SENTINEL HOLDING
INSTITUT

SHI-PRODUKTPASS

Produkte finden - Gebäude zertifizieren

SHI-Produktpass-Nr.:

14186-10-1013

MEX

Warengruppe: Verlegunterlagen

VISCOH®
DEINE WELT EIN STÜCK LEISER

VISCOH GmbH
Am Flügelbahnhof 4
96317 Kronach

Produktqualitäten:

QNG Qualitätssiegel Nachhaltiges Gebäude ✓

DGNB NEUBAU 2023 ✓

DGNB NEUBAU 2018 ✓

GEPRÜFT NACHHALTIGES PRODUKT
SHI PRODUKT PASS
SENTINEL HOLDING INSTITUT
www.sentinel-holding.eu

Köttner
Helmut Köttner
Wissenschaftlicher Leiter
Freiburg, den 02.02.2026

SENTINEL HOLDING
INSTITUT

Produkt:
MEX

SHI Produktpass-Nr.:
14186-10-1013

VISCOH®
DEINE WELT EIN STÜCK LEISER

Inhalt

QNG - Qualitätssiegel Nachhaltiges Gebäude	1
DGNB Neubau 2023	2
DGNB Neubau 2018	3
Produktsiegel	4
Rechtliche Hinweise	5
Technisches Datenblatt/Anhänge	6

Wir sind stolz darauf, dass die SHI-Datenbank, die erste und einzige Datenbank für Bauprodukte ist, die ihre umfassenden Prozesse sowie die Aktualität regelmäßig von dem unabhängigen Prüfunternehmen SGS-TÜV Saar überprüfen lässt.

SGS TÜV SAAR

SENTINEL HOLDING
INSTITUT

Produkt:
MEX

SHI Produktpass-Nr.:
14186-10-1013

VISCOH®
DEINE WELT EIN STÜCK LEISER

QNG - Qualitätssiegel Nachhaltiges Gebäude

Das Qualitätssiegel Nachhaltiges Gebäude, entwickelt durch das Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen (BMWSB), legt Anforderungen an die ökologische, soziokulturelle und ökonomische Qualität von Gebäuden fest. Das Sentinel Holding Institut prüft Bauprodukte gemäß den QNG-Anforderungen für eine Zertifizierung und vergibt das QNG-ready Siegel. Das Einhalten des QNG-Standards ist Voraussetzung für den KfW-Förderkredit. Für bestimmte Produktgruppen hat das QNG derzeit keine spezifischen Anforderungen definiert. Diese Produkte sind als nicht bewertungsrelevant eingestuft, können jedoch in QNG-Projekten genutzt werden.

Kriterium	Pos. / Bauproduktgruppe	Betrachtete Stoffe	QNG Freigabe
3.1.3 Schadstoffvermeidung in Baumaterialien	2.4 Verlegeunterlagen für Bodenbeläge	VOC / Emissionen / gefährliche Stoffe / Polyzyklische Aromatische Kohlenwasserstoffe (PAK) / Nitrosamine	QNG-ready

Nachweis: Prüfbericht des Instituts Wessling GmbH vom 16.03.2017 (Nr. CAL17-028898-1). Konformitätserklärung vom 16.01.2025 bestätigt die materielle Übereinstimmung mit dem geprüften Produkt.

Produkt:
MEX

SHI Produktpass-Nr.:
14186-10-1013

VISCOH
DEINE WELT EIN STÜCK LEISER

DGNB Neubau 2023

Das DGNB-System (Deutsche Gesellschaft für Nachhaltiges Bauen) bewertet die Nachhaltigkeit von Gebäuden verschiedener Art. Das System ist sowohl anwendbar für private und gewerbliche Großprojekte als auch für kleinere Wohngebäude. Die Version 2023 setzt hohe Standards für ökologische, ökonomische, soziokulturelle und funktionale Aspekte während des gesamten Lebenszyklus eines Gebäudes.

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt, 03.05.2024 (3. Auflage)	nicht zutreffend		nicht bewertungsrelevant

Kriterium	Bewertung
SOC 1.3 Schallschutz und akustischer Komfort (*)	Kann Gesamtbewertung positiv beeinflussen

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt, 29.05.2025 (4. Auflage)	nicht zutreffend		nicht bewertungsrelevant

Produkt:
MEX

SHI Produktpass-Nr.:
14186-10-1013

VISCOH
DEINE WELT EIN STÜCK LEISER

DGNB Neubau 2018

Das DGNB-System (Deutsche Gesellschaft für Nachhaltiges Bauen) bewertet die Nachhaltigkeit von Gebäuden verschiedener Art. Das System ist sowohl anwendbar für private und gewerbliche Großprojekte als auch für kleinere Wohngebäude.

