SENTINEL HOLDING
INSTITUT

SHI PRODUCT PASSPORT

Find products. Certify buildings.

SHI Product Passport No.:

2752-10-1005

ERFURT Variovlies ECO

Product group: Floor coverings / Wall coverings - Wallpaper

ERFURT
WÄNDE ZUM WOHLFÜHLEN

ERFURT & SOHN KG
Hugo-Erfurt Str. 1
42399 Wuppertal

Product qualities:

- SHI Product Assessment 2024
- QNG Qualitätssiegel Nachhaltiges Gebäude
- DGNB NEW CONSTRUCTION 2023.2
- DGNB NEW CONSTRUCTION 2023
- DGNB NEW CONSTRUCTION 2018
- BNB-BN NEUBAU V2015
- EU TAXONOMY
- BREEAM DE NEUBAU 2018
- LEED v4.1 (outside US)

CERTIFIED SUSTAINABLE PRODUCT
SHI PRODUCT PASSPORT
SENTINEL HOLDING INSTITUT
www.sentinel-holding.eu

Köttner

Helmut Köttner
Scientific Director
Freiburg, 26 August 2026

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

Contents

SHI Product Assessment 2024	1
QNG - Qualitätssiegel Nachhaltiges Gebäude	2
DGNB New Construction 2023.2	3
DGNB New Construction 2023	4
DGNB New Construction 2018	6
BNB-BN Neubau V2015	7
EU taxonomy	8
BREEAM DE Neubau 2018	9
LEED v4.1	10
Product labels	11
Legal notices	12
Technical data sheet/attachments	12

The SHI Database is the first and only database for construction products whose comprehensive processes and data accuracy are regularly verified by the independent auditing company SGS-TÜV Saar

SGS TÜV SAAR

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

SHI Product Assessment 2024

Since 2008, Sentinel Holding Institut GmbH (SHI) has been establishing a unique standard for products that support healthy indoor air. Experts carry out independent product assessments based on clear and transparent criteria. In addition, the independent testing company SGS regularly audits the processes and data accuracy.

Criteria	Product category	Harmful substance limit	Assessment
SHI Product Assessment	Other products	TVOC ≤ 300 µg/m^3 Formaldehyd ≤ 24 µg/m^3	Indoor Air Quality Certified
Valid untill: 11 July 2027			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

QNG - Qualitätssiegel Nachhaltiges Gebäude

The Qualitätssiegel Nachhaltiges Gebäude (Quality Seal for Sustainable Buildings), developed by the German Federal Ministry for Housing, Urban Development and Building (BMWSB), defines requirements for the ecological, socio-cultural, and economic quality of buildings. The Sentinel Holding Institut evaluates construction products in accordance with QNG requirements for certification and awards the QNG ready label. Compliance with the QNG standard is a prerequisite for eligibility for the KfW funding programme. For certain product groups, the QNG currently has no specific requirements defined. Although classified as not assessment-relevant, these products remain suitable for QNG-certified projects.

Criteria	Pos. / product group	Considered substances	QNG assessment
3.1.3 Schadstoffvermeidung in Baumaterialien			QNG ready - Not relevant for assessment
Verification: Das Produkt ist nicht flammhemmend ausgerüstet. Siehe ergänzend Herstellererklärung vom 12.03.2024			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

DGNB New Construction 2023.2

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact			Not relevant for assessment

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

DGNB New Construction 2023

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings. The 2023 version sets high standards for ecological, economic, socio-cultural, and functional aspects throughout the entire life cycle of a building.

Criteria	Assessment
ECO1.1 Life cycle cost (*)	May positively contribute to the overall building score
Verification: Langlebigkeit; ca. 35 Jahre Nutzungsdauer durch die Möglichkeit des Überstreichens.	

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 03.05.2024 (3rd edition)			Not relevant for assessment
Verification: Das Produkt ist nicht flammhemmend ausgerüstet. Siehe ergänzend Herstellererklärung vom 12.03.2024			

Criteria	Quality level
ENV1.3 Responsible resource extraction	May positively contribute to the overall building score
Verification: FSC-Zertifikat vom 28.02.2020	

Criteria	Assessment
ENV1.1 Climate action and energy (*)	May positively contribute to the overall building score
Verification: Produkte mit Altpapieranteil sparen den vorgelagerten Prozess der Zellstoff-Produktion und damit Energie und CO2-Austoß ein. Eine erhöhte Langlebigkeit ist durch die mehrfache Überstreichbarkeit gegeben	

Criteria	Assessment
SOC1.2 Indoor air quality (*)	May positively contribute to the overall building score
Verification: Schadstoffgeprüft	

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 29.05.2025 (4th edition)			Not relevant for assessment
Verification: Das Produkt ist nicht flammhemmend ausgerüstet. Siehe ergänzend Herstellererklärung vom 12.03.2024			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

DGNB New Construction 2018

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact			Not relevant for assessment
Verification: Das Produkt ist nicht flammhemmend ausgerüstet. Siehe ergänzend Herstellererklärung vom 12.03.2024			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

BNB-BN Neubau V2015

The Bewertungssystem Nachhaltiges Bauen (Assessment System for Sustainable Building) is a tool for evaluating public office and administrative buildings, educational facilities, laboratory buildings, and outdoor areas in Germany. The BNB was developed by the former Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and is now overseen by the Federal Ministry for Housing, Urban Development and Building (BMWSB).

Criteria	Pos. / product type	Considered substance group	Quality level
1.1.6 Risiken für die lokale Umwelt			Not relevant for assessment
Verification: Das Produkt ist nicht flammhemmend ausgerüstet. Siehe ergänzend Herstellererklärung vom 12.03.2024			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

EU taxonomy

The EU Taxonomy classifies economic activities and products according to their environmental impact. At the product level, the EU regulation defines clear requirements for harmful substances, formaldehyde and volatile organic compounds (VOCs). The Sentinel Holding Institut GmbH labels qualified products that meet this standard.

Criteria	Product type	Considered substances	Assessment
DNSH - Pollution prevention and control	Sonstige	Stoffe nach Anlage C	compliant
Verification: Herstellererklärung vom 12.03.2024			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

BREEAM DE Neubau 2018

BREEAM (Building Research Establishment Environmental Assessment Methodology) is a UK-based building assessment system that evaluates the sustainability of new constructions, refurbishments, and conversions. Developed by the Building Research Establishment (BRE), the system aims to assess and improve the environmental, economic, and social performance of buildings.

Criteria	Product category	Considered substances	Quality level
Hea 02 Indoor Air Quality	Ceiling, wall, and acoustic and thermal insulation materials	Emissions: Formaldehyde, TVOC, TSVOC, carcinogens	Exemplary quality
Verification: Prüfbericht des Instituts eco-INSTITUT Germany GmbH vom 11.07.2025 / Prüfbericht Nr. 60016-A012-AgBB-L			

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

LEED v4.1

LEED (Leadership in Energy and Environmental Design) is an internationally recognised building certification system developed by the U.S. Green Building Council. It is one of the most widely used sustainability standards for buildings worldwide and is particularly applied in internationally oriented projects. LEED assesses buildings holistically across categories such as energy efficiency, resource conservation, material selection, indoor environmental quality and site sustainability. Depending on the number of points achieved, projects are awarded one of the certification levels: LEED Certified, Silver, Gold or Platinum.

