ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN15804+A2

Exoperm Duro 150

Owner of the declaration:
Partel

Product:
Exoperm Duro 150

Declared unit:
1 m²

This declaration is based on Product Category Rules:
EN 15804:2012+A2:2019, EPD Ireland PCR Part A, Version 2.1, 2022
EPD Ireland PCR Part A, Version 2.1, 2022

Program operator:
EPD Ireland

Declaration number:
EPDIE-26-332

Issue date:
15.05.2026

Valid to:
14.05.2031

General information

Product

Exoperm Duro 150

Owner of the declaration:

Partel
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Program operator:

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Manufacturer:

Partel

Declaration number:

EPDIE-26-332

Place of production:

Partel
17 Claregalway Corporate Park
H91 R85P Claregalway, Co. Galway, Ireland

This declaration is based on Product Category Rules:

EN 15804:2012+A2:2019, EPD Ireland PCR Part A, Version 2.1, 2022
EPD Ireland PCR Part A, Version 2.1, 2022

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. The EPD Program operator shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Type of EPD

Specific product EPD

Issue date:

15.05.2026

Declared unit:

1 m^2 Exoperm Duro 150

Valid to:

14.05.2031

Scope of the EPD:

A1-A3, A4, A5, C1, C2, C3, C4, D

Year of study:

2024

Functional unit:

1 m2 of Exoperm Duro 150 vapour permeable breather membrane

Comparability:

Environmental Product Declarations from different programmes may not be directly comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See clause 5.3 of EN 15804:2012+A2:2019

LCA consultant or person responsible for LCA:
EcoReview, Peter Seymour

Verification:

Independent verification of the declaration and data, according to ISO14025:2010

Third party verifier:
Stephen Forson

Approved:

SIGNATURE OF PROGRAMME OPERATOR

Pat Barry, CEO - Irish Green Building Council

Product

Product description:

EXOPERM DURO 150 is a lightweight, vapour-permeable breather membrane designed for external walls and low-pitched roofs. It provides long-term weather protection while allowing moisture vapour to escape, helping maintain a healthy building envelope.
It is suitable for a wide range of construction types including timber frame, steel frame, modular, concrete, and masonry systems. The membrane combines high breathability with strong water resistance, making it ideal for both construction-phase protection and long-term performance.

Roll size: 1.5m x 50m (50 m^2)

Product specification:

Key Features & Benefits
High breathability (Sd ≈ 0.08 m) for effective moisture diffusion
Water-resistant (Class W1) for protection against wind-driven rain
Lightweight and easy to install
UV & weather resistant (up to 6 months walls / 4 months roofs exposure)
Durable external protection for walls and roofs
Flexible and robust with high elongation (90% both directions)
Fire classification: B-s1,d0
Supports healthy construction by reducing condensation risk
Versatile applications: new build, retrofit, offsite construction

Typical Applications
External air & wind-tight layer in wall/roof systems
Ventilated and closed-joint façades
Warm, cold, and hybrid roofs
Passive House and low-energy buildings
Structural weather protection across multiple substrates

Technical data:

Property	Standard	Value
Weight	EN 1849-2	130 g/m^2 ± 5%
Sd value	EN ISO 12573	~0.08 m
Water resistance	EN 1928	Class W1
Reaction to fire	EN 13501-1	B-s1, d0
Tear resistance (MD/CD)	EN 12310-1	≥ 130 / ≥ 170 N
Elongation (MD/CD)	EN 12311-1	90% / 90%
Tensile strength (MD/CD)	EN 12311-1	150 / 110 N per 50mm
Temperature resistance	EN 13859-2	-40oC to +80oC
Vapour permeability	EN ISO 12572	>2,000 g / m^2 / 24h
Processing temperature	-	-40oC to +80oC
UV exposure resistance	EN 13859-2	Wall: up to 6 months / Roof: up to 4 months

Market/Geographical Area:

Republic of Ireland and UK

Reference service life, product

No RSL. Product has a 15 year performance guarantee.