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt	nicht zutreffend	nicht zutreffend	nicht bewertungsrelevant

Produkt:
MEX

SHI Produktpass-Nr.:
14186-10-1013

VISCOH
DEINE WELT EIN STÜCK LEISER

Produktsiegel

In der Baubranche spielt die Auswahl qualitativ hochwertiger Materialien eine zentrale Rolle für die Gesundheit in Gebäuden und deren Nachhaltigkeit. Produktlabels und Zertifikate bieten Orientierung, um diesen Anforderungen gerecht zu werden. Allerdings besitzt jedes Zertifikat und Label eigene Prüfkriterien, die genau betrachtet werden sollten, um sicherzustellen, dass sie den spezifischen Bedürfnissen eines Bauvorhabens entsprechen.

Produkte mit dem QNG-ready Siegel des Sentinel Holding Instituts eignen sich für Projekte, für welche das Qualitätssiegel Nachhaltiges Gebäude (QNG) angestrebt wird. QNG-ready Produkte erfüllen die Anforderungen des QNG Anhangdokument 3.1.3 "Schadstoffvermeidung in Baumaterialien". Das KfW-Kreditprogramm Klimafreundlicher Neubau mit QNG kann eine höhere Fördersumme ermöglichen.

Das Instytut Techniki Budowlanej (ITB) ist das führende polnische Institut für Bautechnik und agiert unter der Autorität des Ministeriums für Entwicklung und Technologie der Republik Polen. Als notifizierte und akkreditierte Prüfstelle bewertet und verifiziert das ITB Umweltproduktdeklarationen (EPD) gemäß ISO 14025 und EN 15804. Damit trägt das Institut wesentlich zur Transparenz und Vergleichbarkeit ökologischer Produktinformationen bei und unterstützt Hersteller sowie Planer bei der nachhaltigen Bewertung von Bauprodukten im europäischen Kontext.

Produkt:
MEX

SHI Produktpass-Nr.:
14186-10-1013

VISCOH®
DEINE WELT EIN STÜCK LEISER

Rechtliche Hinweise

(*) Die Kriterien dieses Steckbriefs beziehen sich auf das gesamte Bauobjekt. Die Bewertung erfolgt auf der Ebene des Gebäudes. Im Rahmen einer sachgemäßen Planung und fachgerechten Installation können einzelne Produkte einen positiven Beitrag zum Gesamtergebnis der Bewertung leisten. Das Sentinel Holding Institut stützt sich einzig auf die Angaben des Herstellers.

Alle Kriterien finden Sie unter:
https://www.sentinel-holding.eu/de/Themenwelten/Pr%C3%BCfkriterien%20f%C3%BCr%20Produkte

Wir sind stolz darauf, dass die SHI-Datenbank, die erste und einzige Datenbank für Bauprodukte ist, die ihre umfassenden Prozesse sowie die Aktualität regelmäßig von dem unabhängigen Prüfunternehmen SGS-TÜV Saar überprüfen lässt.

SGS TÜV SAAR

Herausgeber

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

VISCOH®

DEINE WELT EIN STÜCK LEISER

Technische Daten VISCOH® MEX

Material: Polyolefin Schwerschaum

Einsatz: Hochwertige universell einsetzbare Qualitätsunterlage für alle schwimmend zu verlegenden Parkett- und Laminatböden.

Qualität: Optimiert für höchste Geh- und Trittschalldämmung, ausgezeichnete Druckfestigkeit, dynamischer Belastbarkeit und extreme Langlebigkeit. Sehr gute Formanpassungsfähigkeit für punktuellen Ausgleich von Unebenheiten im Unter-boden. Mit integriertem Feuchteschutz gegen aufsteigende Reusfeuchte. Erfüllt die erhöhten Anforderungen der EPLF.

