ENVIRONMENTAL PRODUCT DECLARATION

EPD

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Product name:

1. GDA ActiMat & GDA ActiTex
2. GDA ActiMat C & GDA ActiTex C
3. GDA SolidMat
4. GDA ActiStop sealing profile

Producer:

Issued on: 12 August 2025
Valid until: 12 August 2030

GDA Sp. z o.o.

GENERAL INFORMATION

EPD OWNER

Manufacturer / EPD Holder	GDA Sp. z o.o.
Company Address	ul. Maszynowa 30, 80-298 Gdańsk
Contact details	office: biuro@actigda.com logistics: logistyka@actigda.com
Website	https://actigda.com/

PRODUCT IDENTIFICATION

Product name	1. GDA ActiMat & GDA ActiTex 2. GDA ActiMat C & GDA ActiTex C 3. GDA SolidMat 4. GDA ActiStop sealing profile
Place(s) of production	Gdańsk, Poland

EPD INFORMATION

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.

EPD Poland program operator	Multicert Sp. z o.o. Ul. Mydlarska 47, 04-690 Warszawa, Poland www.epd.org.pl, epd@epd.org.pl
EPD standards	This EPD is in accordance with EN 15804+A2 and ISO 14025 standards.
Product category rules	The CEN standard EN 15804+A2 serves as the core PCR.
EPD verification	Independent verification of this EPD and data, according to ISO 14025: □ Internal certification ■ External verification
EPD verifier	Izabela Sztamberek-Sochan, Ph.D.
EPD number	EPD-P 05.08.2025
Registration	EPD Polska www.epd.org.pl
Publishing date	12 August 2025
EPD valid until	12 August 2030
Reasons for performing LCA	B2B

Accountability

The EPD Holder is responsible for the information provided and evidence. Multicert Sp. z o.o. does not hold responsibility for the manufacturer information, life cycle assessment data nor supporting evidence.

COMPANY INFORMATION

HOLDER OF THE EPD

GDA Sp. z o.o.
ul. Maszynowa 30 80-298 Gdańsk, Poland

FACTORY PLANT / MANUFACTURER

GDA Sp. z o.o.
ul. Maszynowa 30, 80-298 Gdańsk, Poland

COMPANY PROFILE

GDA Sp. z o.o., headquartered in Gdańsk, Poland, is a leading manufacturer of high-performance waterproofing and sealing systems for geotechnical and civil engineering applications. The company specializes in the production of geosynthetic clay liners (GCLs), mineral composite mats and polymer-enhanced sealing profiles marketed under the brands GDA ActiMat, GDA ActiMat C, GDA ActiTex, GDA ActiTex C GDA SolidMat, and GDA ActiStop.

The company's manufacturing facility, located in Gdańsk, is equipped with a modern production line for needle-punched geosynthetic barriers and advanced extrusion technologies. The plant integrates raw material dosing, multi-layer textile lamination, bentonite filling, and mechanical bonding processes to ensure consistent product quality and performance.

The company operates in accordance with a certified quality management system compliant with EN ISO 9001, ensuring robust process control and product reliability. In line with its environmental and occupational health commitments, GDA has also implemented management systems in accordance with EN ISO 14001 and ISO 45001, respectively. GDA's in-house laboratory and development team continuously work to improve material performance, durability, and environmental compatibility of its products. This includes the optimization of bentonite composites and polymer-enhanced profiles used in landfill engineering, tunnel waterproofing, and hydraulic barrier systems. The integration of vertically controlled processes – from raw material selection through to product finalization – allows GDA to maintain full traceability and consistent technical performance across its product range.

Thanks to its strategic location in northern Poland and well-established logistics network, GDA Sp. z o.o. efficiently supplies national and international construction markets. The company's customer base includes infrastructure contractors, environmental engineering

firms, and system integrators across Europe and beyond. GDA is committed to innovation, sustainability, and long-term value creation in geosynthetic barrier technology.

PRODUCT INFORMATION

PRODUCT DESCRIPTION

The product groups covered by this EPD declaration include:

1. **GDA ActiMat & GDA ActiMat C**

ActiMat is a high specification needlepunched geosynthetic clay liner, comprising of sodium bentonite encapsulated between two or more woven and non-woven geotextiles. It features an integrated self-seaming overlap technology, eliminating the need for additional edge treatment during installation. Designed for use in environmental and civil engineering applications, ActiMat provides effective and durable hydraulic sealing in water reservoirs, dams, canals, embankments, landfills, secondary containment systems, and transport infrastructure. Key advantages include self-healing properties, robust construction, minimal subgrade preparation, rapid installation, and suitability for all-weather conditions—including wet and frozen surfaces.

Materials used in production include:

- Bentonite
- Polypropylene (woven & nonwoven fabric)
- Tap water

ActiMat C is a variant of the standard ActiMat geosynthetic clay liner, additionally laminated on the woven fabric side with a polyethylene–ethylene vinyl acetate (PE+EVA) film following the needle-punching process. This polymeric coating significantly enhances the membrane's waterproofing performance, chemical resistance, and mechanical durability, particularly in demanding subgrade or high-moisture environments.

Materials used in production include:

- Bentonite
- Polypropylene (woven & nonwoven fabric)
- Polyethylene (Foil - part PE)
- Ethylene-vinyl acetate (Foil - part EVA)
- Tap water

2. GDA ActiTex & GDA ActiTex C

GDA Actitex- an active waterproofing membrane of high strength geotextiles encapsulating a sodium bentonite layer between non-woven & woven geotextile which are needle punched together. Bentonite when in contact with water become dense gel which ensures perfect protection against water. Swelling pressure of bentonite causes self-healing of the waterproofing. Optionally material can be coated with polymeric film. ActiTex is used in below-ground structures, tunnels, green roofs, and property-line foundations such as secant or sheet pile walls, particularly where permanent or intermittent hydrostatic pressure is expected. Its key advantages include active self-healing, excellent substrate conformity, mechanical bonding to prevent water tracking, resistance to freeze-thaw cycles, and suitability for all-weather installation. The membrane is VOC-free and maintains performance through repeated wet-dry conditions.