Criteria	Product category	Considered substances	Assessment
EQ Credit: Low-Emitting Materials			Not relevant for assessment

SENTINEL HOLDING
INSTITUT

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

ERFURT
WÄNDE ZUM WOHLFÜHLEN

Product labels

In the construction industry, high-quality materials are crucial for a building's indoor air quality and sustainability. Product labels and certificates offer guidance to meet these requirements. However, the evaluation criteria of these labels vary, and it is important to carefully assess them to ensure products align with the specific needs of a construction project.

This product is SHI Indoor Air Quality certified and recommended by Sentinel Holding Institut. Indoor-air-focused construction, renovation, and operation of buildings is made possible by transparent and verifiable criteria thanks to the Sentinel Holding concept.

Products bearing the Sentinel Holding Institute QNG-ready seal are suitable for projects aiming to achieve the "Qualitätssiegel Nachhaltiges Gebäude" (Quality Seal for Sustainable Buildings). QNG-ready products meet the requirements of QNG Appendix Document 3.1.3, "Avoidance of Harmful Substances in Building Materials." The KfW loan program Climate-Friendly New Construction with QNG may allow for additional funding.

The Forest Stewardship Council (FSC) label is awarded to products made wholly or partly from wood sourced from responsibly managed and controlled forestry. Health-related aspects of the final product are not part of the FSC assessment.

The IBU ("Institut Bauen und Umwelt e.V.") is an initiative of building product manufacturers committed to sustainability in construction. It serves as the programme operator for Environmental Product Declarations (EPDs) in accordance with the EN 15804 standard. The IBU EPD programme provides comprehensive life cycle assessments and environmental impact data for construction products, supported by independent third-party verification.

Product:
ERFURT Variovlies ECO

SHI Product Passport no.:
2752-10-1005

Legal notices

(*) These criteria apply to the construction project as a whole. While individual products can positively contribute to the overall building score through proper planning, the evaluation is always conducted at the building level. The information was provided entirely by the manufacturer.

Find our criteria here: https://www.sentinel-holding.eu/de/Themenwelten/Pr%C3%BCfkriterien%20f%C3%BCr%20Produkte

The SHI Database is the first and only database for construction products whose comprehensive processes and data accuracy are regularly verified by the independent auditing company SGS-TÜV Saar

Publisher

Sentinel Holding Institut GmbH
Bötzinger Str. 38
79111 Freiburg im Breisgau
Germany
Tel.: +49 761 590 481-70
info@sentinel-holding.eu
www.sentinel-holding.eu

ERFURT-Variovlies ECO

ERFURT®
WÄNDE ZUM WOHLFÜHLEN

GLATTVLIES-
TAPETEN

Produktvorteile

- PVC-frei
- Schwer entflammbar
- Für Wand und Decke
- Mehrfach überstreichbar
- Atmungsaktiv
- Keine Weichzeit
- Vlieskleber
- Wandklebetechnik
- Geringer Farbverbrauch
- Rissüberbrückend
- Leicht entfernbar
- Einfache Verarbeitung

Verarbeitung



1. Alte Tapeten und Anstriche entfernen. Raue Untergründe mit gipshaltigen Spachtelmassen glätten. Stark saugende Untergründe mit lösungsmittelfreien Grundierungen grundieren.



2a. Im Kleistergerät ohne Weichzeit oder



2b. In Wandklebetechnik ohne Weichzeit verarbeiten.



3. Die Bahnen Naht an Naht im Lot verkleben.



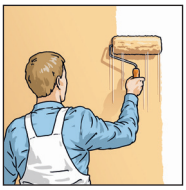
4. Blasen- und faltenfrei mit Tapezierbürste oder Gummirolle andrücken.



5. Überstände an Decken, Fußleisten, Fenstern usw. mit dem Cuttermesser und dem Tapeziespachtel abschneiden.



6. In Ecken und an Kanten wird nicht überlappend tapeziert, sondern die Trennung erfolgt exakt auf der Kante und nachfolgende Bahn auf Stoß tapezieren.



7. Nach Trocknung mit hochwertiger Dispersionsfarbe nach DIN EN 13300 überstreichen oder z. B. mit Putz, Tapete o.Ä. beschichten.

Variovlies PRO

www.erfurt.com

Technisches Merkblatt 09/2020

Produktbeschreibung

Überstreichbare Glattvlies-Tapete aus recyceltem Papier und Textilfasern.

Produktvorteile

- Hochwertige und homogene Vlies-Oberfläche
- Sehr gute Untergrundabdeckung
- In den meisten Fällen reicht eine Farbbeschichtung aus
- Keine Weichzeit
- Besonders für Wandklebetechnik geeignet
- Leicht entfernbar
- Frei von PVC und Weichmachern
- Hautsympathisch - frei von Glasfasern
- Ressourcen schonend - aus nachwachsenden Rohstoffen
- Geprüft nach Oeko-Tex Standard 100
- Diffusionsoffen
- Mehrfach überstreichbar
- Schwer entflammbar gem. DIN EN 13501-1
- Einfache Verarbeitung
- Für Wand und Decke geeignet
- Rissüberbrückend für Risse der Klasse A1

Hersteller

ERFURT & SOHN KG • Hugo-Erfurt-Straße 1
42399 Wuppertal • GERMANY • www.erfurt.com

Herstellung

Alle ERFURT-Variovlies ECO-Tapeten entsprechen der DIN EN 234 und werden aus recyceltem Papier und Textilfasern hergestellt.

Anwendung/Verarbeitung

Untergrund

ERFURT-Variovlies ECO kann auf allen tapezierfähigen Untergründen im Innenbereich eingesetzt werden. Der Untergrund muss trocken, tragfähig, gleichmäßig saugfähig, sauber, glatt und für die vorgesehene Wandbekleidung hinreichend ebenflächig sein. Alte Tapeten und nicht haftende Beschichtungen entfernen. Raue Untergründe mit gipshaltigen Spachtelmassen glätten. Glatte Gipsputze mit verdünntem Kleister vorleimen. Stark saugende bzw. unterschiedlich saugende Untergründe sind durch geeignete Grundanstriche zu egalisieren. Die BFS-Merkblätter Nr. 7, Nr. 10, Nr. 16, sowie VOB (Teil C, DIN 18363, Abs. 3) sind zu beachten.

Materialprüfung

Vor der Verarbeitung die Rollen auf mögliche Materialfehler hin überprüfen. Nur Rollen der gleichen Abmessung miteinander verarbeiten. BFS-Merkblatt Nr. 7 beachten.