Umwelt: Es sind weder Lösungsmittel, noch andere ozonschichtschädigenden Substanzen enthalten. Das Produkt ist ohne Zusatz von Weichmachern, Asbest, Formaldehyd, Halogenen sowie Schwermetallen. Entsorgung über Hausmüll, recyclebar, gewässerneutral, toxikologisch unbedenklich, Abfallschlüssel nach AVV : 170203.

Art.-Nr.	Stärke	Länge	Breite	Verpackung			GTIN (EAN)
	mm	m	cm	Rolleninhalt	Kartoninhalt	Paletteninhalt	
12300	2 (± 10%)	12,5	100	12,5 m²	24 Rollen = 300 m²	24 Rollen = 300 m²	4260404430711

	Anforderung EPLF	Kenngröße	Nutzen für den Anwender	Mindest-anforderung	Erhöhte Anforderung	VISCOH® MEX
Akustische Anforderungen	Gehschallverbesserung	RWS*	Reduzierung der Schallemission im Raum selbst beim Begehen	-	-	20%
	Trittschallminderung	IS_{Lam}*	Reduzierung des Trittschalls in unteren und angrenzenden Räumen	≥ 14 dB	≥ 18 dB	19 dB
Nutzungs Anforderungen	Dynamische Beanspruchung	DL_{25}	Erhalt der wesentlichen Eigen-schaften, mechanischer Schutz	≥ 10‘000 Zyklen	≥ 100‘000 Zyklen	≥ 100‘000 Zyklen
	Dauerhafte Druckbeanspruchung	CC	Dauerhafter Erhalt der wesentlichen Eigenschaften (10 Jahre)	≥ 2 kPa	≥ 20 kPa	≥ 25 kPa
	Druckbeanspruchung	CS	Schutz des Verbindungssystems, Schutz gegen Fugenbruch	≥ 10 kPa	≥ 60 kPa	70 kPa
	Stoßbeanspruchung	RLB*	Schutz der Oberfläche vor herabfallenden Gegenständen	≥ 500 mm	≥ 1200 mm	1250 mm
Konstruktive Anforderungen	Wärmedurchlasswiderstand	Rλ, B*	Fussbodenheizungseignung	H: ≤ 0.15 m²K/W	H: ≤ 0.15 m²K/W	0,036 m²K/W
	Punktuelle Ausgleichsfähigkeit	PC	Vermeidung von Schallbrücken, mechanischer Schutz	≥ 0.5mm	≥ 0.5mm	≥ 1.4mm
	Wasserdampfdurchlässigkeit	SD	Vermeidung von Feuchteschäden	≥ 75 m	≥ 75 m	-
	Wasseraufnahme	WA	Vermeidung von Schimmelbildung			< 1 Vol%
	Brandverhalten	RTF				Efl
Bauaufsichtlich zugelassen						Z-158.10-169

* Das gesamte Fußbodensystem wird geprüft.

Alle Werte wurden nach EN16354 ermittelt und geprüft entsprechend den darin enthaltenen Anforderungen. Tritt- und Gehschalldämmwerte sind nach Normenaufbauten geprüft. In der Praxis können diese Werte aufgrund individueller Bauweisen und Bauprodukte sowie deren Anordnung abweichen.

Gemäß den Empfehlungen des Bundesverbandes Flächenheizungen und Flächenkühlungen e.V. (BVF) und EN 1264-3 ist die Unterlage geeignet für den Einsatz auf Fußbodenheizungen. Es ist der Gesamtwärmedurchlasswiderstand von max. 0,15 m² K/W zu beachten. Der angegebene Werte für das Wasserdampf-diffusionsverhalten (SD-Wert) ist nur für die Unterlage gültig, und nur dann, wenn die Rollenstöße sorgfältig mit geeignetem Klebeband abgedichtet werden.

Chemische Beständigkeit:
- beständig gegenüber Wasser, den meisten Haushaltsreinigern, Salzlösungen, Säuren und Laugen

teilweise beständig gegen organische Lösungsmittel und Kohlenwasserstoffe

Lagerbedingungen:
- Dämmunterlage nicht im Freien lagern, vor Sonneneinstrahlung schützen.
- elektrostatische Aufladung vermeiden, keine offenen Flammen, nicht Rauchen!