Reference service life, building or construction works

LCA: Calculation rules

Declared unit:

1 m^2 Exoperm Duro 150

kg per Declared unit 0.113

Cut-off criteria:

All relevant inputs and outputs - like emissions, energy and materials - have been taken into account in this LCA, and in accordance with EN15804+A2:2019. The study covers at least 95% of the materials and energy per module and at least 99% of the total use of materials and energy of each unit process. Long term emissions have been excluded from the study.

Allocation:

The source of default unit processes or activities is the Ecoinvent database version 3.11, system model “Allocation, cut-off by classification”. The measurement of environmental impacts in this EPD uses the LCIA methodologies recommended for PEF 3.1. In this EPD, the waste processes are allocated in the relevant module. In the case of the use of secondary materials or energy recovered from secondary fuels, the system boundary between the system under study and the previous system (providing the secondary materials) is set where outputs of the previous system, e.g. materials, products, building elements or energy, reach the end-of-waste state. The modularity and the polluter payer principles have been followed.

Data quality:

Geographical representativeness: Data is largely from the area under study (Europe). The geographical representativeness is thus assumed to be ‘Good’.

Technical representativeness: Data is from the processes and products under study. The same state of technology that is used in production is that defined in the goal and scope. The processes use electricity. The electricity records are selected as being the residual mixes for the locations of production. The technical representativeness is thus assumed to be ‘fair to good’.

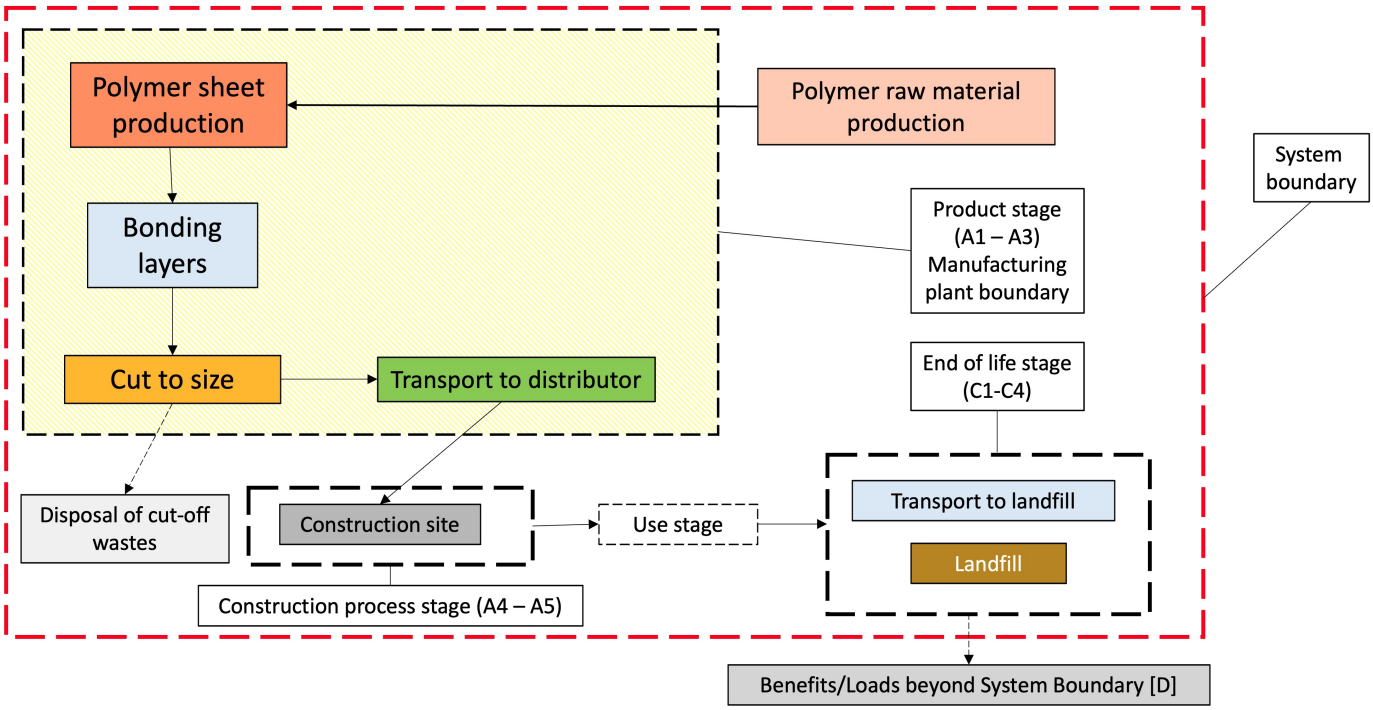
Time representativeness: The production year used in this LCA is 2024. The Ecoinvent version 3.11 database was used to represent this production. This version of Ecoinvent was issued in November 2024. The time representativeness is thus assumed to be ‘very good’.

