

# ENVIRONMENTAL PRODUCT DECLARATION

## IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Glidevale Protect TF200®  
Building Product Design Ltd



**EPD HUB, HUB-0233**

Publishing date 23 December 2022, last updated on 26 October 2023, valid until 23 December 2027.

## GENERAL INFORMATION

### MANUFACTURER

Manufacturer	Building Product Design Ltd
Address	Building Product Design Ltd, 2 Brooklands Road, Sale, Cheshire, M33 3SS
Contact details	technical@glidevaleprotect.com
Website	www.glidevaleprotect.com

### EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	
EPD author	Neena Chandramathy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal certification <input checked="" type="checkbox"/> External verification
EPD verifier	Elma Avdyli, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

### PRODUCT

Product name	Glidevale Protect TF200®
Additional labels	
Product reference	
Place of production	Merthyr Tydfil , UK
Period for data	2021
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

### ENVIRONMENTAL DATA SUMMARY

Declared unit	1m2
Declared unit mass	0.1 kg
GWP-fossil, A1-A3 (kgCO2e)	0.351
GWP-total, A1-A3 (kgCO2e)	0.338
Secondary material, inputs (%)	1.5
Secondary material, outputs (%)	12.6
Total energy use, A1-A3 (kWh)	2.76
Total water use, A1-A3 (m3e)	0.0354

## PRODUCT AND MANUFACTURER

### ABOUT THE MANUFACTURER

Building Product Design is a leading building materials specialist, offering a comprehensive range of products for new build and refurbishment schemes across a variety of sectors including private residential, social housing, commercial and education sectors. Our products are tried, trusted and tested for both traditional build and offsite construction to deliver benefits including condensation control, thermal efficiency, airtightness, damp proofing, improved air quality, natural daylight and removal of moisture.

A UK producer operating from two manufacturing facilities in Nottinghamshire and South Wales, Building Product Design offers superior performance and product innovation at the very heart of our business. With almost 40 years of experience and technical expertise, all our ranges supplied by our Glidevale Protect, Passivent and Kingfisher brands are designed and developed specifically for the UK and Irish market requirements under the ISO 9001 quality standard, with the company also accredited to the international health and safety standard ISO 45001 and the environmental standard ISO 14001. Our quality hallmarks, management systems and external product performance certification are complemented by the achievement of STA Assure Gold Level status to ensure complete customer assurance.

### PRODUCT DESCRIPTION

Protect TF200® is a high performance, water resistant wall membrane with high wet strength and water vapour permeability. Fully independently certified by BM TRADA certified, the product is used as an external breather membrane in timber framed panels, Structural Insulated Panels (SIPs), Cross Laminated Timber (CLT) panels and steel frame construction. Protect TF200 provides a primary line of protection to the whole of the external wall, including joints, sole plate and intermediate floor zones during the construction process and a second line of protection against rainwater penetration during the life of the building after the external masonry is built. The membrane is positioned on the cold side of the insulated panel to minimise the risk of condensation within the structure and to allow water vapour to escape into the vented cavity. Protect TF200

is manufactured by extruding polypropylene to produce fibres. These fibres are then spun and bonded together using a combination of heat and pressure in a continuous process. The product is embossed on the upper and lower surface with a weight of 100g/m<sup>2</sup> and has the following characteristics: Water resistance Class W2 (no leakage - aged), vapour resistance 0.03 MNs/g / 0.005 Sd to BS EN ISO 12572. Product is available in a selection of widths and colours in addition to the images shown.

Further information can be found at [www.glidevaleprotect.com](http://www.glidevaleprotect.com).

### PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals		
Minerals		
Fossil materials	100	Africa
Bio-based materials		

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.0038

### FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m <sup>2</sup>
Mass per declared unit	0.1 kg

### SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

# PRODUCT LIFE-CYCLE

## SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries			
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D			
x	x	x	MND	MND	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x			
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling	

Modules not declared = MND. Modules not relevant = MNR.

## MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Transportation of raw materials from the suppliers to the manufacturing place is included based on the supplier information. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The PP spunbond is purchased from supplier located in Africa as jumbo rolls. At the manufacturing facility, the rolls of PP spunbond is cut into different roll sizes and packed. Individual rolls are packed in 17" lay flat tubes. Cardboard and Timber pallets are used to support the product while transporting. The packed rolls are sold to the market.

## TRANSPORT AND INSTALLATION (A4-A5)

As per the PCR the impacts from A4 & A5 are considered option, hence it has been excluded in this LCA.

## PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

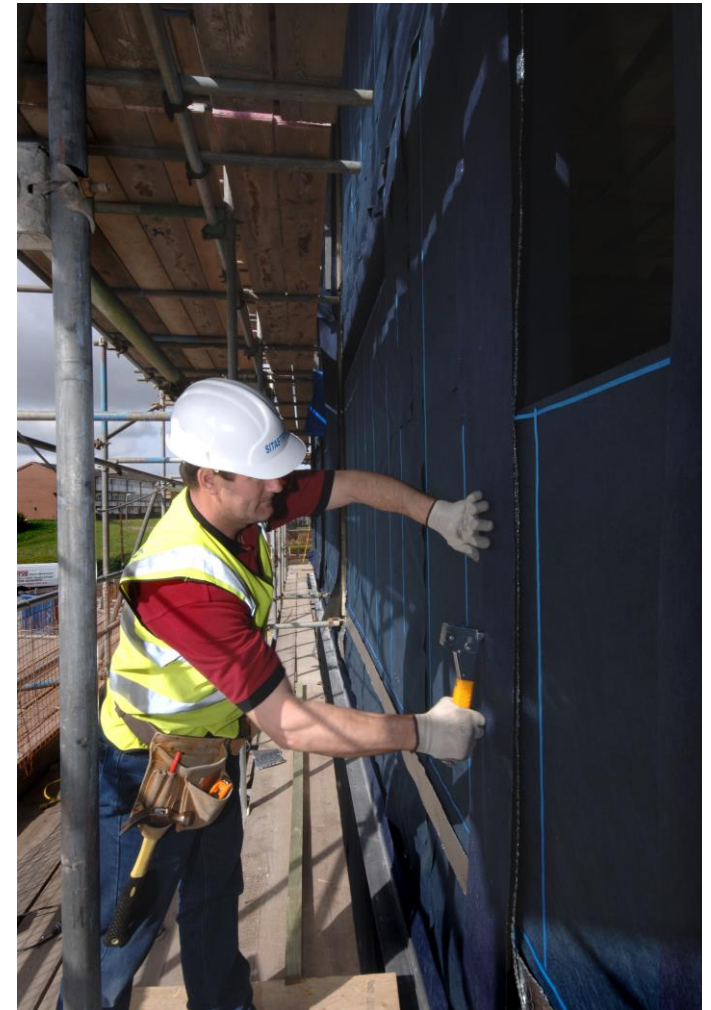
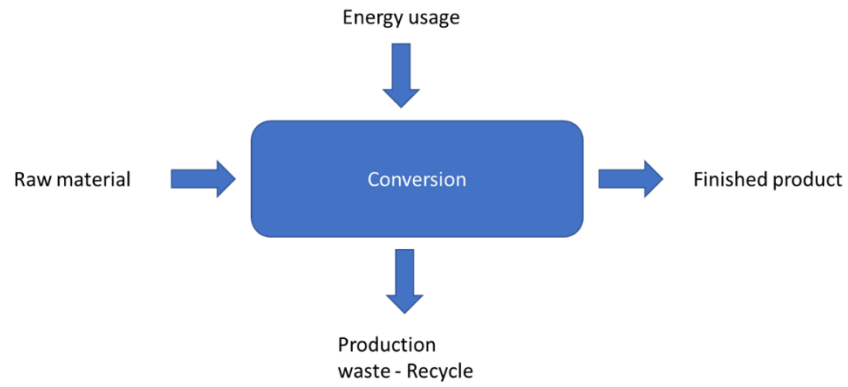
Air, soil, and water impacts during the use phase have not been studied.

## PRODUCT END OF LIFE (C1-C4, D)

Breather membranes are typically not separated from construction waste and are assumed to be sent to landfill.



Manufacturing process



# LIFE-CYCLE ASSESSMENT

## CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

## ALLOCATION, ESTIMATES AND ASSUMPTIONS

Production and sales information for relevant years collected for all TF200 product widths manufactured. Standard material basis weight of 0.1kg/sqm applied to achieve tonnages. Basis weights for all other products used to calculate factory annual tonnage Assumed 3% production waste above produced rolls. Final packaging calculated from material weights and finished rolls produced. Packaging of raw materials has been calculated based on jumbo width used for conversion and a standard roll length of 2200lm.

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Allocated by mass or volume

Packaging materials	Allocated by mass or volume
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

## AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	%

This EPD is product and factory specific and does not contain average calculations.

## LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent and One Click LCA databases were used as sources of environmental data.