Kleisterempfehlung TG / WKT

Zur Rissüberbrückung und Wandgestaltung:
Henkel: Metylan NP Neuputzkleister , Metylan NP Power Granulat Plus
Pufas: Pufas Glasgewebe- und Vlieskleber GK, Pufas SicherheitsKleister SK

Auf nicht saugende Untergründe, z .B. Kunststoffwände:
Henkel: Metylan Ovalit VB
Pufas: Pufas Wandbelags- und Bordürenkleber

Verarbeitung

ERFURT-Varivolies ECO lotrecht und auf Stoß verkleben. Die Bahnen mit der Gummirolle oder einem Tapezierspachtel blasenfrei andrücken. Überstände an Decken, Fußleisten, Fenster usw. mit einem Kunststoffspachtel in die Ecke drücken und mit einem Cuttermesser beschneiden. Gegebenenfalls ist ein Doppelnahtschnitt mit dem Gleitfußmesser möglich. ERFURT-Variovlies ECO ist besonders für die Verarbeitung in Wandklebetechnik (Kleisterauftrag durch Airlessgerät oder Farbwalze) geeignet. Beim Trocknen sind Zugluft sowie starkes Aufheizen des Raumes zu vermeiden. Zu schnelles Trocknen kann in Nahtbereichen zu Öffnungen führen, die bei nachfolgenden Beschichtungen sichtbar werden. Nicht unter + 10° C Luft- und Objekttemperatur arbeiten.

Anstrich/ Beschichtung

Nach Trocknung der Tapete ist die Fläche mit Dispersionsfarbe (min. Nassabriebklasse 3 nach DIN EN 13300) zu beschichten.

Renovierung

ERFURT-Variovlies ECO-Tapeten sind im Falle von Renovierungsarbeiten mehrmals überstreichbar. Bei fachgerechter Verarbeitung ist der Wandbelag leicht entfernbar.

Lagerung

Die Lagerung der Tapetenrollen muss trocken, kühl und stehend erfolgen.

Hinweise

Die Entsorgung von Tapezierabfällen kann über den Hausmüll erfolgen. Sofern ein Mangel während der Verarbeitung auftreten sollte, sind die Arbeiten unverzüglich einzustellen und beim Handel zu reklamieren. Beanstandungen ohne Beweisführung (Musterstücke und Einlegezettel) können nicht anerkannt werden. Da die Anwendung und Verarbeitung außerhalb unseres Einflusses liegt, befreien unsere Angaben unsere Kunden nicht von der eigenen Prüfung unserer Produkte auf ihre vorgesehene Verwendung. Mit Erscheinen einer, durch technischen Fortschritt bedingten, Neuauflage, verliert die vorliegende Ausgabe ihre Gültigkeit.

Prüfsiegel

ERFURT-Variovlies-ECO-Tapeten bestehen aus hochwertigen, natürlichen Rohstoffen die alle relevanten Norm-Vorgaben erfüllen und höchsten Qualitätsansprüchen genügen. Die ERFURT-Vliesfaser-ECO-Tapeten werden regelmäßig durch unabhängige Prüfinstitute auf verschiedene Produkteigenschaften hin getestet und ausgezeichnet. Folgende Prüfungen / Auszeichnungen liegen vor:

- Geprüft nach Oeko-Tex Standard 100.
- Geprüft nach AgBB-Schema 2018 (Emissionsprüfung nach DIN EN 16516.
- A+: Entspricht der französischen Emissionsprüfung gem. Décret-No. 2011-321 +KMR Verordnung.
- Wasserdampfdurchlässigkeit nach DIN EN ISO 12572 entspricht einer diffusionsäquivalenten Luftschichtdicke von ca. 0,02 m.
- Klassifizierung des Brandverhaltens: B-s1,d0 nach DIN EN 13501-1 (schwer entflammbar).
- Entspricht der DIN EN 234 (Festlegungen für Wandbekleidungen für nachträgliche Behandlung).

Made in Germany
ERFURT & SOHN KG
Hugo-Erfurt-Straße 1
42399 Wuppertal
Tel.: +49 202 6110 0
Fax: +49 202 6110 89451
E-Mail: info@erfurt.com
Internet: **www.erfurt.com**

ERFURT®
WÄNDE ZUM WOHLFÜHLEN

ERFURT
WÄNDE ZUM WOHLFÜHLEN

ERFURT & SOHN KG • Hugo-Erfurt-Straße 1 • 42399 Wuppertal • GERMANY

Sentinel Holding Institut GmbH
Frau Natalie Szcyglowski
Merzhauser Str. 74

79100 Freiburg i.Br.

ERFURT & SOHN KG
Hugo-Erfurt-Straße 1
42399 Wuppertal
GERMANY
Phone: +49 202 6110 0
Fax: +49 202 6110 89451
info@erfurt.com
www.erfurt.com
Sitz der Gesellschaft: 58332 Schwelm
Amtsgericht Hagen
HRA 4191

12.03.2024

Bestätigung der DGNB-Kriterien; Qualitätsstufe 4

Sehr geehrte Damen und Herren,

hiermit bestätigen wir, dass alle überstreichbaren Tapeten, die ERFURT & Sohn KG für die Produktgruppen

- Rauhfaser / Vlies-Rauhfaser / Variovlies / Variovlies ECO
- Vliesfaser / Strukturvlies

produziert, den DGNB-Kriterien der Qualitätsstufe 4 entsprechen und unter folgenden Grenzwerten liegen:

- Polybromierte Biphenyle (PBB)	< 0,1%
- Polybromierte Diphenylether (PBDE)	< 0,1%
- Tris (2-chlorethyl)-phosphat (TCEP)	< 0,1%
- Chlorparaffine	< 0,1%
- Antimontrioxid	< 0,1%

Alle von ERFURT & Sohn KG produzierten Tapeten sind REACH-konform und halten den geforderten Grenzwert von < 0,1% SVHC ein.

Darüber hinaus belegen die Prüfbescheide des ECO Instituts Köln, dass alle o.g. Tapeten von Erfurt & Sohn besonders emissionsarm sind und dem aktuellsten AgBB-Standard (Ausschuss zur gesundheitlichen Bewertung von Bauprodukten) entsprechen.

Mit freundlichen Grüßen

ERFURT & SOHN KG

Jörg Rappl
Leiter Produktmanagement

Zertifikat

für die

FSC® Chain-of-Custody (Produktkette)

Die TÜV NORD CERT GmbH bescheinigt die unabhängige Prüfung und die regelwerkskonforme Anwendung in Übereinstimmung mit FSC®-STD-40-004, V3-1; FSC®-STD-50-001, V2-1 für

Erfurt & Sohn KG
Hugo-Erfurt-Straße 1
42399 Wuppertal
Deutschland

Geltungsbereich

Einkauf von Tapetenrohvlies und Tapetenrohpapier (FSC Mix, FSC Recycled); Herstellen und Vertrieb von Vliestapeten, Tapetenrohpapieren und Papierprägetapeten (FSC Mix, FSC Recycled) – Transfersystem

Handel mit Tapeten (FSC Mix, FSC Recycled) – Transfersystem

Das Unternehmen ist berechtigt, das eingetragene Warenzeichen des Forest Stewardship Council® (FSC) für die genannten Produkte / Dienstleistungen zu nutzen.

