natureplus e.V.

Guideline 0300

External thermal insulation composite systems

Version: Oct. 23, 2026
for the awardance of the eco-label

Introduction

The International Association for Sustainable Building and Living - natureplus association - pursues the goal of promoting sustainable building products and increasing their popularity and use. To this end, sustainability criteria for building products are defined and verified as part of regular conformity assessments at the applicant's premises.

Three comprehensive sustainability definitions are created to achieve a holistic understanding of quality.

CLIMATE PROTECTION

The climate crisis is worsening, and the consequences are becoming increasingly visible. The construction sector is one of the largest emitters, accounting for around 40% [1] of global greenhouse gas emissions. Energy-intensive manufacturing processes, long transport routes and short renovation cycles are often still characteristic of the status quo.

The natureplus certification requires manufacturers to meet limit values on CO2 emissions and primary energy consumption.

[1] UNEP, 2020, 2020 Global Status Report for Buildings and Construction, p. 4.

HEALTHY LIVING

In Western societies, we spend about 90% [2] of our lives in buildings. Pollutants emitted by building materials can accumulate in the indoor air we breathe daily, posing unnecessary health risks to occupants. The accumulation of chemical pollutants from building materials in household dust is also a cause for concern.

The natureplus certification ensures that hazardous input materials are avoided or used in quantities that are harmless to health. Emissions from building products are strictly regulated and regularly monitored.

[2] Umweltbundesamt, o. D., Ausschuss für Innenraumrichtwerte (AIR)

CONSERVATION OF RESOURCES

All construction activities have an impact on nature and the environment, with the consumption of finite resources remaining unacceptably high. The production of building materials in Germany consumes about 60% of our resources, and as much as 90% if only mineral raw materials are considered. At the same time, the construction sector is responsible for 50% of the waste generated. [3]

The natureplus certification sets out requirements for increased transparency in the supply chain, respect for human rights and the environment, and the responsible use of resources throughout the life cycle of a building product.
Sustainable materials should also be durable, reusable, or recyclable.

[3] VDI ZRE, 2019, Ressourceneffizienz im Bauwesen – Von der Planung bis zum Bauwerk, p. 5.

Notes on this product guideline:

The eco-label, the certification programme including all associated documents is the property of the non-profit natureplus® environmental organisation. The Association and its specially appointed Criteria Commission are therefore responsible for the further development of the requirements.

The label is awarded by the European cooperative natureplus Institute SCE mbH.

In the event of textual discrepancies between different language versions of a guideline, the Criteria Commission's Task Force will determine the valid wording. The affected language versions will be amended to reflect the valid wording.

In the event of conflict between the basic guidelines (50XX) and this product guideline, the product award guideline shall prevail.

For questions, criticism and suggestions, please contact:

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1 Application Areas

The following criteria contain the requirements for the awardance of the natureplus eco-label for the following external thermal insulation composite systems. These systems are comprised of an insulation material, adhesive, fixings and a render system (base render coat with an inlaid fibre-glass webbing/mesh (strengthening), primer or key coat and a finishing coat of plaster).

- External thermal insulation composite systems employing cork insulating boards
- External thermal insulation composite systems employing wood fibre insulating boards
- External thermal insulation composite systems employing hemp insulating boards
- External thermal insulation composite systems employing reed insulating boards
- External thermal insulation composite systems employing mineral foam insulating boards

The award guideline is to be applied exclusively to those products mentioned in this guideline.

2 Award Criteria

The prerequisite for a product to be awarded the natureplus® quality label in accordance with these guidelines is compliance with the following award guidelines:

- GL5001 Chemicals Directive
- GL5002 Origin of Wood and Wood Production
- GL-5003 Nature Conservation when Exploiting Mineral Resources
- GL5004 Transparency and Social Responsibility
- GL5010 Low-emission building products
- GL5020 Climate compatibility and energy efficiency

The requirements of the basic guidelines can be fulfilled via certification of the individual components.

Requirements for the system components

Wood fibre insulation boards must fulfil the requirements of the award guideline RL0201"Porous Wood Fibre Board". The award guideline RL0201 is also to be used in the case of products with a raw density below 230 kg/m3.