# ENVIRONMENTAL IMPACT DATA

## CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO <sub>2</sub> e	3E-1	1.78E-2	2.1E-2	3.38E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	4.55E-4	2.23E-3	1.18E-2	7.9E-3
GWP – fossil	kg CO <sub>2</sub> e	2.98E-1	1.78E-2	3.49E-2	3.51E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	4.54E-4	3.94E-4	1.17E-2	-4.43E-3
GWP – biogenic	kg CO <sub>2</sub> e	1.43E-3	-2.15E-6	-1.39E-2	-1.25E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	3.3E-7	1.83E-3	7.71E-5	1.23E-2
GWP – LULUC	kg CO <sub>2</sub> e	3.27E-4	1.08E-5	5.44E-5	3.92E-4	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	1.37E-7	4.39E-7	6.6E-7	5.9E-7
Ozone depletion pot.	kg CFC-11e	1.13E-8	3.66E-9	4.91E-9	1.99E-8	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	1.07E-10	5.87E-11	3.3E-10	-7.68E-10
Acidification potential	mol H <sup>+</sup> e	1.3E-3	4.72E-4	2.35E-4	2.01E-3	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	1.91E-6	2.76E-6	9.74E-6	-6.42E-6
EP-freshwater <sup>2)</sup>	kg Pe	9.27E-6	9.83E-8	1.06E-6	1.04E-5	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	3.7E-9	1.44E-8	2.21E-8	-3.22E-8
EP-marine	kg Ne	2.43E-4	1.17E-4	3.22E-5	3.92E-4	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	5.75E-7	1.14E-6	1.52E-5	-1.02E-6
EP-terrestrial	mol Ne	2.7E-3	1.3E-3	3.38E-4	4.34E-3	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	6.35E-6	8.99E-6	3.51E-5	-1.17E-5
POCP (“smog”) <sup>3)</sup>	kg NMVOce	9.9E-4	3.39E-4	1.02E-4	1.43E-3	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	2.04E-6	3.03E-6	1.25E-5	-7.18E-6
ADP-minerals & metals <sup>4)</sup>	kg Sbe	3.8E-6	1.67E-7	1.64E-7	4.13E-6	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	7.75E-9	6.38E-9	1.16E-8	4.02E-9
ADP-fossil resources	MJ	8.61E0	2.36E-1	7.46E-1	9.59E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	7.07E-3	6.35E-3	2.56E-2	-9.86E-2
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	1.18E-1	6.18E-4	4.96E-3	1.24E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	2.63E-5	8.32E-5	1.12E-3	-1.58E-3

## ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	9.46E-9	7.63E-10	2.44E-9	1.27E-8	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	4.11E-11	8.49E-11	1.76E-10	-1.34E-11
Ionizing radiation <sup>6)</sup>	kBq U235e	8.98E-3	1.01E-3	9.05E-3	1.9E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	3.09E-5	2.96E-5	1.01E-4	-9.13E-4
Ecotoxicity (freshwater)	CTUe	3.38E0	1.59E-1	8.69E-1	4.4E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	5.4E-3	7.55E-3	5.37E-2	-1.04E-2
Human toxicity, cancer	CTUh	7.51E-11	9.03E-12	2.91E-11	1.13E-10	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	1.38E-13	1.21E-12	7.52E-13	-1.39E-11
Human tox. non-cancer	CTUh	2.37E-9	1.44E-10	3.41E-10	2.86E-9	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	6.4E-12	1.32E-11	2.46E-11	1.29E-11
SQP <sup>7)</sup>	-	2.8E-1	8.99E-2	5.67E-2	4.26E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	1.07E-2	3.9E-3	8.86E-2	5.06E-4

### USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy <sup>8)</sup>	MJ	2.22E-1	1.82E-3	1.46E-1	3.7E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	8.9E-5	4.1E-4	5.07E-4	-4.56E-4
Renew. PER as material	MJ	0E0	0E0	1.34E-1	1.34E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-3.94E0	0E0	0E0
Total use of renew. PER	MJ	2.22E-1	1.82E-3	2.8E-1	5.04E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	8.9E-5	-3.94E0	5.07E-4	-4.56E-4
Non-re. PER as energy	MJ	8.61E0	2.36E-1	7.16E-1	9.56E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	7.07E-3	6.35E-3	2.56E-2	-7E-2
Non-re. PER as material	MJ	0E0	0E0	3.01E-2	3.01E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	-2.86E-2
Total use of non-re. PER	MJ	8.61E0	2.36E-1	7.46E-1	9.59E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	7.07E-3	6.35E-3	2.56E-2	-9.86E-2
Secondary materials	kg	9.14E-4	0E0	5.9E-4	1.5E-3	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	6.06E-4
Renew. secondary fuels	MJ	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m <sup>3</sup>	1.21E-3	2.88E-5	3.42E-2	3.54E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	1.47E-6	1.7E-6	2.83E-5	-3.26E-2

8) PER = Primary energy resources.

### END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.31E-2	2.78E-4	1.66E-3	1.5E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	6.87E-6	0E0	5.06E-5	4.95E-5
Non-hazardous waste	kg	3.95E-1	8.91E-3	3.38E-2	4.38E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	7.6E-4	0E0	1E-1	8.73E-3
Radioactive waste	kg	6.55E-6	1.64E-6	4.53E-6	1.27E-5	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	4.85E-8	0E0	1.51E-7	6.09E-9

### END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Materials for recycling	kg	0E0	0E0	4.07E-3	4.07E-3	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	6.08E-4	0E0	0E0
Materials for energy rec	kg	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1.2E-2	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	2.88E0	0E0	0E0



## VERIFICATION STATEMENT

### VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online  
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

### THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Elma Avdyli, as an authorized verifier acting for EPD Hub Limited  
Updated 26.10.2023

