

ENVIRONMENTAL PRODUCT DECLARATION

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

OBEX CORTEX 0500FR Class B Interface Sealing Membrane
OBEX Protection Ltd



GENERAL INFORMATION

MANUFACTURER

Manufacturer	OBEX Protection Ltd
Address	Unit 5, Norton Road, Broomhall, Worcester, WR5 2QR
Contact details	technical@obexuk.com
Website	obexglobal.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 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Callum Doouss
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☒ Internal verification ☐ External verification
EPD verifier	TBC

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	OBEX CORTEX 0500FR Class B Interface Sealing Membrane
Additional labels	
Product reference	0500FR
Place of production	United Kingdom
Period for data	
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	0500FR ISM
Declared unit mass	0.65 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	4.96E+00
GWP-total, A1-A3 (kgCO ₂ e)	4.86E+00
Secondary material, inputs (%)	21
Secondary material, outputs (%)	3.85
Total energy use, A1-A3 (kWh)	22.5
Net freshwater use, A1-A3 (m ³)	0.13

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Manufacturer of Facade Sealing Solutions

PRODUCT DESCRIPTION

OBEX CORTEX 0500FR Class B Interface Sealing Membrane is a top-performing, fire-classified membrane that has been specifically designed for creating weather and airtight seals around windows, doors, curtain walling systems, SFS sections to concrete frames, and balcony waterproofing.

This Interface Sealing Membrane has been approved by BBA, a third-party organization that ensures its quality and reliability. It achieves Class B-s3,d0 – EN 13501-1 fire classification, making it suitable for use on relevant buildings above 18m.

OBEX CORTEX 0500FR Class B Interface Sealing Membrane works seamlessly with OBEX CORTEX 0771FR Class B Paste Adhesive, together ensuring a robust, airtight seal between two substrates.

This membrane is perfect for a wide range of applications where a compliant fire-classified EPDM-alternative is required.

Typical Uses

Weather & airtight seals around windows, doors and curtain walling systems
 Weather & airtight seals from SFS sections to the concrete frame
 Top of parapet walls
 Balcony waterproofing
 Many other applications where a robust Class B EPDM-alternative is required

Further information can be found at obexglobal.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals		
Minerals	15.86	chalk, antimony, etc
Fossil materials	73.8	plastics
Bio-based materials	10.32	Cardboard, wood

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

The mass of biogenic carbon containing materials in the product or packaging is less than 5 % of the mass of the product or packaging, the declaration of biogenic carbon content may be omitted.

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	-

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	0500FR ISM 1m2
Mass per declared unit	0.65 kg
Functional unit	1 m2
Reference service life	60 years

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	X	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X	Recovery	Recycling
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	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. 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.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

PRODUCT USE AND MAINTENANCE (B1-B7)

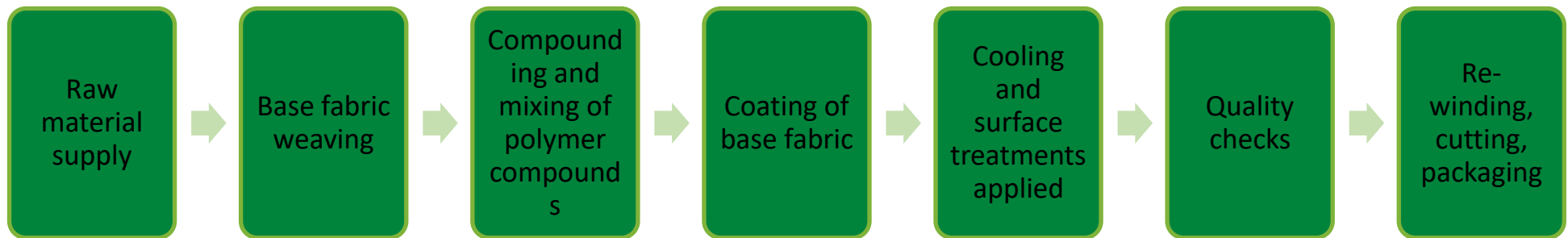
This EPD does not cover the use phase.