Scope and type of EPD (X = Module declared; ND = Module not declared)

Product stage			Construction installation stage		Use stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	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	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

System boundary:

This LCA covers the Product (A1, A2 and A3), Transport to site (A4), Construction Installation (A5), User (B1 to B7), End of Life (C1 to C4) and Benefits/loads beyond the system boundary (D) Stages, as indicated above. This is termed: "Cradle to grave and module D".



Additional technical information:

Electricity modelling

Electricity is supplied from the grid, and is taken to be the residual mix of the place of manufacture. The LCA has calculated the electricity impact based on the market-based approach. The CO2 intensity of the electricity is 0.065 kg CO2eq per kWh.

LCA: Scenarios and additional technical information

The following information describes the scenarios in the different modules of the EPD.

The transport to the customer phase (A4) is modelled on delivery distance of 150 km.
The installation phase (A5) involves fixing the membrane to internal wooden battens, and joining the membrane sheet edges with sticky Soloseal adhesive tape. In the installation process normally 0.6m length of Soloseal adhesive tape is used per m2 of Exoperm Duro 150 membrane. On-site installation losses are 2% by mass.

In the deconstruction/demolition stage C1 it is assumed that the membranes are removed manually from building – thus no energy or materials are used, and the impacts in C1 are assumed to be zero.

In the transport phase C2 it is assumed that these materials travel 50km to landfill, as per default values in the Product Category Rules PCR for EPD Ireland [5].

The end of life processing scenario is assumed to be landfill, C4. This is appropriate for the membranes, as they are made of a mix of different materials, and is the default scenario for mixed materials in the Product Category Rules PCR for EPD Ireland. Thus there are zero loads or benefits beyond the system boundary for these products.

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	5.77E-01	3.15E-03	5.96E-02	0.00E+00	1.11E-03	0.00E+00	1.04E-02	0.00E+00
	GWP-fossil	kg CO_2 -eq	5.72E-01	3.14E-03	5.91E-02	0.00E+00	1.11E-03	0.00E+00	1.04E-02	0.00E+00
	GWP-biogenic	kg CO_2 -eq	4.09E-03	2.88E-06	3.77E-04	0.00E+00	1.02E-06	0.00E+00	5.43E-06	0.00E+00
	GWP-luluc	kg CO_2 -eq	5.44E-04	1.55E-06	5.44E-05	0.00E+00	5.47E-07	0.00E+00	7.58E-07	0.00E+00
	ODP	kg CFC11 -eq	1.27E-08	6.80E-11	1.39E-09	0.00E+00	2.40E-11	0.00E+00	3.10E-11	0.00E+00
	AP	mol H+ -eq	2.23E-03	6.87E-06	2.32E-04	0.00E+00	2.42E-06	0.00E+00	8.97E-06	0.00E+00
	EP-FreshWater	kg P -eq	3.72E-05	2.55E-08	3.32E-06	0.00E+00	9.01E-09	0.00E+00	1.43E-08	0.00E+00
	EP-Marine	kg N -eq	5.58E-04	1.69E-06	5.43E-05	0.00E+00	5.97E-07	0.00E+00	7.23E-06	0.00E+00
	EP-Terrestial	mol N -eq	4.76E-03	1.76E-05	4.88E-04	0.00E+00	6.21E-06	0.00E+00	3.65E-05	0.00E+00
	POCP	kg NMVOC -eq	2.01E-03	1.07E-05	2.19E-04	0.00E+00	3.76E-06	0.00E+00	1.50E-05	0.00E+00
	ADP-minerals&metals[1]	kg Sb-eq	2.02E-06	1.03E-08	3.05E-07	0.00E+00	3.62E-09	0.00E+00	2.29E-09	0.00E+00
	ADP-fossil[1]	MJ	1.19E+01	4.46E-02	1.25E+00	0.00E+00	1.57E-02	0.00E+00	2.74E-02	0.00E+00
	WDP[1]	m^3	5.41E-01	1.85E-04	4.99E-02	0.00E+00	6.52E-05	0.00E+00	1.23E-03	0.00E+00