Materials used in production include:

- Bentonite
- Polypropylene (woven & nonwoven fabric)
- Tap water

ActiTex C is a variant of the standard ActiTex active waterproofing membrane, additionally laminated on the woven fabric side with a polyethylene–ethylene vinyl acetate (PE+EVA) film following the needle-punching process.

Materials used in production include:

- Mineral fillers
- Synthetic polymers (e.g. rubber and plastomers)
- Pigments

3. GDA SolidMat

SolidMat is a high-performance geocomposite consisting of a specialized mineral blend encapsulated between one woven and two non-woven geotextiles, needlepunched for structural integrity. Upon contact with water, the core solidifies into a rigid, durable layer with high tensile and puncture strength, forming a permanent barrier. The product is used for slope stabilization, subgrade reinforcement, liner protection, and as a hydraulic barrier in landfills, ponds, canals, and containment areas. Key advantages include robust construction, minimal subgrade preparation, fast installation, and long-term performance under demanding site conditions.

Materials used in production include:

- Cement + mineral aggregate (Concrete mix)
- Poliester (nonwoven fabric)
- Polypropylene (woven fabric)

4. GDA ActiStop

ActiStop is a hydrophilic strip waterstop composed of a formulated blend of sodium bentonite and butyl rubber. Designed for construction joints in concrete structures, it actively swells upon contact with water, sealing against hydrostatic pressure by self-injecting into voids, honeycombs, and minor cracks.It is used in in-situ concrete joints, pipe penetrations, and new-to-existing concrete interfaces, offering flexibility for irregular surfaces and complex geometries.Key benefits include high swelling capacity, resistance to over 6 bar hydrostatic pressure, compatibility with various substrates, simple on-site installation through butt-jointing, and reliable performance across wet-dry and freeze-thaw cycles.

Materials used in production include:

- Polyisobutene
- Iron black (black pigment)
- Milled bentonite
- Plastomeric resin (EVA)
- Butyl rubber

PRODUCT RAW MATERIAL COMPOSITION

PRODUCT VARIANT	GDA ACTIMAT	GDA ACTIMAT C	GDA ACTITEX	GDA ACTITEX C
BENTONITE	76%	74%	76%	74%
POLYPROPYLENE (NONWOVEN)	3%	3%	3%	3%
POLYPROPYLENE (WOVEN)	2%	2%	2%	2%
TAP WATER	19%	18%	19%	18%
POLYETHYLENE	-	2%	-	2%
ETHYLENE-VINYL ACETATE	-	1%	-	1%

PRODUCT VARIANT	GDA SOLIDMAT
CEMENT 33% + MINERAL AGGREGATE 67%	93%
POLIESTER	6%
POLYPROPYLENE	1%

PRODUCT VARIANT	GDA ACTISTOP
MINERAL FILLERS	approx. 80%
SYNTHETIC POLYMERS (E.G. RUBBER AND PLASTOMERS)	approx. 20%
PIGMENTS	<1%

REFERENCE STANDARDS

The products covered by this Environmental Product Declaration are manufactured in accordance with the following standards:

EN 13361
Geosynthetic barriers - Characteristics required for use in the construction of reservoirs and dams.

EN 13362
Geosynthetic Barriers - Characteristics required for use in the construction of canals.

EN 13492
Geosynthetic barriers - Characteristics required for use in the construction of liquid waste disposal sites, transfer stations or secondary containment.

EN 13491
Geosynthetic barriers - Characteristics required for use in the construction of tunnels and associated underground structures.

EN 15382
Geosynthetic barriers - Characteristics required for use in transportation infrastructure.

The products meet the quality, execution and conformity assessment requirements as specified in the above standards.

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

RAW MATERIALS PROCUREMENT (A1-A2)

Modules A1 and A2 cover the extraction, processing, and transport of raw materials used in the production of GDA geosynthetic and sealing systems.

Module A1 includes the complete lifecycle stages of raw material production, starting from the extraction of natural resources, through refining and processing, up to the delivery of processed materials to the GDA manufacturing facility in Gdańsk, Poland. For GDA ActiMat and GDA ActiTex the primary components include bentonite, nonwoven and woven geotextiles, and process water while polyethylene (PE) and ethylene-vinyl acetate (EVA) films are additionally used for lamination in case of GDA ActiMat C and GDA ActiTex C. For GDA ActiStop waterproof sealing profiles, the key raw materials are polyisobutene, milled bentonite, black pigment, plastomeric resin, and butyl rubber. SolidMat is composed of a mineral concrete mixture reinforced with nonwoven and woven geotextiles.
All materials have been modeled using background data from the ecoinvent v 3.9.1 database. No supplier-specific EPDs have been used.

Module A2 comprises the transport of all raw and intermediate materials to the GDA production site. Transportation is modeled based on Polish and European average data for truck and ship transport, using regionalized fuel consumption and emissions datasets from ecoinvent v 3.9.1.

Only materials and processes contributing more than 1% of the total product mass or environmental impact are included, in accordance with the cut-off criteria defined in EN 15804+A2.

MANUFACTURING AND PACKAGING (A3)

The production process for sealing products at GDA Sp. z o.o. begins with the receipt of high-quality raw materials such as bentonite, textiles, synthetic materials, concrete, and polymers. These components are properly prepared and mixed according to developed technologies, then formed on automated production lines—resulting in mats, sealing profiles, or other waterproofing products.

The products may be further reinforced with foil layers or laminates to increase impermeability and mechanical resistance. The manufacturing process involves multiple quality control steps, both during raw material preparation and throughout the production of finished elements. Key technical parameters—such as strength, watertightness, and uniformity of layers—are monitored by the company's in-house laboratory.

Finished products are cut or packaged in accordance with technical requirements and their intended use. They then go through the packaging stage, where appropriately selected packaging materials (including films, straps, spacers, and pallets) are used to ensure product protection during transportation and storage. Every production batch is marked to ensure complete identification and traceability.