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

PRODUCT END OF LIFE (C1-C4, D)

The environmental impacts considered for recycling, incineration, reusability in the EPD with Benefits of recycling also included in the section D. Transportation included in the end of life also included in the EPD.

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, 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

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, no allocation done.

Data type	Allocation
Raw materials	-
Packaging material	-
Ancillary materials	-
Manufacturing energy and waste	-

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. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases 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 ¹⁾	kg CO ₂ e	3.14E+00	5.67E-01	1.15E+00	4.86E+00	3.72E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.13E-05	8.96E-03	0.00E+00	-7.31E-03
GWP – fossil	kg CO ₂ e	3.11E+00	5.66E-01	1.28E+00	4.96E+00	3.59E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.04E-05	-1.94E-03	0.00E+00	-7.31E-03
GWP – biogenic	kg CO ₂ e	2.47E-02	1.44E-04	-1.28E-01	-1.03E-01	1.65E-05	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.46E-08	1.09E-02	0.00E+00	1.56E-06
GWP – LULUC	kg CO ₂ e	1.16E-03	2.98E-04	8.45E-05	1.55E-03	1.30E-03	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.51E-07	3.41E-07	0.00E+00	0.00E+00
Ozone depletion pot.	kg CFC-11e	7.80E-08	7.65E-09	1.79E-08	1.04E-07	1.31E-09	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.10E-12	2.34E-12	0.00E+00	-2.94E-12
Acidification potential	mol H ⁺ e	2.08E-02	2.52E-03	1.34E-03	2.47E-02	1.17E-04	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.35E-07	1.46E-05	0.00E+00	-9.48E-06
EP-freshwater ²⁾	kg Pe	2.04E-01	4.96E-05	5.53E-03	2.10E-01	3.43E-06	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.56E-09	-1.20E-03	0.00E+00	-6.09E-04
EP-marine	kg Ne	8.32E-03	7.08E-04	3.03E-04	9.33E-03	4.78E-05	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.02E-08	7.45E-06	0.00E+00	-2.14E-06
EP-terrestrial	mol Ne	6.61E-02	7.75E-03	3.52E-03	7.74E-02	4.02E-04	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.70E-07	7.26E-05	0.00E+00	-2.35E-05
POCP (“smog”) ³⁾	kg NMVOCe	2.19E-02	2.85E-03	2.51E-03	2.72E-02	1.58E-04	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.89E-07	1.68E-05	0.00E+00	-6.70E-06
ADP-minerals & metals ⁴⁾	kg Sbe	3.68E-02	2.31E-06	2.31E-07	3.68E-02	1.73E-07	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.60E-10	1.86E-09	0.00E+00	-1.23E-10
ADP-fossil resources	MJ	4.96E+01	7.72E+00	1.63E+01	7.36E+01	5.12E-01	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.81E-04	-2.61E-02	0.00E+00	-9.64E-02
Water use ⁵⁾	m ³ e depr.	2.13E+00	3.89E-02	3.38E-02	2.20E+00	3.73E-03	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.65E-06	1.32E-03	0.00E+00	-4.52E-07

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

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	1.55E-07	3.48E-08	1.31E-04	1.31E-04	2.84E-09	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.56E-12	7.31E-11	0.00E+00	-7.74E-11
Ionizing radiation ⁶⁾	kBq 11235e	4.84E-02	7.18E-03	3.83E-03	5.94E-02	5.58E-04	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.79E-07	-2.64E-05	0.00E+00	-1.69E-05
Ecotoxicity (freshwater)	CTUe	1.35E+01	1.52E+00	8.92E-01	1.59E+01	1.38E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.26E-04	1.90E-02	0.00E+00	-3.22E-13
Human toxicity, cancer	CTUh	5.74E-09	1.03E-10	1.32E-10	5.98E-09	8.70E-12	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.47E-15	-4.10E-13	0.00E+00	-1.58E-12
Human tox. non-cancer	CTUh	1.28E-07	4.60E-09	1.59E-09	1.34E-07	4.61E-10	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.60E-13	7.11E-11	0.00E+00	-1.58E-12
SQP ⁷⁾	-	4.18E+00	3.48E+00	9.93E-01	8.65E+00	4.26E-01	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.27E-04	3.23E-03	0.00E+00	-2.79E-04