FSC Zertifikat-Registrier-Code: TUEV-COC-000638
TUEV Zertifikat-Registrier-Nr.: 04 751 051404
Auditbericht-Nr. 3539 0095

Gültig von 2025-03-15
Gültig bis 2030-03-14

Die Gültigkeit dieses Zertifikats ist unter info.fsc.org zu verifizieren.

Nutzen Sie unsere Datenbank, um die Zertifikatsgültigkeit zu verifizieren.

Essen, 2025-01-27

Zertifizierungsstelle der TÜV NORD CERT GmbH

Das Zertifizierungsverfahren wurde in Übereinstimmung mit den TÜV NORD CERT Audit- und Zertifizierungsverfahren durchgeführt und setzt ein jährliches Überwachungsaudit voraus. Dieses Zertifikat bleibt im Eigentum der TÜV NORD CERT GmbH und muss auf Anfrage an dieselbe zurückgegeben werden. Das Zertifikat allein ist kein Nachweis dafür, dass ein bestimmtes, vom Zertifikathalter geliefertes Produkt FSC® zertifiziert ist. Produkte, die vom Zertifikatshalter angeboten, ausgeliefert und in Rechnung gestellt werden, können nur als im Geltungsbereich dieses Zertifikates befindlich gelten, wenn eine erforderliche FSC®-Aussage der Kategorie auf den Lieferdokumenten angegeben ist.

TÜV NORD CERT GmbH
Am TÜV 1, 45307 Essen
www.tuev-nord-cert.de

DAkkS Deutsche Akkreditierungsstelle D-ZE-12007-01-08

FSC www.fsc.org FSC® A000529

FSC FORESTS FOR ALL FOREVER

asi assurance services international

TÜV®

ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	IGI - The Global Wallcoverings Association
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-IGI-20230435-IBG1-EN
Issue date	18.01.2024
Valid to	17.01.2029

Wallcoverings on non-woven base

IGI - The Global Wallcoverings Association

Institut Bauen und Umwelt e.V.

ECO PLATFORM EPD VERIFIED

www.ibu-epd.com | https://epd-online.com



1. General Information

IGI - The Global Wallcoverings Association

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-IGI-20230435-IBG1-EN

This declaration is based on the product category rules:

Wall coverings, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

18.01.2024

Valid to

17.01.2029



Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)



Florian Pronold
(Managing Director Institut Bauen und Umwelt e.V.)

Wallcoverings on non-woven base

Owner of the declaration

IGI - The Global Wallcoverings Association
Chaussée de Louvain 426
1380 LASNE
Belgium

Declared product / declared unit

The declared unit is 1m² (square meter) decorative wallcovering on non-woven base including packaging.

Scope:

This EPD focuses on the production, transport and disposal of a weighted average of 1m² wallcoverings on non-woven base of participating members of the IGI - The Global Wallcoverings Association.
Non-decorative wallcoverings for a later additional treatment like painting ("whites") areincluded in this scope as they follow a worst case approach.
16 out of 71 IGI members are involved in this EPD: A.S. Création Tapeten AG (DE), Anstey Wallpaper Co. Ltd (GB), BN International (NL), Borås Tapetfabrik AB (SE), Decoprint NV (BE), Erfurt & Sohn KG (DE), Fine Decor Wallcoverings Ltd (GB), Flügger A/S (DK), Grandeco NV (BE), JV S.p.A. (IT), Marburger Tapetenfabrik J.B. Schaefer GmbH & Co. KG (DE), Rasch GmbH & Co. KG (DE), Roysons Corporation (US), The Surface Print Company Ltd (GB), UGÉPA SA (FR), York Wallcoverings inc. (US).
The technical properties are displayed in chapter 2.3.
The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025:2011
☐ internally ☒ externally



Prof. Dr. Birgit Grahl,
(Independent verifier)

2. Product

2.1 Product description/Product definition

Wallcoverings on non-woven base according to *EN 15102* involve a non-woven base. A non-woven base is a substrate composed of a blend of cellulose and polyester fibres. Non-woven wallcovering is dimensionally stable to aqueous paste and does not require a soak time. When the wallcovering is to be changed it can be stripped in its entirety by peeling the wallcovering lengths from the wall.
This property as defined in *EN 235* is strippable.
For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) *Regulation (EU) No. 305/2011 (CPR)* applies. The product needs a Declaration of Performance taking into consideration *EN 15102* and CE-marking. For the application and use the respective national provisions apply.

For the placing on the market in Great Britain the product needs a Declaration of Performance taking into consideration *BS EN 15102* and UK Conformity Assessed (UKCA) marking.

For placing on the market in Northern Ireland the product needs a Declaration of Performance taking into consideration *(BS) EN 15102* and CE or CE and UK Northern Ireland (UKNI) marking.

For the placing on the market in the USA the product should conform to *ASTM F 1141 – 93* Standard Specification for Wallcovering and *ASTM F 793 – 06* Standard Classification of Wall Covering by Use Characteristics.

2.2 Application

Wallcoverings are used for the decorative wall design of interior spaces in private or commercial use.

2.3 Technical Data

In accordance with EN 233, the following technical (structural) data can be declared on delivery:

Constructional data

Name	Value	Unit
Measures by categories EN 233	category 1 - 3	-
Straightness and parallelism in mm. according to EN 12956	equal or less than 1	-
Washability according to EN 12956	spongeable to extra-washable	-
Colour fastness to light according to EN ISO 105-B02	3 - 6	-
Migration of heavy metals and certain other elements to EN 12149	fulfills the norm	-
Emissions of formaldehyde max. < 120 mg/kg according to EN 12149	fulfills the norm	-

In case of multiple answers, values need to be examined depending on the manufacturer.
For USA manufactured products should be in accordance with *ASTM F 793-0-06* Table 1 Classification Criteria.
Depending on whether products are intended for the European, UK or US market, the following performance data must be declared.

1a: Product according to the *CPR*, based on *(BS) EN 15102*:
Performance data of the product in accordance with the Declaration of Performance with respect to its Essential Characteristics according to *EN 15102*.

or:

1b
Performance Category I, II, III, IV, V or VI as described in Table 1 of *F 793-0-06* should be declared.

2.4 Delivery status

The products declared are provided within the following dimensions:

Width metres		Length metres	
Min.	Max.	Min.	Max.
0.06	1.47	1.00	150.00

This table contains the range of all wallcoverings examined. For more precise information please contact the specific manufacturer.

