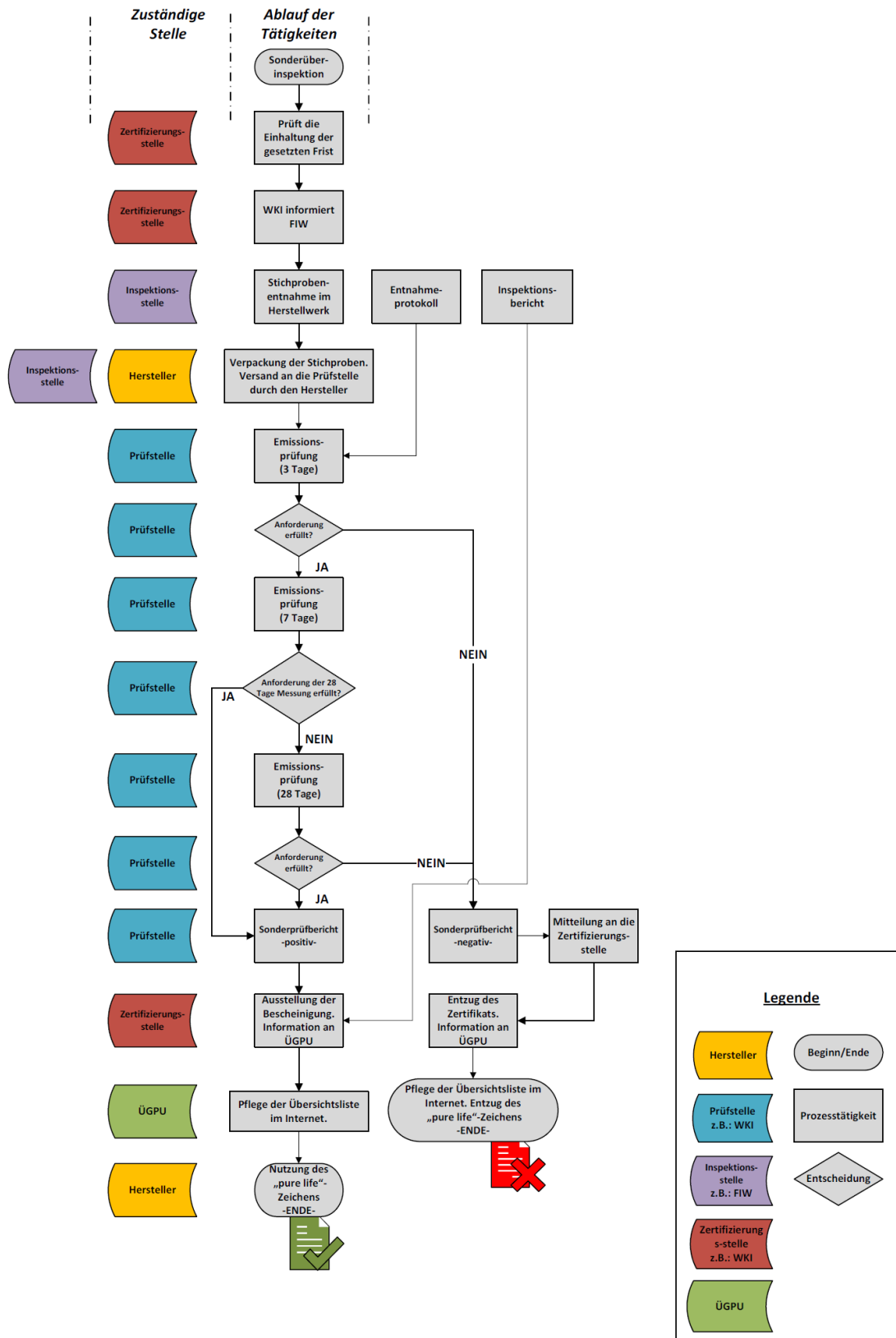
pure life – Folgezertifizierung (Regelprüfung)

Stand: 24.03.2016



„pure life“ - Sonderinspektion (Sonderprüfung)

Stand: 24.03.2016



Appendix 6 Environmental quality hallmark pure life for product labelling

The manufacturer is entitled to hallmark the products with the following environmental quality hallmark **pure life**, provided he has a valid certificate for the products in question and that he has concluded a trade mark agreement with the ÜGPU.



Meets the QNG requirements for prevention of hazardous substances in insulants. “pure life” is a seal of approval issued by the ÜGPU association.