TRANSPORT TO CUSTOMER (A4)

Finished products from GDA Sp. z o.o., such as bentonite mats, sealing profiles, or composite mats, are delivered to customers both domestically and internationally using various modes of transportation. Depending on the order size, destination, and client requirements, different means may be used—ranging from trucks of different payload capacities, to multimodal transport (such as road combined with rail or sea), with maritime shipping utilized for international deliveries. The method and route of delivery are selected on a case-by-case basis, taking into account the specifics of the product, shipment size, and recipient location.

The environmental impacts related to transport are modeled based on the actual share of different transport means and average distances for each product group.

PRODUCT END OF LIFE (C1-C4, D)

At the end of life, no dedicated deinstallation or removal processes are carried out for bentonite mats, cementitious mats, or waterproof sealing profiles. These products are either left in situ (in the construction or ground) or are removed together with other mineral construction and demolition waste during standard demolition activities. Therefore, modules C1 (deconstruction), C2 (transport at end-of-life), and C3 (waste processing) are not modelled for these products and are treated as "not declared," in accordance with EN 15804.

Module C4 (disposal) covers the direct deposition of the product at the place of installation. It is assumed that, after demolition of the structure, the entire product is landfilled with the surrounding mineral demolition waste at the site. No re-use, recycling, or energy recovery is involved for the main product.

Module D (benefits and loads beyond the system boundary) is included where relevant and covers only potential loads and benefits from energy recovery of packaging waste (e.g. incineration with energy recovery), if such treatment occurs during production (A3) or installation (A5), in accordance with the system boundary approach and as required by EN 15804.

No additional end-of-life processes or secondary material recovery are modelled for the product itself.

LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Period for data	2024 year

DECLARED AND FUNCTIONAL UNIT

Product	Delcared unit	Mass per Declared Unit [kg]
1. GDA ActiMat	1 m2	5,925
2. GDA ActiMat C	1 m2	6,105
3. GDA ActiTex	1 m2	5,925
2. GDA ActiTex C	1 m2	6,105
3. GDA SolidMat	1 m2	8,403
4.GDA ActiStop sealing profile	1 linear m	0,717

BIOGENIC CARBON CONTENT

The products do not contain biogenic carbon.

SYSTEM BOUNDARY

The scope of the EPD is "cradle to gate with modules C1–C4 and D". The following life cycle modules are included in the declared scope: A1 (Raw material supply), A2 (Transport), A3 (Manufacturing), A4 (Transport to customer), C1 (Deconstruction/demolition), C2 (Transport at end-of-life), C3 (Waste processing), C4 (Disposal), and D (Benefits and loads beyond the system boundary).

Modules C1 (Deconstruction/demolition), C2 (Transport at end-of-life), and C3 (Waste processing) are included within the declared system boundary, but are not modelled for these products. This is because, in practice, no dedicated deinstallation, removal, or waste processing operations are performed at end of life:

- Bentonite mats and sealing profiles typically remain in situ in the structure or soil and are not removed;
- Cementitious mats are removed together with other mineral construction materials as part of general demolition, without any separate treatment.

Therefore, no significant environmental impacts are assigned to modules C1, C2, or C3; these modules are treated as "not declared" in accordance with EN 15804 for this product group.

Module C4 (Disposal) is modelled and includes the environmental impacts associated with the landfilling of the products at the place of installation after the end of their service life.

Module D (Benefits and loads beyond the system boundary) is included, as relevant, to reflect potential benefits or burdens resulting from processes (such as energy recovery from packaging waste) that occur outside the product system boundary.

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	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demo	Transport	Waste processing	Disposal	Reuse Recovery Recycling

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

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the EN 15804:2012+A2:2019. 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 are available are included in the calculations. No individual unit process accounts for more than 1% of the total mass or energy flows has been omitted. The total of all neglected input and output flows does not exceed 5% of total mass or energy usage. The life cycle analysis covers all industrial processes from raw material acquisition through production and distribution.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy, and water use related to company management and sales activities are excluded.

ALLOCATION

The allocation is carried out in accordance with the provisions of EN 15804. The information provided for the year 2024 includes all geosynthetic clay liners (GCLs), mineral composite mats and polymer-enhanced sealing profiles at GDA's production facility during that year. Due to the similarity in production resources and processing stages, an average based on product weight was applied for each product type. Input and output data from production are inventoried and allocated on a mass basis to the specified declared unit of 1 linear m in case of GDA ActiStop sealing profile and 1m^2 in case of other products.

DATA QUALITY

For foreground data, the LCA study relies on high-quality primary data gathered by RBT for the year 2024, including average transport distances for material supplies and final product shipments. For black steel, galvanized steel, and polyester-coated steel, third-party verified Environmental Product Declarations (EPDs) provided by the respective material suppliers were used as the main data sources for material-related impacts. All relevant background data sets have been sourced from the OpenLCA software's database: ecoinvent 3.9.1, which includes consistent and well-documented data sets accessible in the ecoinvent online database or through the ecoinvent database documentation.

GEOGRAPHIC REPRESENTATIVENESS

The product system covered by this EPD is manufactured and managed in Poland.

ESTIMATES AND ASSUMPTIONS

Where specific and recent primary data were unavailable, the study relied on established industry averages and background data from the ecoinvent 3.9.1 database.

For allocation purposes, a mass-based approach was used for all input and output flows.

Average transport distances for both raw materials and finished products were calculated based on internal company records for the year 2024. Where detailed distances were not available for certain shipments, company-wide averages were applied.

The emission factor for electricity consumption during manufacturing was based on the Emission Factors for Electricity in Poland reported by KOBiZE (National Centre for Emissions Management) in December 2024 (0.701 kg CO_2e/kWh).

It was assumed that all major raw material and energy inputs have been accounted for, and any neglected flows represent less than 5% of the total mass or energy consumption, with no single flow exceeding 1% (in line with EN 15804+A2).

End-of-Life Assumptions:
No dedicated deinstallation or removal processes are expected for bentonite mats or sealing profiles at end of life. These products typically remain in situ during demolition. Cementitious mats are removed together with bulk mineral demolition waste, without separate treatment.