2.5 Base materials/Ancillary materials

The weighted average of the primary product components is shown in the following table, in percentage:

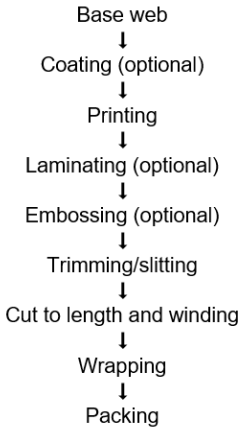
Name	Value	Unit
Carrier material (Non-Woven, 80% Paper 20% PET)	71	%
Packaging	10	%
Additives	11	%
Ink & Pigment	8	
Sum	100	%

Pallets were considered as part of the packaging.

This product contains substances listed in the candidate list (date: 06.12.2023) exceeding 0.1 percentage by mass: no.
This product contains other *CMR substances in categories 1A or 1B* that are not on the candidate list, exceeding 0.1 percentage by mass: yes, vinyl acetate CAS no.: 108-05-4.
Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the *(EU) Ordinance on Biocide Products No. 528/2012*): no
Ancillary materials of the phthalate chemical group, specifically Diisononyl phthalate (DINP) and Dioctyl Terephthalate (DOTP), remain on the product and serve the function of softeners.
This EPD is a weighted average of a Manufacturer Group regarding several producers and product references. Therefore, it cannot be ruled out that individual wallcoverings may contain small amounts (>0.1% of product weight) of substances that are included in the *Substance of Very High Concern SVHC candidate list*, the *CMR substances in categories 1A or 1B list* or ancillary materials and additives serving the function of fire retardants, softeners or biocides.
This can be attributed, for example, to the contents of used waste paper.
Further information can be obtained from the respective manufacturer.

2.6 Manufacture

The manufacturing process can be described with the help of the following graphic:



The order of manufacture may change and can slightly deviate for different producers.

2.7 Environment and health during manufacturing

Compliance with statutory health and safety for personnel is ensured. Further, the energy and environmental management is certified for some members according to *ISO 14001* and *ISO 50001*.
For greater detail please contact the specific manufacturer.

2.8 Product processing/Installation

Depending on the manufacturers suggestion, the adhesive is applied to the back of the wallcovering or the substrate using a wallpaper brush or short-napped roller. The wallcovering is pressed against the wall and is cut along the top and bottom edge to fit the wall.

2.9 Packaging

Product is wrapped in clear shrink wrap, packed in corrugated cardboard boxes and palletised.

2.10 Condition of use

There are no special features to be noted within the limits of normal and customary usage.

2.11 Environment and health during use

No environmental problems can be expected when the product is handled and used
properly.

2.12 Reference service life

Given the wallcovering is professionally installed, the reference service life is 10 years according to the German Sustainable Building Assessment System (BNB).
Description of the influences on the ageing of the product when applied in accordance with the rules of technology.

2.13 Extraordinary effects

Fire
The reaction to fire performance according to /EN 13501/ is shown in the following table:*

Fire protection

Name	Value
Building material class	B-D
Burning droplets	s1-s3
Smoke gas development	d0-d2

*This table contains the range of all wallcoverings examined. For more precise information please contact the specific manufacturer.

For USA information on fire performance according to *ASTM E 84* Test method for Surface Burning Characteristics of Building Materials.

Water
The product is not water resistant. There is no risk of a hazardous environmental impact in the event of water flooding.

Mechanical destruction
There is no risk of a hazardous environmental impact following unforeseen mechanical destruction.

2.14 Re-use phase

The product is not re-usable.

2.15 Disposal

Wallcoverings are subject to the *waste code 170904* (mixed construction and demolition waste other than those mentioned in 170901, 170902 and 170903) in accordance with the *European Waste Catalogue (EWC)*.
Wallcoverings can therefore be disposed of as normal household waste, that is in the dustbin or in additional refuse sacks. Used wallcoverings should not be placed in the waste paper bank. Most household waste is incinerated or landfilled depending on regional legal regulations in the EU or in the US.

2.16 Further information

For further information please visit www.igiwallcoverings.org.

3. LCA: Calculation rules

3.1 Declared Unit

The declared unit is 1 m² of wallcovering including packaging. The model is based on a weighted average of the produced square meters of each participating manufacturer.

Declared unit

Name	Value	Unit
Declared unit	1	m^2
Grammage	0.178	kg/m^2
Conversion factor to 1 kg	5.631	-
Layer thickness	0.001	m
Density	1776	kg/m^3

The production processes and location may vary between individual companies. The weighted average represents the most likely scenario by production volumes and the selected datasets correspond to all regarded regions.

3.2 System boundary

Type of the EPD: cradle to gate - with options. The EPD is considered a declaration of an average product as calculated from the output of several manufacturers (2b).

Module A1-3, A4 and A5
The product stage begins with the consideration of the production of the necessary raw materials and energies including all corresponding upstream processes as well as transport.
Furthermore, the entire production phase was investigated, including the treatment of production waste until reaching the end-of-waste status (EoW). In addition, distribution transport and installation in the building were taken into account.

Modules C1-4
The modules include the environmental impacts of the removal and waste treatment until reaching the end-of-waste status

(EoW) including the associated transport at the end of the product life cycle.

Modules D
Calculation of potential benefits through the generated energy (electric & thermic) by the incineration processes in the life cycle stages in A5 C3 and C4. The burdens resulting from the waste-to-energy plants are assigned in module C3 or C4 in case of landfill gas combustion.

3.3 Estimates and assumptions
'Non-woven' lacks information on the proportions of cellulose and polyester. According to one manufacturer it contains 80% cellulose and 20% polyester (PET). These proportions were applied to all other non-woven carrier materials.
Most solvents were modelled as a generic mix of solvents.

3.4 Cut-off criteria
No materials were cut-off from the study. No energy consumption was neglected.

3.5 Background data
For modeling the lifecycle, the *LCA for Experts Software System and Database for Life Cycle Engineering (GaBi)* Service pack 2023.1 was used. All background data records relevant for production and disposal were almost exclusively taken from various *GaBi* supplementary databases or rarely also from *ecoinvent (v.3.6)*. The data records included in the databases are documented online.

3.6 Data quality
Data collection for the investigated products was carried out on the basis of evaluations of the internal production and environmental data, the collection of LCA-relevant data within the supply chain as well as through the measurement of relevant energy supply data. The collected data were checked for plausibility and consistency. A good representation is to be assumed.
The data were collected in 2022 and refer to the calendar year 2021.

3.7 Period under review
The LCA data were collected for the calendar year 2021.

3.8 Geographic Representativeness
Land or region, in which the declared product system is manufactured, used or handled at the end of the product´s lifespan: Global

3.9 Allocation
Potential benefits resulting from the thermal utilization of the packaging waste (module A5) as well as from the thermal utilization or landfilling of the wallcoverings at the end of life (modules C3 and C4) are allocated to module D.

3.10 Comparability
Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account. The used background database is GaBi service package 1 of 2023.