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A+ A B C

ECO PLATFORM EPD VERIFIED

VISCOH GmbH Z-158.10-169

Stand 10.2024 Druckfehler und Irrtümer vorbehalten

Type III Environmental Product Declaration No. 518/2023

Issuance date: 08.09.2023
Validity date: 08.09.2028

POLYETHYLENE FOAM BASED PRODUCTS







Owner of the EPD:

Fair Packaging Sp. z o.o. Sp. k.
Address: Buszewo 10
62-045 Pniewy, Poland
Tel.: +48 572 839 016
Website: http://fairunderlay.com/
http://fairpackaging.com/pl/
Contact: elaput@fairpackaging.pl

EPD Program Operator:

Instytut Techniki Budowlanej (ITB)
Address: Filtrowa 1,
00-611 Warsaw, Poland
Website: www.itb.pl
Contact: Michał Piasecki
m.piasecki@itb.pl
energia@itb.pl

ITB is the verified member of The European Platform for EPD program operators and LCA practitioner www.eco-platform.org

Basic information

This declaration is the Type III Environmental Product Declaration (EPD) based on EN 15804+A2 and verified according to ISO 14025 by an external auditor. It contains the information on the impacts of the declared construction materials on the environment and their aspects verified by the independent body according to ISO 14025. Basically, comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804+A2.

Life cycle analysis (LCA): A1-A3, A4-A5 and D modules in accordance with EN 15804+A2
(Cradle-to-Gate with options)

The year of preparing the EPD: 2023

Product standard: Requirements are defined in customer specifications

Service Life: 50 years

PCR: ITB-PCR A

Declared unit: 1 kg

Reasons for performing LCA: B2B

Representativeness: Poland, European, 2022

MANUFACTURER

Fair Packaging Sp. z o. o. Sp. k. has been producing and processing products made of foamed polyethylene for over 20 years. The beginnings of the company's activity were mainly the production of simple industrial packaging. Today, thanks to intensive R&D work, Fair Packaging supplies leading brands from the automotive, electronics, household appliances, furniture and construction industries.



Figure 1 Fair Packaging production plant in Buszewo, Poland

The company's success is primarily due to quality, confirmed by annual audits conducted by the largest clients, speed of response to the changing market, especially in the automotive and electronics industries, as well as ensuring the availability of products upon request to customers.

The company's offer includes packaging and packaging materials with such unique properties as non-staining PE foam, laminates that eliminate micro-scratches occurring during land transport, anti-electrostatic materials with a precisely defined surface resistance, and protective bags for the transport of modern OLED TVs with anti-electrostatic properties, made of laminate. foam and metalized foil (so-called alu bags).

In 2011 the company started the production of floor underlays. The establishment of FairUnderlay was our natural development path and was a response to market demand. The more than 10 years of experience in PE processing that we brought with us from Fair Packaging allowed us from our very beginning to produce underlays that met the most stringent standards set by market organisations. Today, we already supply to 24 countries, have an extensive customer portfolio and our products are on the shelves of the largest DIY chains in the world.

PRODUCTS DESCRIPTION

This product is a flexible material made mostly of polyethylene. It is soft and resilient and gives the impression of being a soundproofing and cushioning material. Foamed polyethylene packaging protects against scratches damage during transport moisture, including sea moisture. Foam also has insulating properties, which means that it protects against heat loss. Polyethylene foam products in the form of rolls, sheets and bags. Optionally combined with various types of films, such as LDPE, MDPE, HDPE, metallized BOPP, metallized PET (Al or Au)/PE. Products according to the customer's needs can have minor modifications and include, for example, double-sided adhesive tapes, printing. The dimensions (thickness, width, length, density) and colors of the products are customized according to customer needs. All additional technical information about the product is available on the manufacturer's website and catalogues.

LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Unit
The declared unit is 1 kg of polyethylene foam based products produced in Buszewo (Poland).

System boundary

The life cycle analysis of the declared products covers “Product Stage” A1-A3, A4, C2-C4+D modules in accordance with EN 15804+A2 and ITB PCR A v.1.6 (cradle to gate with options). Energy and water consumption, emissions as well as information on generated wastes were inventoried and were included in the calculation. It can be assumed that the total sum of omitted processes does not exceed 5% of all impact categories. In accordance with EN 15804+A2, machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA.

Allocation
The allocation rules used for this EPD are based on general ITB’s document PCR A. Production of the polyethylene foam based products is a direct process (as presented in Figure 2) conducted in the manufacturing plant located in Buszewo (Poland). Input and output data from the production is inventoried and allocated to the production on the mass basis. The declaration covers a wide range of polyethylene foam based products. Their production resources and processing stages are basicly similar, so it is possible to average the production by product weight.