Accordingly, no significant environmental impacts have been assigned to modules C1, C2, or C3, which are treated as "not declared."

Module C4 includes landfilling of product residues at the site of use after service life.

Packaging Management:
Packaging waste generated during the production process (A3) is incinerated with energy recovery. The environmental impacts of this process are included in module A3. Benefits and loads associated with recovered energy are reported in module D.

General Data Quality and Limitations:
The EPD covers all relevant life cycle stages within the declared scope. Uncertainties arise primarily from the use of generic data for background processes and certain transport legs.

The reference service life was estimated based on typical in-use scenarios and technical documentation, with no additional maintenance assumed during the declared service period.

Interpretation and Boundary Assumptions:
All system boundary settings and cut-off criteria are harmonized with EN 15804+A2 and applied consistently across material types.

Any secondary material content, recyclability potential, or contribution to module D is described as relevant for energy recovery from packaging.

MANUFACTURING ENERGY SCENARIO DOCUMENTATION

Scenario parameter	Value
Electricity data source and quality	Emission Factors for Electricity in Poland reported in December 2024 by KOBiZE - the National Centre for Emissions Management in Poland
Electricity CO2e / kWh	0,701 kg CO2e / kWh

TRANSPORT SCENARIO DOCUMENTATION

The transport scenario considers the average transportation of products from the manufacturing site to customers. The calculation is based on actual shipment data and includes a combination of transport modes: ship, train, and truck (divided into three weight classes: >16 t, 10–16 t, and <10 t). The average transport distance multiplied by the amount of product transported (expressed in t·km) has been used to determine the environmental impacts associated with transport. All transport modes and distances reflect typical delivery routes and transport practices during the reference period.

The distribution across transport modes varies depending on the product type and destination, with long-distance shipments often carried out by ship or train, and local deliveries completed by truck. The calculated transport scenario is representative of actual logistics and supply chain conditions for the declared products.

END OF LIFE SCENARIO DOCUMENTATION

Scenario parameter	Value (per DU)
Declared Unit (DU)	1 m² (for mats) / 1 m (for profiles)
Collection process – collected separately	0
Collection process – collected with mixed waste	1 DU (entire product mass)
Recovery process – for re-use	0
Recovery process – for recycling	0
Recovery process – for energy recovery	0
Disposal (total) – for final deposition	1 DU (entire product landfilled on site)

ENVIRONMENTAL IMPACT DATA

I) GDA ACTIMAT (DU = 1 m^2)

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	5,79E-03	1,78E-02	7,20E-04	5,82E-03	MND	MND	MND	MND	2,20E-04	4,18E-07
Climate change – total	kg CO2e	1,18E+00	6,51E-01	1,46E-01	1,21E+00	MND	MND	MND	MND	7,28E-02	1,66E-02
Climate change – fossil	kg CO2e	1,17E+00	6,50E-01	1,32E-01	1,21E+00	MND	MND	MND	MND	7,27E-02	1,41E-02
Climate change – biogenic	kg CO2e	6,37E-03	-7,10E-05	1,41E-02	9,80E-04	MND	MND	MND	MND	1,60E-05	2,54E-03
Climate change – LULUC	kg CO2e	8,00E-04	4,90E-04	3,24E-05	6,30E-04	MND	MND	MND	MND	1,67E-05	-7,05E-07
Abiotic depletion of fossil resources	MJ	3,17E+01	8,14E+00	1,25E+00	1,70E+01	MND	MND	MND	MND	7,05E-01	-9,04E-02
Eutrophication, aquatic freshwater	kg PO4e	2,40E-04	2,38E-05	1,20E-04	8,14E-05	MND	MND	MND	MND	2,32E-06	-1,27E-07
Eutrophication, aquatic marine	kg Ne	1,28E-03	4,45E-03	1,70E-04	1,46E-03	MND	MND	MND	MND	7,00E-04	1,49E-06
Eutrophication, terrestrial	mol Ne	1,44E-02	4,92E-02	9,90E-04	1,56E-02	MND	MND	MND	MND	9,20E-04	9,70E-06
Abiotic depletion, minerals & metals	kg Sbe	3,49E-06	5,34E-07	7,58E-08	2,62E-06	MND	MND	MND	MND	2,09E-08	-1,75E-09
Ozone depletion	kg CFC11e	1,21E-07	1,02E-08	8,92E-10	2,55E-08	MND	MND	MND	MND	8,15E-10	-2,57E-10
Photochemical ozone formation	kg NMVOCe	4,95E-03	1,34E-02	3,00E-04	6,26E-03	MND	MND	MND	MND	3,30E-04	-4,31E-06
Water use	m3e depr.	4,14E-01	2,47E-02	2,33E-02	8,15E-02	MND	MND	MND	MND	2,18E-03	7,10E-04

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	6,35E+00	3,98E+00	4,32E-01	8,34E+00	MND	MND	MND	MND	4,56E-01	3,84E-02
Human toxicity, cancer effects	CTUh	3,47E-10	2,79E-10	8,81E-11	5,38E-10	MND	MND	MND	MND	1,23E-11	7,64E-13
Human toxicity, non-cancer effects	CTUh	8,14E-09	2,35E-09	1,37E-09	9,93E-09	MND	MND	MND	MND	2,36E-10	5,63E-11
Ionizing radiation, human health	kBq U235-Eq	5,45E-02	4,59E-03	3,40E-03	2,17E-02	MND	MND	MND	MND	4,40E-04	-6,46E-05
Particulate matter	disease incidence	7,10E-08	2,06E-08	5,02E-09	6,83E-08	MND	MND	MND	MND	4,78E-09	-1,66E-12

USE OF NATURAL RESOURCES

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Total use of non-renewable PER	MJ	3,17E+01	8,14E+00	1,25E+00	1,70E+01	MND	MND	MND	MND	7,06E-01	-9,04E-02
Total use of renewable PER	MJ	7,99E-01	6,42E-02	1,41E-01	2,54E-01	MND	MND	MND	MND	5,88E-03	-5,60E-04
Use of net fresh water	m3	1,90E-02	8,20E-04	3,40E-03	2,70E-03	MND	MND	MND	MND	7,40E-04	3,29E-05
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Use of secondary materials	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