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon
The biogenic carbon content quantifies the amount of biogenic carbon in a construction product leaving the factory gate, and it is separately declared for the product and for any accompanying packaging.

Information on describing the biogenic Carbon Content at factory gate

Name	Value	Unit
Biogenic carbon content in product	0.036	kg C
Biogenic carbon content in accompanying packaging	0.004	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

Transport to the building site (A4)

Name	Value	Unit
Capacity utilisation (including empty runs)	80 - 90	%
Truck transport	27	t payload
Transport distance	389	km
Train transport	726	t payload
Transport distance	15	km
Ship transport	27500	dwt payload
Transport distance	174	km
Cargo plane transport	65	t payload
Transport distance	29	km

Because many different countries are involved, there were always global data sets used to model the transport distances.

Installation into the building (A5)
The treatment of packaging as waste was modeled in Module A5 as a weighted average. The following table depicts the packaging materials treated in A5 with more than 1 gram of participation in the weighted average.
Modules B1-B7 are deemed not relevant since the product needs no maintenance or operational energy or water use and are, therefore, not declared.

Name	Value	Unit
Cardboard	0.009	kg
Pallet	0.009	kg
Paper	0.001	kg
Polyethylene	0.001	kg

Reference service life

Name	Value	Unit
Reference service life	10	a

End of life (C1-C4)

Name	Value	Unit
Incineration	98	%
Landfill	2	%

For the calculation of this LCA landfilling is chosen for the US and incineration for the EU. Different disposal routes are available but not taken into account for this industry average LCA.

Reuse, recovery and/or recycling potentials (D), relevant scenario information
In module D the potential benefits of the thermal combustion of the wallcoverings (C3) and their packaging (A5) as well as the incineration of landfill gases (C4) are displayed.

The benefits from thermal combustion of the wallcoverings are calculated in Module D. From the total paper used as backing, 73,3% of recycled paper in product does not receive benefits, as it is a secondary material coming burden-free to the system.

5. LCA: Results

In this section, the LCA results for 1 m² wallcoverings are presented. It should be borne in mind that the LCA results only indicate possible effects.

Indicators used for evaluation:

The EN 15804+A2 LCIA methodology with the characterization factors infrom *EU-JRC* were used to evaluate the possible environmental effects of the wallcoverings. The characterization factors are available at the following internet link: http://eplca.jrc.ec.europa.eu/LCDN/developerEF.xhtml.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m² wallcoverings on non-woven base

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	1.79E-01	3.41E-02	1.75E-02	2.66E-05	1.48E-03	2.3E-01	1.97E-03	-8.04E-02
GWP-fossil	kg CO_2 eq	3.27E-01	3.4E-02	4.09E-03	2.66E-05	1.47E-03	9.92E-02	2.13E-04	-8.04E-02
GWP-biogenic	kg CO_2 eq	-1.45E-01	0	1.34E-02	0	0	1.3E-01	1.76E-03	0
GWP-luluc	kg CO_2 eq	-2.87E-03	5.71E-05	1.09E-06	8.89E-09	1.36E-05	3.17E-06	1.42E-07	-5.08E-06
ODP	kg CFC11 eq	7.73E-10	2.73E-15	1.86E-15	1.62E-16	1.91E-16	4.73E-14	2.81E-16	-5.99E-13
AP	mol H^+ eq	1.02E-03	1.65E-04	4.98E-06	6.73E-08	1.23E-05	6.05E-05	7.69E-07	-9.73E-05
EP-freshwater	kg P eq	2.77E-05	2.7E-08	8.71E-09	2.34E-09	5.36E-09	1.63E-08	3.16E-08	-1.24E-07
EP-marine	kg N eq	3.55E-04	7.41E-05	1.94E-06	2.36E-08	6.11E-06	2.08E-05	4.57E-07	-2.87E-05
EP-terrestrial	mol N eq	3.52E-03	8.13E-04	2.31E-05	1.63E-07	6.75E-05	2.75E-04	2.65E-06	-3.08E-04
POCP	kg NMVOC eq	8.77E-04	1.93E-04	5.02E-06	4.41E-08	1.16E-05	5.51E-05	1.45E-06	-8.01E-05
ADPE	kg Sb eq	6.26E-08	6.82E-10	2.44E-11	1.53E-12	9.65E-11	4.16E-10	4.47E-12	-5.52E-09
ADPF	MJ	6.58E+00	4.58E-01	6.84E-03	4.75E-04	2E-02	1.04E-01	2.5E-03	-1.46E+00
WDP	m^3 world eq deprived	3.09E-01	1.18E-04	1.93E-03	8.59E-03	1.77E-05	2.77E-02	8.06E-06	-7.26E-03

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m² wallcoverings on non-woven base

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1.82E+00	7.58E-03	2.72E-01	9.67E-05	1.45E-03	2.1E+00	2.17E-02	-4.09E-01
PERM	MJ	2.36E+00	0	-2.71E-01	0	0	-2.07E+00	-2.15E-02	0
PERT	MJ	4.18E+00	7.58E-03	1.27E-03	9.67E-05	1.45E-03	2.74E-02	2.26E-04	-4.09E-01
PENRE	MJ	5.48E+00	4.6E-01	6.13E-02	4.75E-04	2E-02	1.13E+00	3.31E-02	-1.46E+00
PENRM	MJ	1.11E+00	0	-5.45E-02	0	0	-1.02E+00	-3.06E-02	0
PENRT	MJ	6.59E+00	4.6E-01	6.85E-03	4.75E-04	2E-02	1.04E-01	2.5E-03	-1.46E+00
SM	kg	9.18E-03	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0
FW	m^3	7.49E-03	8.6E-06	4.54E-05	2E-04	1.59E-06	6.57E-04	2.68E-07	-3.32E-04

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 m² wallcoverings on non-woven base

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	3.33E-06	9.51E-13	2.21E-13	1.35E-14	6.21E-14	1.99E-12	2.1E-13	-8.46E-11
NHWD	kg	2.02E-02	4.68E-05	1.13E-03	6.08E-05	3.06E-06	1.74E-02	2.12E-03	-7.09E-04
RWD	kg	1.08E-04	5.68E-07	2.54E-07	1.9E-08	3.75E-08	5.02E-06	2.96E-08	-1.09E-04

CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0
MER	kg	1.73E-02	0	1.02E-02	0	0	1.45E-01	0	0
EEE	MJ	3.71E-02	0	0	0	0	0	0	3.61E-01
EET	MJ	7.01E-02	0	0	0	0	0	0	7.01E-01

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 m² wallcoverings on non-woven base