System limits
Minimum 99.0% input materials and 100% energy consumption (electricity, gas, other) were inventoried in a processing plant and were included in the calculation. In the assessment, all significant parameters from gathered production data are considered, i.e. all material used per formulation, utilized thermal energy, and electric power consumption, direct production waste and available emission measurements. Tires consumption for transport was not considered. Substances with a percentage share of less than 0.1% of total mass were excluded from the calculations. The packaging products (wooden pallets) are included.

Modules A1 and A2: *Raw materials supply and transport*

The modules A1 and A2 represent the extraction and processing of raw materials (mainly LDPE granulate) and transport to the production site. LDPE granules and films are intermediates commonly used in the production of polyethylene foam products. For A2 module (transport) European averages for fuel data are applied.

Module A3: *Production*

In the first part of the process, a rubber compound is prepared. The mix consists of rubber as the mix matrix, chalk as the mix filler and a number of processing aids to facilitate material processing and the subsequent foaming and vulcanization processes. The mixtures are prepared in a mixer and on a rolling mill. In the mixer, the raw materials are combined together under the influence of elevated temperature and pressure exerted by the piston; on the rolling mill, the pre-mixed mixture is cooled and formed into rolls of the mixture.

The mixture prepared in this way, after appropriate seasoning time and re-rolling on the rolling mill, goes to the second part of the process, which is the forming of the finished product. Molding consists in forming a web of rubber mixture on a forming calender, and then vulcanizing and foaming it in a vulcanizing oven under the influence of high temperature.

Before entering the oven, a non-woven polyester fabric is fed on which the rubber-based compound is deposited.

In the middle part of the oven, a film supplied by the supplier is fed, composed of metallized PET bonded with an adhesive layer to paper. This film bonds to the mixture using its viscosity.

The final stage in the production of a roll of finished product is lateral edging with trimming knives, cross-cutting with a cross-cutting knife and rolling up small rolls on a winder. At the end of the oven, an optional acrylic glue system supplied by the supplier is fed. Electricity and heat are consumed in the process. The products, after undergoing shaping processes and additional technological operations.

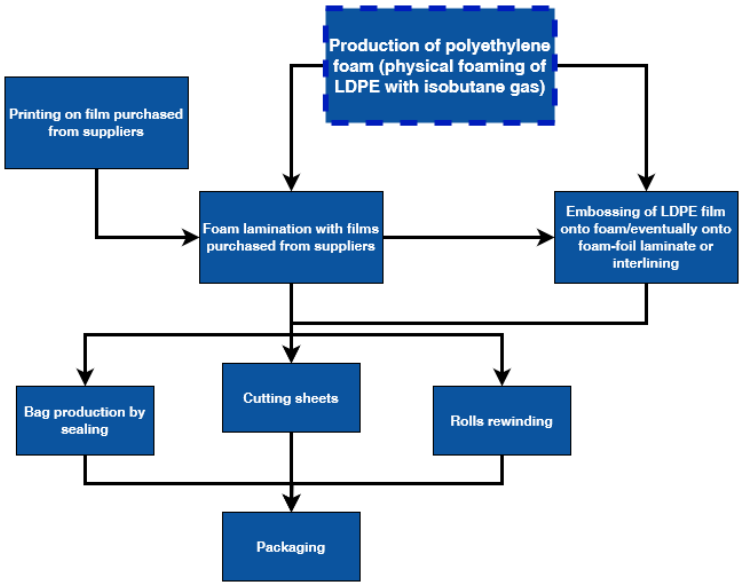


Figure 2 Manufacturing process scheme (A3)

Module A4-A5: transport to consumer, installation

Vehicle transport at distance 500 km is considered (emission standard: Euro 5) with 100% load capacity. No special tools, nor specific protection is necessary. The recommendations how to use the product is described in the application manuals or videos.