END OF LIFE – WASTE

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,04E-05	4,13E-05	1,95E-06	1,10E-04	MND	MND	MND	MND	3,74E-06	-3,76E-07
High Level Radioactive waste	kg	1,35E-05	1,06E-06	8,35E-07	5,25E-06	MND	MND	MND	MND	1,03E-07	-1,64E-08
Non-hazardous waste	kg	1,74E-03	1,80E-04	2,47E-05	4,70E-04	MND	MND	MND	MND	9,87E-06	-1,12E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	8,72E-02	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

II) GDA ACTIMAT C (DU = 1 m^2)

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	7,20E-03	1,78E-02	7,40E-04	3,81E-03	MND	MND	MND	MND	2,30E-04	4,30E-07
Climate change – total	kg CO2e	1,56E+00	6,62E-01	1,50E-01	1,20E+00	MND	MND	MND	MND	1,00E-01	1,71E-02
Climate change – fossil	kg CO2e	1,55E+00	6,62E-01	1,36E-01	1,19E+00	MND	MND	MND	MND	1,00E-01	1,45E-02
Climate change – biogenic	kg CO2e	4,43E-03	-6,21E-05	1,46E-02	2,39E-03	MND	MND	MND	MND	1,62E-05	2,62E-03
Climate change – LULUC	kg CO2e	9,90E-04	4,90E-04	3,34E-05	7,60E-04	MND	MND	MND	MND	1,68E-05	-7,26E-07
Abiotic depletion of fossil resources	MJ	4,50E+01	8,30E+00	1,29E+00	1,71E+01	MND	MND	MND	MND	7,17E-01	-9,32E-02
Eutrophication, aquatic freshwater	kg PO4e	3,10E-04	2,46E-05	1,20E-04	1,30E-04	MND	MND	MND	MND	2,35E-06	-1,31E-07
Eutrophication, aquatic marine	kg Ne	1,55E-03	4,46E-03	1,70E-04	1,13E-03	MND	MND	MND	MND	1,07E-03	1,54E-06
Eutrophication, terrestrial	mol Ne	1,72E-02	4,93E-02	1,02E-03	1,19E-02	MND	MND	MND	MND	9,60E-04	9,99E-06
Abiotic depletion, minerals & metals	kg Sbe	4,54E-06	5,61E-07	7,81E-08	2,57E-06	MND	MND	MND	MND	2,11E-08	-1,80E-09
Ozone depletion	kg CFC11e	1,24E-07	1,05E-08	9,19E-10	2,50E-08	MND	MND	MND	MND	8,29E-10	-2,65E-10
Photochemical ozone formation	kg NMVOCe	6,26E-03	1,34E-02	3,10E-04	5,24E-03	MND	MND	MND	MND	3,50E-04	-4,44E-06
Water use	m3e depr.	7,62E-01	2,55E-02	2,40E-02	1,14E-01	MND	MND	MND	MND	2,21E-03	7,40E-04

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	7,20E+00	4,07E+00	4,45E-01	8,20E+00	MND	MND	MND	MND	5,37E-01	3,96E-02
Human toxicity, cancer effects	CTUh	4,53E-10	2,84E-10	9,08E-11	6,45E-10	MND	MND	MND	MND	1,27E-11	7,87E-13
Human toxicity, non-cancer effects	CTUh	1,02E-08	2,45E-09	1,41E-09	1,03E-08	MND	MND	MND	MND	3,00E-10	5,80E-11
Ionizing radiation, human health	kBq U235-Eq	8,55E-02	4,85E-03	3,50E-03	4,96E-02	MND	MND	MND	MND	4,50E-04	-6,66E-05
Particulate matter	disease incidence	8,50E-08	2,12E-08	5,17E-09	7,33E-08	MND	MND	MND	MND	5,00E-09	-1,71E-12

USE OF NATURAL RESOURCES

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Total use of non-renewable PER	MJ	4,50E+01	8,30E+00	1,29E+00	1,71E+01	MND	MND	MND	MND	7,17E-01	-9,32E-02
Total use of renewable PER	MJ	1,16E+00	6,70E-02	1,46E-01	4,70E-01	MND	MND	MND	MND	5,94E-03	-5,80E-04
Use of net fresh water	m3	3,59E-02	8,50E-04	3,50E-03	3,82E-03	MND	MND	MND	MND	7,50E-04	3,39E-05
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Use of secondary materials	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

END OF LIFE – WASTE

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,70E-05	4,23E-05	2,01E-06	1,00E-04	MND	MND	MND	MND	3,82E-06	-3,87E-07
High Level Radioactive waste	kg	2,14E-05	1,13E-06	8,61E-07	1,24E-05	MND	MND	MND	MND	1,04E-07	-1,69E-08
Non-hazardous waste	kg	1,85E-03	1,90E-04	2,55E-05	5,70E-04	MND	MND	MND	MND	1,01E-05	-1,15E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	8,98E-02	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

III) GDA ACTITEX (DU = 1 m^2)