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	8.53E-09	7.01E-10	3.05E-11	1.08E-12	8.72E-11	4.37E-10	7.46E-12	-8.26E-10
IR	kBq U235 eq	7.95E-02	8.15E-05	4.02E-05	2.91E-06	5.59E-06	7.51E-04	4.37E-06	-1.81E-02
ETP-fw	CTUe	9.36E+00	3.22E-01	4.01E-03	9.77E-04	1.42E-02	4.97E-02	2.59E-03	-3.08E-01
HTP-c	CTUh	7.92E-10	6.04E-12	1.97E-13	1.86E-14	2.92E-13	2.74E-12	1.12E-13	-1.6E-11
HTP-nc	CTUh	7.64E-08	3.34E-10	1.2E-11	1.74E-12	1.77E-11	1.61E-10	1.2E-11	-5.02E-10
SQP	SQP	8.81E+00	3.6E-02	1.98E-03	7.06E-05	8.34E-03	2.88E-02	2.2E-04	-2.69E-01

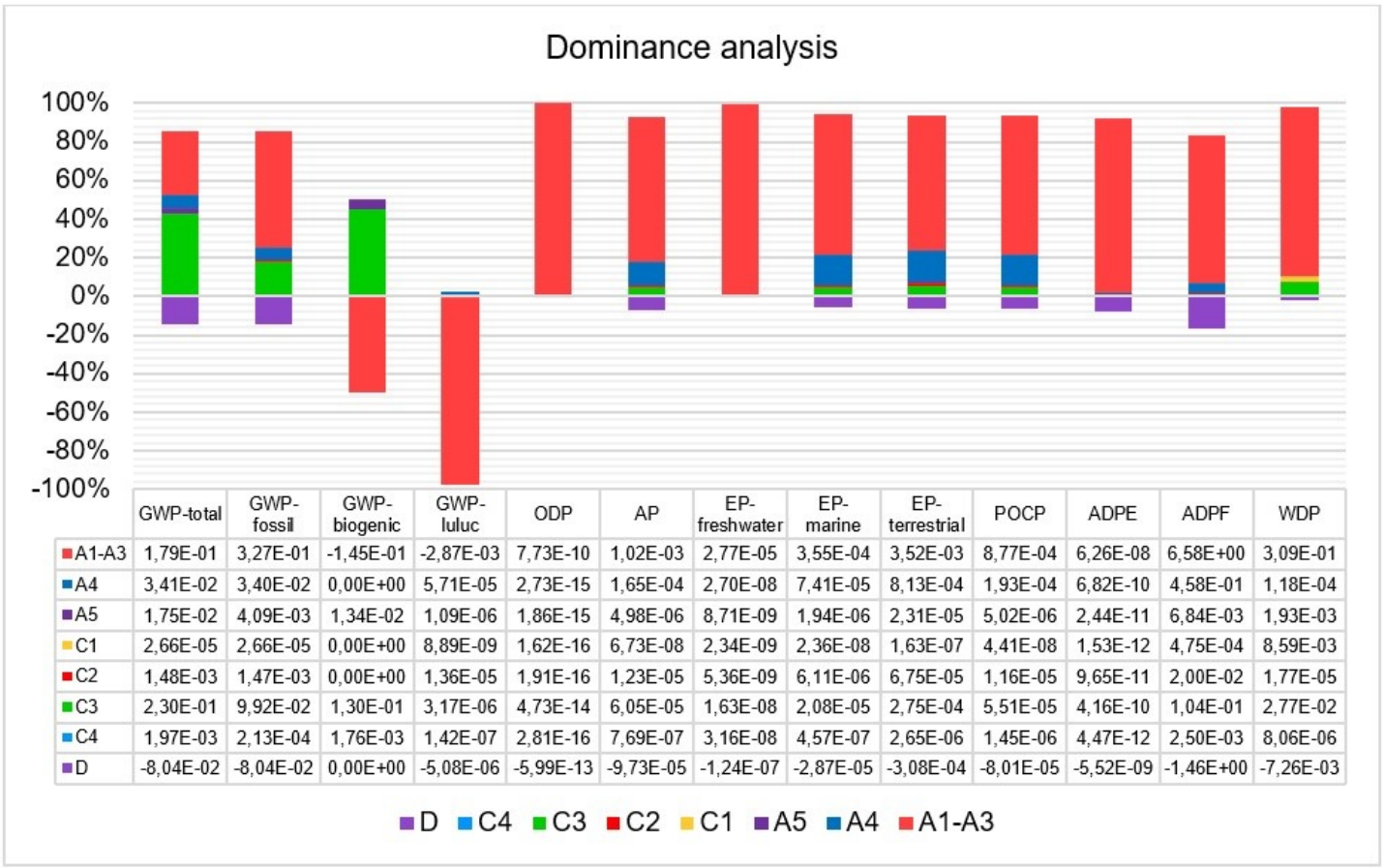
PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator “Potential Human exposure efficiency relative to U235”. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators “abiotic depletion potential for non-fossil resources”, “abiotic depletion potential for fossil resources”, “water (user) deprivation potential, deprivation-weighted water consumption”, “potential comparative toxic unit for ecosystems”, “potential comparative toxic unit for humans – cancerogenic”, “Potential comparative toxic unit for humans - not cancerogenic”, “potential soil quality index”. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

This EPD was created using a software tool.

6. LCA: Interpretation



	GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater	EP-marine	EP-terrestrial	POCP	ADPE	ADPF	WDP
A1-A3	1,79E-01	3,27E-01	-1,45E-01	-2,87E-03	7,73E-10	1,02E-03	2,77E-05	3,55E-04	3,52E-03	8,77E-04	6,26E-08	6,58E+00	3,09E-01
A4	3,41E-02	3,40E-02	0,00E+00	5,71E-05	2,73E-15	1,65E-04	2,70E-08	7,41E-05	8,13E-04	1,93E-04	6,82E-10	4,58E-01	1,18E-04
A5	1,75E-02	4,09E-03	1,34E-02	1,09E-06	1,86E-15	4,98E-06	8,71E-09	1,94E-06	2,31E-05	5,02E-06	2,44E-11	6,84E-03	1,93E-03
C1	2,66E-05	2,66E-05	0,00E+00	8,89E-09	1,62E-16	6,73E-08	2,34E-09	2,36E-08	1,63E-07	4,41E-08	1,53E-12	4,75E-04	8,59E-03
C2	1,48E-03	1,47E-03	0,00E+00	1,36E-05	1,91E-16	1,23E-05	5,36E-09	6,11E-06	6,75E-05	1,16E-05	9,65E-11	2,00E-02	1,77E-05
C3	2,30E-01	9,92E-02	1,30E-01	3,17E-06	4,73E-14	6,05E-05	1,63E-08	2,08E-05	2,75E-04	5,51E-05	4,16E-10	1,04E-01	2,77E-02
C4	1,97E-03	2,13E-04	1,76E-03	1,42E-07	2,81E-16	7,69E-07	3,16E-08	4,57E-07	2,65E-06	1,45E-06	4,47E-12	2,50E-03	8,06E-06
D	-8,04E-02	-8,04E-02	0,00E+00	-5,08E-06	-5,99E-13	-9,73E-05	-1,24E-07	-2,87E-05	-3,08E-04	-8,01E-05	-5,52E-09	-1,46E+00	-7,26E-03