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment: EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Remarks on environmental impacts

Additional environmental impact indicators										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	PM	Disease incidence	3.03E-08	2.33E-10	2.94E-09	0.00E+00	8.20E-11	0.00E+00	1.98E-10	0.00E+00
	IRP[2]	kgBq U235 -eq	1.13E-02	2.26E-05	1.61E-03	0.00E+00	7.98E-06	0.00E+00	8.94E-06	0.00E+00
	ETP-fw[1]	CTUe	1.20E+01	2.21E-02	1.04E+00	0.00E+00	7.78E-03	0.00E+00	3.79E-01	0.00E+00
	HTP-c[1]	CTUh	1.88E-10	1.00E-12	1.80E-11	0.00E+00	1.00E-12	0.00E+00	1.00E-12	0.00E+00
	HTP-nc[1]	CTUh	3.55E-09	3.20E-11	9.56E-10	0.00E+00	1.10E-11	0.00E+00	1.21E-10	0.00E+00
	SQP[1]	dimensionless	1.46E+00	2.70E-02	1.60E-01	0.00E+00	9.52E-03	0.00E+00	6.51E-02	0.00E+00

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Potential Soil Quality Index (dimensionless)

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. 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 nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Resource use										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	PERE	MJ	1.19E+00	7.01E-04	1.09E-01	0.00E+00	2.47E-04	0.00E+00	3.80E-04	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	1.19E+00	7.01E-04	1.09E-01	0.00E+00	2.47E-04	0.00E+00	3.80E-04	0.00E+00
	PENRE	MJ	1.25E+01	4.74E-02	1.32E+00	0.00E+00	1.67E-02	0.00E+00	2.91E-02	0.00E+00
	PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+01	4.74E-02	1.32E+00	0.00E+00	1.67E-02	0.00E+00	2.91E-02	0.00E+00
	SM	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
	RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m^3	1.41E-02	5.99E-06	1.31E-03	0.00E+00	2.11E-06	0.00E+00	2.94E-05	0.00E+00

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 materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

End of life - Waste

Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	HWD	kg	1.41E-03	2.84E-07	1.16E-04	0.00E+00	1.00E-07	0.00E+00	1.95E-07	0.00E+00
	NHWD	kg	5.94E-02	2.22E-03	6.55E-03	0.00E+00	7.82E-04	0.00E+00	1.13E-01	0.00E+00
	RWD	kg	8.74E-06	1.47E-08	1.42E-06	0.00E+00	5.18E-09	0.00E+00	5.70E-09	0.00E+00

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

End of life - Output flow

Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	CRU	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
	MFR	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
	MER	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
	EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0.00E+00
Biogenic carbon content in accompanying packaging	kg C	0.00E+00

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2

Additional requirements

Dangerous substances

None of the substances contained in the product are listed in the “Candidate List of Substances of Very High Concern for authorisation”, or they do not exceed the limit for registration with the European Chemicals Agency.

Mandatory additional information on release of dangerous substances to indoor air, soil and water.

Bibliography

[1] ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006.

[2] ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006.

[3] ISO 14025: Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures', International Organization for Standardization, ISO14025:2006.

[4] I.S. EN 15804:2012+A2:2019,: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products', EN 15804:2012+A2:2019.

[5] Product Category Rules : Part A Version 2 Implementation and use of I.S. EN 15804:2012 and CEN TR 16970:2016 in Ireland. Product Category Rules: Part A, version 2.

[6] CML - Department of Industrial Ecology, CML-IA Characterisation Factors, Dated August 2016, Leiden University, Leiden, Netherlands.

[7] PEF methodology final draft.pdf (europa.eu)

[8] https://www.aib-net.org/sites/default/files/assets/facts/residual-mix/2023/AIB_2023_Residual_Mix_FINALResults09072024.pdf

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