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	5,55E-03	1,78E-02	7,30E-04	4,31E-03	MND	MND	MND	MND	2,20E-04	4,21E-07
Climate change – total	kg CO2e	9,68E-01	6,52E-01	1,47E-01	1,34E+00	MND	MND	MND	MND	7,28E-02	1,67E-02
Climate change – fossil	kg CO2e	1,09E+00	6,52E-01	1,33E-01	1,33E+00	MND	MND	MND	MND	7,27E-02	1,42E-02
Climate change – biogenic	kg CO2e	-1,25E-01	-7,01E-05	1,43E-02	1,17E-03	MND	MND	MND	MND	1,60E-05	2,56E-03
Climate change – LULUC	kg CO2e	9,00E-04	4,90E-04	3,27E-05	6,70E-04	MND	MND	MND	MND	1,67E-05	-7,11E-07
Abiotic depletion of fossil resources	MJ	2,85E+01	8,15E+00	1,26E+00	1,90E+01	MND	MND	MND	MND	7,05E-01	-9,12E-02
Eutrophication, aquatic freshwater	kg PO4e	2,40E-04	2,39E-05	1,20E-04	9,29E-05	MND	MND	MND	MND	2,32E-06	-1,28E-07
Eutrophication, aquatic marine	kg Ne	1,25E-03	4,45E-03	1,70E-04	1,08E-03	MND	MND	MND	MND	7,00E-04	1,50E-06
Eutrophication, terrestrial	mol Ne	1,42E-02	4,92E-02	1,00E-03	1,13E-02	MND	MND	MND	MND	9,20E-04	9,78E-06
Abiotic depletion, minerals & metals	kg Sbe	3,26E-06	5,37E-07	7,64E-08	3,02E-06	MND	MND	MND	MND	2,09E-08	-1,77E-09
Ozone depletion	kg CFC11e	1,38E-08	1,02E-08	9,00E-10	2,87E-08	MND	MND	MND	MND	8,15E-10	-2,59E-10
Photochemical ozone formation	kg NMVOCe	4,79E-03	1,34E-02	3,10E-04	5,48E-03	MND	MND	MND	MND	3,30E-04	-4,34E-06
Water use	m3e depr.	3,90E-01	2,48E-02	2,35E-02	9,29E-02	MND	MND	MND	MND	2,18E-03	7,20E-04

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	6,36E+00	3,99E+00	4,36E-01	9,30E+00	MND	MND	MND	MND	4,56E-01	3,87E-02
Human toxicity, cancer effects	CTUh	4,95E-10	2,80E-10	8,88E-11	5,96E-10	MND	MND	MND	MND	1,23E-11	7,71E-13
Human toxicity, non-cancer effects	CTUh	7,87E-09	2,36E-09	1,38E-09	1,14E-08	MND	MND	MND	MND	2,36E-10	5,67E-11
Ionizing radiation, human health	kBq U235-Eq	5,08E-02	4,62E-03	3,42E-03	2,50E-02	MND	MND	MND	MND	4,40E-04	-6,52E-05
Particulate matter	disease incidence	6,92E-08	2,07E-08	5,07E-09	7,79E-08	MND	MND	MND	MND	4,78E-09	-1,67E-12

USE OF NATURAL RESOURCES

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Total use of non-renewable PER	MJ	2,85E+01	8,15E+00	1,26E+00	1,90E+01	MND	MND	MND	MND	7,06E-01	-9,12E-02
Total use of renewable PER	MJ	2,87E+00	6,45E-02	1,43E-01	2,91E-01	MND	MND	MND	MND	5,88E-03	-5,70E-04
Use of net fresh water	m3	1,78E-02	8,20E-04	3,43E-03	3,07E-03	MND	MND	MND	MND	7,40E-04	3,32E-05
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Use of secondary materials	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

END OF LIFE – WASTE

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,02E-05	4,14E-05	1,96E-06	1,20E-04	MND	MND	MND	MND	3,74E-06	-3,79E-07
High Level Radioactive waste	kg	1,25E-05	1,07E-06	8,42E-07	6,06E-06	MND	MND	MND	MND	1,03E-07	-1,66E-08
Non-hazardous waste	kg	1,98E-03	1,80E-04	2,50E-05	5,30E-04	MND	MND	MND	MND	9,87E-06	-1,13E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	8,79E-02	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

IV) GDA ACTITEX C (DU = 1kg)

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	6,96E-03	1,78E-02	7,50E-04	2,47E-03	MND	MND	MND	MND	2,30E-04	4,34E-07
Climate change – total	kg CO2e	1,35E+00	6,64E-01	1,52E-01	1,13E+00	MND	MND	MND	MND	1,00E-01	1,72E-02
Climate change – fossil	kg CO2e	1,48E+00	6,63E-01	1,37E-01	1,13E+00	MND	MND	MND	MND	1,00E-01	1,46E-02
Climate change – biogenic	kg CO2e	-1,27E-01	-6,12E-05	1,47E-02	1,03E-03	MND	MND	MND	MND	1,62E-05	2,64E-03
Climate change – LULUC	kg CO2e	1,09E-03	4,90E-04	3,37E-05	5,60E-04	MND	MND	MND	MND	1,68E-05	-7,32E-07
Abiotic depletion of fossil resources	MJ	4,18E+01	8,31E+00	1,30E+00	1,62E+01	MND	MND	MND	MND	7,17E-01	-9,39E-02
Eutrophication, aquatic freshwater	kg PO4e	3,00E-04	2,47E-05	1,20E-04	8,09E-05	MND	MND	MND	MND	2,35E-06	-1,32E-07
Eutrophication, aquatic marine	kg Ne	1,52E-03	4,46E-03	1,70E-04	6,20E-04	MND	MND	MND	MND	1,07E-03	1,55E-06
Eutrophication, terrestrial	mol Ne	1,70E-02	4,93E-02	1,03E-03	6,31E-03	MND	MND	MND	MND	9,60E-04	1,01E-05
Abiotic depletion, minerals & metals	kg Sbe	4,31E-06	5,64E-07	7,87E-08	2,66E-06	MND	MND	MND	MND	2,11E-08	-1,82E-09
Ozone depletion	kg CFC11e	1,76E-08	1,05E-08	9,27E-10	2,46E-08	MND	MND	MND	MND	8,29E-10	-2,67E-10
Photochemical ozone formation	kg NMVOCe	6,10E-03	1,34E-02	3,20E-04	3,83E-03	MND	MND	MND	MND	3,50E-04	-4,47E-06
Water use	m3e depr.	7,37E-01	2,55E-02	2,42E-02	8,07E-02	MND	MND	MND	MND	2,21E-03	7,40E-04