Hemp insulation boards must fulfil the requirements of the award guideline RL0101"Hemp Insulation".

Insulation boards made from reeds must fulfil the requirements of the award guideline RL0111"Straw and Reed Based Insulation".

Cork insulation boards must fulfil the requirements of the award guideline RL0113"Cork Insulation Boards".

Mineral based foam insulation boards must fulfil the requirements of the award guideline RL0406"Mineral Based Foam Insulation".

Foam glass boards must meet the requirements of the award guidelines RL0406 "Insulation boards made of foam glass".

2.1 Functional Suitability

An official technical approval for the whole system must be available.

The European Organisation for Technical Approvals (EOTA) Guideline ETAG 004 and the Guideline for External Thermal Insulation Composite Systems with rendering for the use on timber frame building kits CUAP 04.04./26 (Common Understanding of Assessment Procedure (CUAP)) are to be used in the technical approval and evaluation of the products. Compliance with the relevant, valid national application documents must be confirmed.

The fixing plugs/anchors must comply with the relevant national requirements of the guideline ETAG 014 "PLASTIC ANCHORS FOR FIXING OF EXTERNAL THERMAL INSULATION COMPOSITE SYSTEMS WITH RENDERING".

Broad-head fixings must comply with the requirements of CUAP 04.04/26. The vapour diffusion resistance number μ (according to EN 12086) of the insulating material must not exceed a value of 10.

2.2 Composition, Forbidden Substances, Substance Restrictions

For plaster and mortar components, the following requirements apply:

The levels of organic components within the finishing render may not exceed 7 % (inclusive silicon resins) and may not exceed a maximum of 5% in the base render and the adhesive render. The following additives/components are not permitted:

- Glycol ethers and -esters
- APEO's (Alkyl phenol ethoxylate)
- Formaldehyde separators/dispersers

Products containing cement must comply with the limit value defined in "Annex XVII of the REACH Regulation (as of October 2, 2025), Section 47: Chromium VI Compounds, Point 1."

For wall paints, the following requirements apply:

Preservatives may only be used for pot-preservation for retail ready-to-use liquid products. They are not permitted for film-preservation. Biocides may not be used in products which, due to their properties (e.g. highly alkaline), do not require pot-preservation.

Siccatives (driers) containing cobalt are prohibited.

The product must not be classified in WGK 2 or WGK 3 (Water Hazard Classes 2 and 3) according to VwVwS (Administrative Regulation on the Classification of Substances Hazardous to Waters intoWater Hazard Classes) of the German Environmental Agency (Umwelt Bundes Amt).

With regard to the recommended application, the amount of anorganic white pigments of artifical origin is restricted to 38 g/m².

The following substances must not be added to the product:

- softening agents (according to VdL-GL 01)
- glycol compounds
- APEOs (alkylphenol ethoxylates)
- halogenic organic compounds
- organic tin compounds
- azo dyes resulting in carcinogenic amines
- biocides not used for in-can conservation (film preservatives)
- halogenated isothiazolinones
- formaldehyde releasing substances

Only pigments prepared from iron oxides or anorganic substances with comparable or less toxicity may be added to the product.

Pigments which are ecologically or toxicologically questionable, such as metal compounds which are forbidden as per GL-5001 are not permitted under any circumstances.

The proportion of organic solvents must not exceed 0.05 M-%.

The use and addition of biozides is not permitted.

If pot-conservation is used, it must not be employed in amounts which imply the misuse for surface protection.

Further Requirements:

Plastic fixing plugs and accessories must be halogen-free and if available from recycled materials.

The product is subject to assessments as detailed in section 3 and must comply with the limits specified therein.

2.3 Raw Material Sourcing, Production of Preliminary Products, Production

No further requirements in this section.

2.4 Usage

No further requirements in this section.

2.5 Reuse, recycling and disposal

A disposal concept must be provided for the complete system. The components must be suitable for disposal in an inert materials disposal site/facility according to the "Decision of the EU council of the 19th December 2002 on the definition of criteria and procedures for the receipt and acceptance of waste products at waste disposal sites according to article 16 and appendix 2 of the guideline 1999/31/EG". Alternatively the components must be suitable for disposal in a waste incineration plant.

2.6 Ecological Parameters

No further requirements in this section.