Modules *C and D: End-of-life (EOL)*

The end-of-life scenario for all products has been generalized based on actual state of the art. It is assumed that in the end of life stage (C1), some electric/mechanical energy is needed to remove products from installation place, the transport distance for waste to waste processing (C2) is 100 km on > 10t loaded lorry with 75% capacity utilization and fuel consumption of 20 l per 100 km. At the end of life, the PE products are dismantled and the materials recycled according to the national treatment practice of waste what is presented in Table 1. It is assumed that 20% of the product can be recovered in the recycling process. The remaining 40% may be designated for incineration and the remaining 40% for landfill. The reuse, recovery and recycling stage are considered beyond the system boundaries (D) (reuse potential and incineration –gained heat – incineration and recycled content). The end of life scenario for at end-of-life (module C) has been modelled using an average Polish electricity mix as the location where the product reaches end-of-life is unknown.

Table 1. End-of-life scenario (C modules)

Parameter	Contribution
Collection rate	100%
Recycling	20%
Incineration	40%
Landfilling	40%

Data collection period

The data for manufacture of the declared products refer to period between 01.01.2022 – 31.12.2022 (1 year). The life cycle assessments were prepared for Poland and Europe as reference area.

Data quality

The data selected for LCA originate from ITB-LCI questionnaires completed by Fair Packaging Sp. z oxo. Sp. k. and verified during data audit. No data collected is older than five years and no generic datasets used are older than ten years. The representativeness, completeness, reliability, and consistency are judged as good. The background data for the processes come from the following resources database Eco invent v.3.9.1 (granulate LDPE, trichloropropane, isobutane, PET, BOPP, butyl, printing ink, foil, EUR-flat pallet, paper, boxboard carton). Specific (LCI) data quality analysis was a part of the input data verification. Where no background data was available, data gaps were complemented by manufacturer information and literature research.

Assumptions and estimates

The impacts of the representative products were aggregated using weighted average.

Calculation rules

LCA was performed using ITB-LCA tool developed in accordance with EN15804+A2. Emission of greenhouse gases was calculated using the IPCC 2013 GWP method with a 100-year horizon. Emission of acidifying substances, Emission of substances to water contributing to oxygen depletion, Emission of gases that contribute to the creation of ground-level ozone, Abiotic depletion, and ozone depletion emissions where all calculated with the CML-IA baseline method.

Additional information

Polish electricity (Ecoinvent 3.9.1 supplemented by actual national KOBiZE data) emission factor used is 0.702 kg CO_2/kWh. As a general rule, no particular environmental or health protection measures other than those specified by law are necessary.

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to declared unit (DU) – 1 kg of polyethylene foam based products produced in Europe. The following life cycle modules (Table 2) were included in the analysis. The following tables 3-6 show the environmental impacts of the life cycle of selected modules (A1-A5+C1-C4+D).

Table 1 System boundaries for the environmental characteristic of the product.

Environmental assessment information (MD – Module Declared, MND – Module Not Declared, INA – Indicator Not Assessed)															
Product stage			Construction process		Use stage							End of life				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction 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**
MD	**MD**	**MD**	**MD**	**MD**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MD**	**MD**	**MD**	**MD**	**MD**