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	7,21E+00	4,07E+00	4,49E-01	7,94E+00	MND	MND	MND	MND	5,37E-01	3,99E-02
Human toxicity, cancer effects	CTUh	6,01E-10	2,84E-10	9,15E-11	5,08E-10	MND	MND	MND	MND	1,27E-11	7,94E-13
Human toxicity, non-cancer effects	CTUh	9,93E-09	2,45E-09	1,42E-09	9,92E-09	MND	MND	MND	MND	3,00E-10	5,84E-11
Ionizing radiation, human health	kBq U235-Eq	8,18E-02	4,88E-03	3,53E-03	2,21E-02	MND	MND	MND	MND	4,50E-04	-6,71E-05
Particulate matter	disease incidence	8,32E-08	2,13E-08	5,22E-09	6,67E-08	MND	MND	MND	MND	5,00E-09	-1,72E-12

USE OF NATURAL RESOURCES

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Total use of non-renewable PER	MJ	4,18E+01	8,32E+00	1,30E+00	1,62E+01	MND	MND	MND	MND	7,17E-01	-9,39E-02
Total use of renewable PER	MJ	3,23E+00	6,73E-02	1,47E-01	2,56E-01	MND	MND	MND	MND	5,94E-03	-5,90E-04
Use of net fresh water	m3	3,47E-02	8,50E-04	3,53E-03	2,67E-03	MND	MND	MND	MND	7,50E-04	3,42E-05
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Use of secondary materials	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

PER abbreviation stands for primary energy resources

END OF LIFE – WASTE

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,68E-05	4,24E-05	2,02E-06	1,00E-04	MND	MND	MND	MND	3,82E-06	-3,90E-07
High Level Radioactive waste	kg	2,04E-05	1,13E-06	8,68E-07	5,37E-06	MND	MND	MND	MND	1,04E-07	-1,70E-08
Non-hazardous waste	kg	2,09E-03	1,90E-04	2,57E-05	4,60E-04	MND	MND	MND	MND	1,01E-05	-1,16E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	9,05E-02	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

V) GDA ACTISTOP (DU = 1 linear m)

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	1,63E-03	2,40E-04	9,66E-05	4,30E-04	MND	MND	MND	MND	3,28E-05	5,57E-08
Climate change – total	kg CO2e	2,80E-01	7,58E-02	1,95E-02	1,98E-01	MND	MND	MND	MND	4,36E-03	2,22E-03
Climate change – fossil	kg CO2e	3,55E-01	7,57E-02	1,77E-02	1,98E-01	MND	MND	MND	MND	4,36E-03	1,88E-03
Climate change – biogenic	kg CO2e	-7,59E-02	6,53E-05	1,89E-03	1,80E-04	MND	MND	MND	MND	2,50E-06	3,40E-04
Climate change – LULUC	kg CO2e	7,50E-04	3,79E-05	4,34E-06	9,75E-05	MND	MND	MND	MND	2,63E-06	-9,43E-08
Abiotic depletion of fossil resources	MJ	1,07E+01	1,08E+00	1,67E-01	2,82E+00	MND	MND	MND	MND	1,09E-01	-1,21E-02
Eutrophication, aquatic freshwater	kg PO4e	1,10E-04	5,26E-06	1,55E-05	1,41E-05	MND	MND	MND	MND	3,63E-07	-1,70E-08
Eutrophication, aquatic marine	kg Ne	4,10E-04	6,09E-05	2,22E-05	1,10E-04	MND	MND	MND	MND	1,26E-05	1,99E-07
Eutrophication, terrestrial	mol Ne	3,87E-03	6,40E-04	1,30E-04	1,11E-03	MND	MND	MND	MND	1,40E-04	1,30E-06
Abiotic depletion, minerals & metals	kg Sbe	1,82E-06	1,72E-07	1,01E-08	4,64E-07	MND	MND	MND	MND	3,28E-09	-2,34E-10
Ozone depletion	kg CFC11e	8,49E-09	1,63E-09	1,19E-10	4,30E-09	MND	MND	MND	MND	1,26E-10	-3,44E-11
Photochemical ozone formation	kg NMVOCe	2,28E-03	3,10E-04	4,06E-05	6,70E-04	MND	MND	MND	MND	4,70E-05	-5,76E-07
Water use	m3e depr.	2,17E-01	5,26E-03	3,11E-03	1,40E-02	MND	MND	MND	MND	3,40E-04	9,55E-05

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	2,02E+00	5,28E-01	5,78E-02	1,39E+00	MND	MND	MND	MND	5,09E-02	5,14E-03
Human toxicity, cancer effects	CTUh	1,68E-10	3,36E-11	1,18E-11	8,81E-11	MND	MND	MND	MND	1,83E-12	1,02E-13
Human toxicity, non-cancer effects	CTUh	2,58E-09	6,44E-10	1,83E-10	1,72E-09	MND	MND	MND	MND	2,07E-11	7,52E-12
Ionizing radiation, human health	kBq U235-Eq	2,61E-02	1,44E-03	4,50E-04	3,89E-03	MND	MND	MND	MND	6,88E-05	-8,65E-06
Particulate matter	disease incidence	2,04E-08	4,37E-09	6,72E-10	1,16E-08	MND	MND	MND	MND	7,03E-10	-2,23E-13

USE OF NATURAL RESOURCES

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Total use of non-renewable PER	MJ	1,07E+01	1,08E+00	1,67E-01	2,82E+00	MND	MND	MND	MND	1,09E-01	-1,21E-02
Total use of renewable PER	MJ	1,89E+00	1,67E-02	1,89E-02	4,48E-02	MND	MND	MND	MND	9,20E-04	-7,55E-05
Use of net fresh water	m3	5,95E-03	1,70E-04	4,50E-04	4,60E-04	MND	MND	MND	MND	1,20E-04	4,40E-06
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Use of secondary materials	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

END OF LIFE – WASTE

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,85E-05	6,76E-06	2,60E-07	1,79E-05	MND	MND	MND	MND	5,76E-07	-5,03E-08
High Level Radioactive waste	kg	6,65E-06	3,50E-07	1,12E-07	9,45E-07	MND	MND	MND	MND	1,60E-08	-2,20E-09
Non-hazardous waste	kg	4,90E-04	3,01E-05	3,31E-06	8,02E-05	MND	MND	MND	MND	1,52E-06	-1,49E-07

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	1,17E-02	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

VI) GDA SOLIDMAT (DU = 1 m^2)

