natureplus e.V.

Guideline 0604

Mineral-Based Exterior Wall Paints

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 award of the natureplus Eco-label for mineral-based wall paints (silicate paints) for exterior applications according to DIN 18363 2.4.1.

Paints which are advertised for use for both exterior and interior applications must be evaluated according to the requirements of GL 0602.

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
- GL-5003 Nature Conservation when Exploiting Mineral Resources
- GL5004 Transparency and Social Responsibility
- GL5020 Climate compatibility and energy efficiency

2.1 Functional Suitability

Products that are awarded the natureplus Eco-label must fulfil very high functional suitability standards. Manufacturers may prove compliance with these requirements by reference to appropriate official standards and guidelines.

The following requirements must, without exception, be fulfilled:

- Diffusion-equivalent air layer thicknessEN ISO 7783-2, Classification I, High water-vapour permeability
- Water-vapour transmission rate EN 1062-1, Classification III, Low water-permeability

2.2 Composition, Forbidden Substances, Substance Restrictions

The proportion of renewable and mineral raw materials and water in the product must at least 95 mass%.

The proportion of all chemical-synthetic organic constituents (e.g. acrylates) must not exceed 5mass%.

The proportion of organic solvents must not exceed 0.5 M-%.

The use and addition of biozides is not permitted.

The following product additives are prohibited:

- Softeners(According to VdL Guideline 01 (VdL –German Paint Industry Federation))
- Glycol compounds
- APEO's (alkylphenol ethoxylates)
- Halogen organic compounds
- Tin organic compounds
- Azo colorants that are capable of decomposing carcinogenic amines
- Formaldehyde decomposition agents

The product must not be prepared with pigments and siccatives based on lead, cadmium, chrome VI and their compounds.

The requirements relating to coloured products are to be found in the appendix: Coloured Products.

Single substance analyses according to section 3

Contamination of the input materials must be checked by means of element analysis. The solubility of metals and metalloids must be excluded if limit values are exceeded.

If organic substances are present in the end product, the limit values for organohalogen compounds must be complied with.

Phthalic acid esters must be tested according to section 3.3. The limit values must be complied with.

The content of formaldehyde must be determined in accordance with section 3.3. The limit values must be complied with.

The content of volatile organic compounds must be determined in accordance with section 3.3. The limit value must be complied with.

2.3 Raw Material Sourcing, Production of Preliminary Products, Production

A certificate of origin must be provided for all input components which constitute a proportion of >25% of the product.

2.4 Usage

The product must be capable, without the addition of biocides,of retarding the growth of algae and fungus.

In a solid state, the product must not exhibit any unpleasant or foreign smells or odours.

2.5 Reuse, recycling and disposal

The products are to be labelled with indications for disposal of paint containers and paint residues,along with cleaning advice for all tools used.

2.6 Ecological Parameters

All products in this product group must be manufactured in such a way that the environmental parameters listed in RL5020 are complied with.

2.7 Public Declaration

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

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

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).

Additionally, the following product-specific information must be made available to the consumer or user.

- Spreading rate/ Coveragein m2 / Litre
- Shelf life, storage properties, necessary storage conditions

2.8 Processing and Installation

No further requirements in this section.

2.9 Packaging

The packaging used must be recyclable.

Paper and cardboard packaging must be made from recycled paper. Alternatively, paper from sources as per GL5002 is also permitted.

Plastic packaging must be made from polyolefins. PET, polystyrene or polycarbonates are allowed exceptionally in reasonablecases.

PVC packaging is generally not permitted.

Packaging must not contain biocides.

Once awarded, the natureplus label together with the license number must be printed on the packaging or made visible to the consumer in another suitable place.

3 LaboratoryTests

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

This guideline is only applicable to paints which are approved for exterior applications. For this reason the analyses of the interior room parameters VOC – TVOC are not included. Should the product however be intended for use in interior applications it must be certified according to award guideline GL 0602.

3.2 Element Analyses

Element	Limit value [mg/kg]
Arsenic (As)	≤ 5
Cadmium (Cd)	≤ 0,5
Mercury (Hg)	≤ 0,1
Nickel (Ni)	≤ 10
Lead (Pb)	≤ 15
Tin (Sn)	≤ 10
Chromium (Cr)	≤ 10

* If the result for chromium (CR) is above 2 mg/kg, a chromium VI analysis according to section 3.3 is required.

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.

In addition, a coloured sample and/or a mixed sample will be analysed. The method for the selection of the mixed sample is stated in the appendix. If a large number of pigment groups must be tested an appropriate analysis plan, with numerous analyses, may be implemented.

3.3 Other Analyses

Halogenic organic compounds

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

Chromium VI

Test parameters	Limit values	Unit	Method
Chromium VI (Cr VI)	≤ 1	mg/kg	DIN EN 196-10:2016-11 (appendix D)

Total VOC (TVOC)

Test parameters	Limit value	Unit	Method
Total VOC (TVOC)	≤ 500	mg/kg	TM-15 TVOC (Headspace)

Phthalate Este

according to VdL guideline 01 in case of need

Test parameters	Limit values	Unit	Method
Phthalate Ester	≤ 1	mg/kg	Solvent extractionund GC/MS

Free Formaldehyde

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

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

Appendix: Coloured Products – Pigment pastes

In addition to uncoloured products, factory-coloured products or pigment pastes are also available for the processor to pigment the uncoloured product themselves. In order to ensure the validity of the natureplus Eco-label for the complete product pallet, the manufacturer must supply the following information.

1. The manufacturer shall compile a list of all system-related products (coloured products, pigment pastes etc.)
2. In the case of factory-coloured products in which compounds have been added to the base product, a declaration of the percentage of these compounds contained in the end-product must be provided.
3. Input components contained in the pigment pastes that constitute a proportion > 5 % must be declared together with the percentages of the input components in the paste. In addition, the highest recommended application quantity of the paste must be stated.
4. The pigments are declared by means of the respective CAS-number. If a distinct C.I.- number exists, this may also be used in the evaluation.

The manufacturer's information will be evaluated and analysed according to the following criteria.

A.) The pigment pastes must not contain any substances that are restricted according to GL 5001.

B.) All additives which are not used to incorporate the pigment into the base paint are prohibited. This applies in particular to the addition of artificial binders (Acrylates).

C.) The proportion of solvents contained in the paste is restricted to a value that does not exceed a value of 5 % of the highest application quantity in the pigment.

D.) Any mineral pigments which constitute a proportion of ≥10% of the end-product will be tested for heavy metals in accordance with section 3.2. The pigments are grouped on the basis of the core metal. As a rule, this will usually be iron, copper or chromium. A mixed sample from the group is satisfactory for the analysis. If more than 5 colours are present in a mixed sample, it will be divided into a multiple of mixed samples.

E.) If pigments are employed which contain chromium, pigment samples must be taken during the factory on-site inspection. These pigments will be individually tested for the leaching of chromates. The threshold limit for the pigment must not be exceeded.

Test parameter	**Limit Value**	**Unit**	**Method**
Chromium VI (Cr VI)	≤ 2	mg/kg	TM-29-Chromium VI