Table 2 Life cycle assessment (LCA) results for specific product – environmental impacts (DU: 1 kg)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO_2	2.33E+00	1.73E-01	2.71E-01	2.77E+00	8.34E-02	3.52E-05	5.28E-03	1.10E-02	1.13E+00	1.28E-02	-1.32E+00
Greenhouse potential - fossil	eq. kg CO_2	2.38E+00	1.73E-01	2.60E-01	2.81E+00	8.31E-02	3.52E-05	5.28E-03	1.10E-02	1.13E+00	1.26E-02	-1.32E+00
Greenhouse potential - biogenic	eq. kg CO_2	-4.93E-02	4.88E-04	1.13E-02	-3.76E-02	2.84E-04	1.33E-06	2.00E-04	3.76E-05	1.16E-03	1.27E-04	-4.44E-03
Global warming potential - land use and land use change	eq. kg CO_2	1.32E-03	7.90E-05	1.19E-04	1.52E-03	3.26E-05	1.60E-08	2.40E-06	4.32E-06	2.72E-05	1.28E-05	-2.09E-04
Stratospheric ozone depletion potential	eq. kg CFC 11	4.67E-06	3.89E-08	9.68E-09	4.72E-06	1.92E-08	9.33E-13	1.40E-10	2.55E-09	1.43E-09	3.84E-09	-5.91E-08
Soil and water acidification potential	eq. mol H+	9.23E-03	1.06E+01	3.49E-03	1.06E+01	3.37E-04	5.07E-07	7.60E-05	4.47E-05	2.23E-02	1.07E-04	-3.26E-03
Eutrophication potential - freshwater	eq. kg P	4.76E-04	1.05E-05	5.86E-04	1.07E-03	5.59E-06	8.67E-08	1.30E-05	7.40E-07	5.47E-06	3.67E-06	-9.27E-05
Eutrophication potential - seawater	eq. kg N	1.66E-03	4.36E-04	7.01E-04	2.80E-03	1.02E-04	7.33E-08	1.10E-05	1.35E-05	1.17E-02	3.68E-05	-5.74E-04
Eutrophication potential - terrestrial	eq. mol N	1.70E-02	4.80E-03	4.36E-03	2.62E-02	1.11E-03	6.20E-07	9.30E-05	1.47E-04	1.28E-01	4.00E-04	-6.11E-03
Potential for photochemical ozone synthesis	eq. kg NMVOC	1.01E-02	1.31E-03	1.22E-03	1.26E-02	3.40E-04	1.73E-07	2.60E-05	4.50E-05	3.16E-02	1.16E-04	-3.02E-03
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	1.20E-05	5.41E-07	1.57E-06	1.41E-05	2.95E-07	2.23E-10	3.34E-08	3.90E-08	3.95E-07	4.28E-08	-3.74E-06
Abiotic depletion potential - fossil fuels	MJ	8.11E+01	2.49E+00	5.47E+00	8.91E+01	1.23E+00	7.73E-04	1.16E-01	1.63E-01	1.85E-01	2.92E-01	-3.69E+01
Water deprivation potential	eq. m^3	1.24E+00	1.08E-02	1.53E-01	1.40E+00	5.70E-03	1.60E-05	2.40E-03	7.55E-04	2.88E-02	1.69E-03	-2.97E-01

Table 3 Life cycle assessment (LCA) results for specific product – additional impacts indicators (DU: 1 kg)

Indicator	Unit	A1-A3	A4-A5	C1-C4	D
Particulate matter	disease incidence	INA	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA	INA

Table 4 Life cycle assessment (LCA) results for specific product - the resource use (DU: 1 kg)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	2.55E+00	3.26E-02	3.92E-01	2.98E+00	1.77E-02	5.73E-05	8.60E-03	2.34E-03	6.72E-02	0.00E+00	-4.13E-01
Consumption of renewable primary energy resources used as raw materials	MJ	6.33E-01	0.00E+00	0.00E+00	6.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	3.18E+00	3.26E-02	3.93E-01	3.61E+00	1.77E-02	5.73E-05	8.60E-03	2.34E-03	6.72E-02	5.12E-03	-4.31E-01
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	3.48E+01	2.49E+00	5.23E+00	4.25E+01	1.23E+00	7.76E-04	1.16E-01	1.63E-01	-2.91E+01	0.00E+00	-1.60E+01
Consumption of non-renewable primary energy resources used as raw materials	MJ	4.63E+01	0.00E+00	0.00E+00	4.63E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+01	0.00E+00	-1.31E+01
Total consumption of non-renewable primary energy resources	MJ	8.11E+01	2.49E+00	5.51E+00	8.91E+01	1.23E+00	7.76E-04	1.16E-01	1.63E-01	1.85E-01	3.15E-01	-3.78E+01
Consumption of secondary materials	kg	1.00E-01	8.85E-04	8.71E-04	1.02E-01	4.14E-04	7.07E-08	1.06E-05	5.48E-05	9.97E-04	0.00E+00	8.00E-01
Consumption of renew. secondary fuels	MJ	2.15E-02	8.16E-06	3.18E-06	2.16E-02	4.56E-06	3.94E-10	5.91E-08	6.03E-07	1.29E-05	0.00E+00	-1.14E-05
Consumption of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	4.13E-03	4.13E-03	0.00E+00	6.26E-07	9.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net consumption of freshwater	m^3	3.02E-02	2.87E-04	2.15E-02	5.20E-02	1.55E-04	2.10E-07	3.15E-05	2.05E-05	3.42E-04	4.55E-05	-7.38E-03