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	2,08E-02	1,96E-03	1,02E-03	3,19E-02	MND	0,00E+00	MND	MND	MND	5,91E-07
Climate change – total	kg CO2e	5,34E+00	8,96E-01	2,07E-01	1,13E+00	MND	0,00E+00	MND	MND	MND	2,35E-02
Climate change – fossil	kg CO2e	5,31E+00	8,95E-01	1,87E-01	1,13E+00	MND	0,00E+00	MND	MND	MND	1,99E-02
Climate change – biogenic	kg CO2e	2,57E-02	8,20E-04	2,00E-02	-1,70E-04	MND	0,00E+00	MND	MND	MND	3,60E-03
Climate change – LULUC	kg CO2e	3,58E-03	4,40E-04	4,59E-05	8,60E-04	MND	0,00E+00	MND	MND	MND	-9,97E-07
Abiotic depletion of fossil resources	MJ	7,38E+01	1,28E+01	1,77E+00	1,40E+01	MND	0,00E+00	MND	MND	MND	-1,28E-01
Eutrophication, aquatic freshwater	kg PO4e	1,07E-03	6,36E-05	1,60E-04	4,03E-05	MND	0,00E+00	MND	MND	MND	-1,79E-07
Eutrophication, aquatic marine	kg Ne	4,54E-03	4,90E-04	2,30E-04	7,96E-03	MND	0,00E+00	MND	MND	MND	2,11E-06
Eutrophication, terrestrial	mol Ne	5,50E-02	5,01E-03	1,40E-03	8,80E-02	MND	0,00E+00	MND	MND	MND	1,37E-05
Abiotic depletion, minerals & metals	kg Sbe	2,10E-05	2,08E-06	1,07E-07	8,94E-07	MND	0,00E+00	MND	MND	MND	-2,48E-09
Ozone depletion	kg CFC11e	8,04E-06	1,95E-08	1,26E-09	1,74E-08	MND	0,00E+00	MND	MND	MND	-3,64E-10
Photochemical ozone formation	kg NMVOCe	1,91E-02	3,04E-03	4,30E-04	2,39E-02	MND	0,00E+00	MND	MND	MND	-6,09E-06
Water use	m3e depr.	1,60E+00	6,35E-02	3,29E-02	4,17E-02	MND	0,00E+00	MND	MND	MND	1,01E-03

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	1,77E+01	6,27E+00	6,11E-01	6,88E+00	MND	0,00E+00	MND	MND	MND	5,43E-02
Human toxicity, cancer effects	CTUh	2,11E-09	4,00E-10	1,25E-10	4,84E-10	MND	0,00E+00	MND	MND	MND	1,08E-12
Human toxicity, non-cancer effects	CTUh	4,11E-08	7,85E-09	1,94E-09	3,86E-09	MND	0,00E+00	MND	MND	MND	7,96E-11
Ionizing radiation, human health	kBq U235-Eq	2,60E-01	1,72E-02	4,80E-03	7,76E-03	MND	0,00E+00	MND	MND	MND	-9,15E-05
Particulate matter	disease incidence	2,18E-07	5,33E-08	7,11E-09	3,40E-08	MND	0,00E+00	MND	MND	MND	-2,34E-12

USE OF NATURAL RESOURCES

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Total use of non-renewable PER	MJ	7,38E+01	1,28E+01	1,77E+00	1,40E+01	MND	0,00E+00	MND	MND	MND	-1,28E-01
Total use of renewable PER	MJ	4,14E+00	2,00E-01	2,00E-01	1,09E-01	MND	0,00E+00	MND	MND	MND	-8,00E-04
Use of net fresh water	m3	6,61E-02	2,10E-03	4,81E-03	1,39E-03	MND	0,00E+00	MND	MND	MND	4,66E-05
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	0,00E+00
Use of secondary materials	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	0,00E+00

END OF LIFE – WASTE

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,82E-03	8,10E-05	2,75E-06	7,03E-05	MND	MND	MND	MND	6,52E-06	-5,32E-07
High Level Radioactive waste	kg	6,49E-05	4,18E-06	1,18E-06	1,79E-06	MND	MND	MND	MND	1,79E-07	-2,32E-08
Non-hazardous waste	kg	2,73E-02	3,60E-04	3,50E-05	3,20E-04	MND	MND	MND	MND	1,72E-05	-1,58E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	Life cycle stages									
		A1	A2	A3	A4	A5 B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	1,23E-01	0,00E+00	MND	MND	MND	MND	0,00E+00	0,00E+00

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EPD VERIFICATION

The verification procedure for this Environmental Product Declaration (EPD) has been carried out in accordance with the requirements of ISO 14025 standards. Once the verification process is complete, the EPD remains valid for a period of 5 years. There is no need to recalculate the parameters contained in the EPD after this period, provided that the data underlying the declaration have not changed substantially.

EPD CONTRIBUTORS

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EPD verifier	Izabela Sztamberek Sochan, Ph.D.

Note: The sole ownership, liability, and liability of this declaration are with the EPD Owner. Construction product declarations may not be comparable if they do not comply with EN 15804. For detailed information on comparability, please refer to EN 15804 and ISO 14025.

EPD CERTIFICATION

Reg. No. EPD-P 05.08.2025

CERTIFICATE

EPD TYPE III DECLARATION

(ENVIRONMENTAL PRODUCT DECLARATION)

This document confirms that the Enviromental Product Declaration developed by

GDA Sp. z o.o. for:

- GDA ActiMat & GDA ActiTex
- GDA ActiMat C & GDA ActiTex C
- GDA SolidMat
- GDA ActiStop sealing profile

manufactured in accordance with standards

EN 13361, EN 13362, EN 13492, EN 13491, EN 15382

and that the data contained therein has been prepared correctly.

Verification carried out by:

Izabela Sztamberek Sochan, Ph. D.

Program Manager

Grzegorz Suwara

This document is valid until August 12,2030, or until EPD is deregistered and its publication on the website www.epd.org.pl is discontinued.

EPD Polska Registration Office,
Warsaw, August 12, 2025

www.epd.com.pl