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

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 ⁸⁾	MJ	3.51E+00	1.30E-01	1.95E-01	3.84E+00	1.29E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.18E-05	-2.50E-01	0.00E+00	-7.87E-03
Renew. PER as material	MJ	1.79E-03	0.00E+00	1.20E+00	1.20E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.57E-01	0.00E+00	0.00E+00
Total use of renew. PER	MJ	3.52E+00	1.30E-01	1.39E+00	5.04E+00	1.29E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.18E-05	7.35E-03	0.00E+00	-7.87E-03
Non-re. PER as energy	MJ	5.34E+01	7.72E+00	1.59E+01	7.70E+01	5.21E-01	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.87E-04	-2.64E-02	0.00E+00	-9.61E-02
Non-re. PER as material	MJ	1.37E+01	0.00E+00	0.00E+00	1.37E+01	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	7.64E-01	0.00E+00	-7.64E-01
Total use of non-re. PER	MJ	6.71E+01	7.72E+00	1.59E+01	9.07E+01	5.21E-01	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.87E-04	7.38E-01	0.00E+00	-8.61E-01
Secondary materials	kg	1.36E-01	4.04E-03	3.47E-02	1.75E-01	2.88E-04	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.93E-07	9.65E-05	0.00E+00	-8.66E-05
Renew. secondary fuels	MJ	1.88E-04	5.02E-05	2.66E-04	5.03E-04	3.65E-06	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.71E-09	1.30E-05	0.00E+00	-1.29E-05
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m ³	1.31E-01	1.07E-03	3.61E-04	1.32E-01	1.40E-04	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.28E-07	1.53E-05	0.00E+00	-2.22E-09

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	3.61E-01	1.54E-02	6.46E-03	3.83E-01	1.28E-03	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.25E-06	1.58E-03	0.00E+00	-3.59E-04
Non-hazardous waste	kg	1.63E+00	2.96E-01	-7.92E-03	1.92E+00	2.03E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.10E-05	2.51E-02	0.00E+00	-1.30E-07
Radioactive waste	kg	2.47E-05	1.79E-06	1.56E-06	2.81E-05	1.38E-07	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.44E-10	1.36E-07	0.00E+00	-1.34E-07

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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.50E-02	0.00E+00	2.89E-05	1.51E-02	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.80E-02	0.00E+00	0.00E+00
Materials for energy rec	kg	6.77E-04	0.00E+00	1.76E-06	6.79E-04	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	7.00E-03	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	7.90E-04	7.90E-04	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	1.86E+00	5.63E-01	1.25E+00	3.67E+00	3.70E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.11E-05	-1.95E-03	0.00E+00	-7.26E-03
Ozone depletion Pot.	kg CFC ₁₁ e	7.19E-09	6.12E-09	1.37E-08	2.70E-08	1.04E-09	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.78E-13	-4.25E-12	0.00E+00	-5.48E-12
Acidification	kg SO ₂ e	1.21E-02	1.98E-03	1.00E-03	1.51E-02	8.98E-05	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.03E-07	1.03E-05	0.00E+00	-7.67E-06
Eutrophication	kg PO ₄ ³ e	3.37E-03	3.96E-04	1.61E-04	3.93E-03	9.91E-05	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.51E-08	2.88E-06	0.00E+00	-7.28E-07
POCP (“smog”)	kg C ₂ H ₄ e	7.78E-03	1.49E-04	1.12E-04	8.04E-03	9.47E-06	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.01E-08	1.13E-07	0.00E+00	-6.00E-07
ADP-elements	kg Sbe	3.68E-02	2.24E-06	1.60E-07	3.68E-02	1.70E-07	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.57E-10	1.27E-09	0.00E+00	-1.65E-10
ADP-fossil	MJ	3.60E+01	7.61E+00	1.57E+01	5.94E+01	5.03E-01	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.72E-04	-4.28E-02	0.00E+00	-7.82E-02

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	3.11E+00	5.67E-01	1.28E+00	4.96E+00	3.72E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.13E-05	-1.94E-03	0.00E+00	-7.31E-03

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO₂ is set to zero.