Table 5 Life cycle assessment (LCA) results for specific product – waste categories (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste	kg	4.55E-02	2.89E-03	1.64E-03	5.01E-02	1.38E-03	8.00E-09	1.20E-06	1.83E-04	3.81E-03	4.59E-07	9.52E-03
Non-hazardous waste	kg	2.52E+00	4.59E-02	2.32E-02	2.59E+00	2.46E-02	4.16E-07	6.24E-05	3.25E-03	5.65E-02	1.20E+00	3.63E-01
Radioactive waste	kg	6.03E-05	1.65E-07	5.05E-06	6.55E-05	9.21E-08	5.80E-10	8.70E-08	1.22E-08	1.25E-06	1.77E-06	1.19E-05
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	5.14E-04	5.34E-05	1.00E-01	1.01E-01	3.82E-06	8.00E-10	1.20E-07	5.06E-07	3.62E-01	0.00E+00	9.70E-05
Materials for energy recovery	kg	1.61E-06	6.24E-08	5.54E-08	1.73E-06	3.09E-08	7.00E-12	1.05E-09	4.09E-09	1.01E-07	0.00E+00	2.27E-07
Exported Energy	MJ	6.51E-02	5.30E-04	1.79E-02	8.36E-02	0.00E+00	2.31E-06	3.46E-04	0.00E+00	4.40E-01	0.00E+00	8.12E-03

Verification

The process of verification of this EPD is in accordance with ISO 14025 and ISO 21930. After verification, this EPD is valid for a 5-year-period. EPD does not have to be recalculated after 5 years, if the underlying data have not changed significantly.

The basis for LCA analysis was EN 15804 and ITB PCR A
Independent verification corresponding to ISO 14025 (sub clause 8.1.3.) [x] external [ ] internal
External verification of EPD: Halina Prejzner, PhD. eng. LCI audit and verification: Michał Chwedaczuk, M.Sc. eng. LCA, LCI audit and input data verification: Michał Piasecki, PhD., D.Sc., eng.

Note 1: The declaration owner has the sole ownership, liability, and responsibility for the for the information provided and contained I EPD. Declarations of construction products may not be comparable if they do not comply with EN 15804+A2. For further information about comparability, see EN 15804+A2 and ISO 14025.

Note 2: Note: ITB is a public Research Organization and Notified Body (EC Reg. no 1488) to the European Commission and to other Member States of the European Union designated for the tasks concerning the assessment of building products' performance. ITB acts as the independent, third-party verification organization (ISO 17025/17065/17029). ITB-EPD program is recognized and registered member of The European Platform - Association of EPD program operators and ITB-EPD declarations are registered and stored in the international ECO-PORTAL.

Normative references

- ITB PCR A General Product Category Rules for Construction Products
- EN 14313 : 2015 Thermal Insulation products for building equipment. Factory made polyethylene foam
- ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures
- ISO 21930:2017 Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines
- ISO 15686-1:2011 Buildings and constructed assets – Service life planning – Part 1: General principles and framework
- ISO 15686-8:2008 Buildings and constructed assets – Service life planning – Part 8: Reference service life and service-life estimation
- EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- ISO 14067:2018 Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification
- PN-EN 15942:2012 Sustainability of construction works – Environmental product declarations – Communication format business-to-business
- KOBiZE Wskaźniki emisyjności CO_2, SO_2, NO_x, CO i pyłu całkowitego dla energii elektrycznej. December 2021

Instytut Techniki Budowlanej

Instytut Techniki Budowlanej
00-611 Warsaw, Filtrowa 1

Thermal Physics, Acoustics and Environment Department
02-656 Warsaw, Ksawerów 21

CERTIFICATE № 518/2023
of TYPE III ENVIRONMENTAL DECLARATION

Products:

Polyethylene foam based products

Manufacturer:

Fair Packaging Sp. z o.o.
ul. Buszewo 10, 62-045 Pniewy, Poland

confirms the correctness of the data included in the development of
Type III Environmental Declaration and accordance with the requirements of the standard

EN 15804+A2

Sustainability of construction works.
Environmental product declarations.
Core rules for the product category of construction products.

This certificate, issued on 8th September 2023 is valid for 5 years
or until amendment of mentioned Environmental Declaration

Head of the Thermal Physic, Acoustics and Environment Department
Agnieszka Winkler-Skalna, PhD

INSTYTUT TECHNIKI BUDOWLANEJ

Deputy Director for Research and Innovation
Krzysztof Kuczyński, PhD

Warsaw, September 2023