The production stage (module A1-A3) clearly dominates the LCA results. The loads caused by the disposal stage (modules C3 and C4) become noticeable, especially as the biogenic carbon leaves the product system, reflected in the total and biogenic global warming potential. Transports play a subordinate yet not insignificant role.
The main environmental impacts are in all categories located in module A1-A3. For GWP-fossil and ADPF the highest precursor of impact is the production of non-woven backing, made up of paper and PET fibers. The generation of thermal energy for general production and heating/drying processes in A3 is the second highest source of impact in the GWP-fossil category and ADPF; with the electricity use in third place.
The production of paper dominates most impact categories, as it has a relatively high share of the greenhouse potential due to energy demands. In the GWP category, the biogenic carbon dioxide contained in the paper is treated first as a credit; after incineration in a waste-to-energy facility, it is treated as a load (C3). Moreover, paper production has the highest influence on the acidification potential (AP), the eutrophication potential (EP), the ozone depletion (ODP), and the Potential for the formation of tropospheric ozone (POCP).
Transport processes also affect GWP-fossil, AP, EP POCP, and ADPF. The main reason is the combustion of fuels.

Range of the results
The individual results of the participating companies differ from the average results in the present environmental product declaration. Regarding GWP, the results may be 249% higher or 53% lower than the average for this EPD.
The main reason for the deviations is differences in the grammage of the individual wallcoverings. In addition, there are different materials used as well as varying heat and electricity consumptions depending on the Manufacturer.

7. Requisite evidence

Members of the The Global Wallcoverings Association have the following certificates:

- The declared products comply with *EN 15102*.
- According to the (emission) test chamber assessment, which follows the French measurement method *Arrêté du 19/04/11* the wallcoverings meet the requirements of the test standard *ISO 16000*.
- Optional according to the chamber test which follows the *German AgBB (Committee for health-related evaluation of building products)* regulations the wallcoverings meet the requirements of test standard *ISO 16000*.
- Optional compliance with German *RAL-GZ 479*.
- Optional compliance with USA Wallcovering Association *W-101 (2013)* paragraph 8.1 when tested by California Specification Section 01350 to criteria *CDPH/EHLB Standard Method V1.1 (2010)*.

The certificates and classifications for the various wallcoverings can be obtained from the respective manufacturers.

8. References

Standards and Norms

Arrêté du 19/04/11
Order of 19 April 2011 relating to the labeling of construction products or wall or floor coverings and paints and varnishes on their emissions of volatile pollutants

ASTM E 84
ASTM E 84:2016: Standard Test Method for Surface Burning Characteristics of Building Materials

ASTM F 793
ASTM F793 / F793M-15, Standard Classification of Wall Coverings by Use Characteristics, ASTM International, West Conshohocken, PA, 2015

ASTM F1141 - 93
ASTM F1141-93(2009), Standard Specification for Wallcovering, ASTM International, West Conshohocken, PA, 2009

BNB
Lifetimes of components for life cycle analyses according to the Bewertungssystem Nachhaltiges Bauen, 2011.

CDPH/EHLB
Standard method for measuring and evaluating chemical emissions from indoor sources using environmental chambers, Version 1.1

CPR
Construction Product Regulation EU
EN 12149:1997
Wallcoverings in roll form - Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release.
EN 12149:1997
Wallcoverings in roll form - Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release.

EN 12956:1999
Wallcoverings in roll form - Determination of dimensions, straightness, spongeability and washability.

EN 13501-1:2018
Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire Tests.

EN 15102:2007+A1:2011
Decorative wall coverings - Roll and panel form.

EN 233:2016
Wallcoverings in roll form - Specification for finished wallpapers, wall vinyls and plastics wallcoverings.

EN 234:2019
Wallcoverings in roll form – Specification for wallcoverings for subsequent decoration

EN 235:2001
Wall coverings - Vocabulary and Symbols.

EN 259-1:2001
Wall coverings in roll form - Heavy duty wallcoverings - Part 1: Specifications.

EN ISO 105-B02
Textiles - Tests for colour fastness - Part B02: Colour fastness

to artificial light: Xenon arc fading lamp test (ISO 105-B02:2014).

EN ISO 14025:2006
Environmental labels and declarations — Type III environmental declarations — Principles and procedures; 2009-11.

EN ISO 14044:2006
Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006).

EN ISO 16000:2006
Indoor air - Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air - Active sampling method.
Indoor air - Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS or MS-FID.
Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method.
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.

ISO 14001:2015
Environmental management systems - Requirements with guidance for use.

EN 15804
EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

ISO 50001:2011
Energy management systems - Requirements with guidance for use.

SVHC
Candidate List of substances of very high concern for Authorisation (SVHC)
Published in accordance with Article 59(10) of the REACH Regulation. European chemicals agency (ECHA).

RAL-GZ 479
Wallpapers - Quality assurance

Regulation (EU) No 305/2011
of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC Text with EEA relevance. Current consolidated version: 16/07/2021

WA-101
WA Quality Standard for Polymer Coated Fabric Wallcovering

Further documentation

Ecoinvent
Database for Life Cycle Assessment, version 3.6. Swiss Center for Life Cycle Inventories, St. Gallen, 2023.

European Commission
List of substances banned for use in cosmetic products. CMR substances of category 1A, 1B or 2 under Commission Regulation (EC) No 790/2009. 01/12/2010. Updated 01/07/2015.

European Parliament
Regulation (EU) no 528/2012 of the European Parliament and of the council of 22 may 2012 concerning the making available on the market and use of biocidal products.

European Waste Catalogue (EWC)
European Waste Catalogue / Ordinance on European List of Wastes

EU-JRC
EN 15804 reference package. Flows, Methods, Characterisation Factors, Unit Groups and Flow Properties based on EF Reference Package 3.0.

German AgBB
Committee for health-related evaluation of building products. Umweltbundesamt Deutschlands.

Institut Bauen und Umwelt e. V.
Product Category Rules for Building-Related Products and Services – PCR-A: Part A+A2: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report according to EN 15804+A2:2019, version: 1.3 from 31/08/2022.

Institut Bauen und Umwelt e. V.
PCR Guidance-Texts for Building-Related Products and Services - Part B: Requirements on the EPD for Wallcoverings. Version: 8 from 01/08/2021.

LCA for Experts (GaBi)
LCA for Experts 10.7.0.183: Software System and Database for Life Cycle Engineering. 1992-2023. Sphera Solutions GmbH

Publisher

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Programme holder

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Author of the Life Cycle Assessment

brands & values GmbH
Altenwall 14
28195 Bremen
Germany

+49 421 70 90 84 33
info@brandsandvalues.com
www.brandsandvalues.com

Owner of the Declaration

IGI - The Global Wallcoverings Association
Chaussée de Louvain 426
1380 LASNE
Belgium

+32 (0) 2 720 00 09
info@igiwallcoverings.org
www.igiwallcoverings.org