2.7 Public Declaration

Furthermore, there is an obligation to include the following information with the product or to make it available to the consumer or user in an appropriate manner (e.g. online):

- Instructions for use and safety instructions
- Storage and disposal instructions
- Batch numbers
- Country of production
- Country of origin of input materials > 20 M-% where there is a deviation from the country of production

A public declaration of ingredients[1] must be provided in the official language of the country in which the product is intended for sale. It must be freely accessible. Ingredients must be listed in descending order of weight. The following publicly accessible documentation paths are permitted:

- Product packaging
- Technical data sheet
- Sales brochures
- Website

Ingredients from preliminary products or preparations that remain in the final product with a content of >1 M% must also be included in the full declaration.

The following applies to the public declaration of ingredients:

- above 1 M% the name of the ingredient
- below 1 M% at least the functional name of the ingredient, the mass order is cancelled.

[1] Ingredients are substances and mixtures that remain in the final product. Reactants and ancillary input materials are included in the non-public full declaration submitted to the assessment body

When using ingredients with an environmentally hazardous potential, the applicant must indicate at an appropriate place which measures are to be taken within the framework of dismantling and demolition work to protect the environment (e.g. controlled dismantling).

2.8 Processing and Installation

No further requirements in this section.

2.9 Packaging

No further requirements in this section.

3 LaboratoryTests

Finishing plaster (white goods), rendering and adhesive mortars are subject to the following laboratory tests.

The products are subject to laboratory analyses to test for harmful substances and undesirable ancillary ingredients. A representative sample is collected during the production audit. If the sample collection cannot be conducted by a natureplus examiner, an independent person designated by natureplus can collect the sample. For products with different sizes but the same composition, a single sample is sufficient.

3.1 Volatile Organic Compounds VOC / TVOC

No further requirements in this section.

3.2 Element Analyses

The product is subject to an element analysis to determine the content of harmful elements and to check for undesirable contaminations. The measurements have to be in compliance with the limit values. The analysis is performed according to the current version of the test method TM-02 metals.

An eluate analysis is mandatory if the required values of the content analysis are not met.

Element	Limit value [mg/kg]
Arsenic (As)	≤ 5
Cadmium (Cd)	≤ 1
Cobalt (Co)	≤ 20
Mercury (Hg)	≤ 1
Nickel (Ni)	≤ 20
Lead (Pb)	≤ 15
Antimon (Sb)	≤ 5
Tin (Sn)	150

3.3 Other Analyses

Chromium VI

Test parameters	Limit values	Unit	Method
Chromium VI (Cr VI)	≤ 2	mg/kg	TRGS 613

Halogenic organic compounds

Test parameters	Limit values	Unit	Method
Halogenic organic compounds: AOX/EOX	≤ 1	mg/kg	TM-03 Halo

Free Formaldehyde

Test parameters	Limit values	Unit	Method
Free Formaldehyde	≤ 2	mg/kg	UV-Vis (VdL-03:2018-03-4.1) or comparable methods

Total VOC (TVOC)

Test parameters	Limit value	Unit	Method
Total VOC (TVOC)	≤ 1000	mg/kg	Headspace GC/MS analog E DIN55649

4 Appendix

Test methods

TM-01 VOC : Volatile Organic Compounds VOC/TVOC, formaldehyde, acetaldehyde and TSVOC: DIN EN ISO 16000 series expanded by the natureplus implementation rules in guideline 5010.

TM-02 Metals: ICP-MS measurements according to DIN EN ISO 17294-2, supplemented with the natureplus implementation rules and a sample preparation adjusted to the issue analysed.

TM-03 Halo: Halogenic organic compounds after combustion, determined by microcoulometry according to the natureplus implementation rules "AOX/EOX".

TM-04 Odour: natureplus implementation rules "odour intensity", 6-degree grading scale 3 days after loading the test chamber following VDA 270:2018.

TM-05 Pesticides: DFG S 19 extended by natureplus implementing regulations

TM-08 Foreign fibres and foreign substances: scanning electron microscopy SEM

TM-09 Monomeric isocyanates: 24h after test chamber loading

TM-10 PAH: HPLC / GC-MS, sum according to EPA