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ULTIMATEX DJ and ULTIMATEX DJL Woven Polyester Geotextiles

Type III Environmental Product Declaration No. EPD-P 02.03.2026



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Basic information

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

Life cycle analysis (LCA): A1-A3,A4,A5, C1-C4 and D modules in accordance with EN 15804 (Cradle-to-Gate with options) The year of preparing the EPD: 2026

Product standards: EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13252:2021, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13257:2016, EN 13265:2016

Service Life: 100 years.

PCR: EN 15804:2012+A2:2019/AC:2021 serves as core PCR for this EPD

Declared unit: 1 kg.

Reasons for performing LCA: B2B

Representativeness: Poland, Europe

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Manufacturer	3
Scope of this EPD	4
Products description	4
ULTIMATEX DJL and ULTIMATEX DJ	4
Product material declaration	5
Substances, REACH – Very high concern	5
Product life cycle	5
Raw material acquisition transportation (A1, A2)	5
Manufacturing (A3)	6
Transport to the building site (A4)	7
Construction installation and packaging end-of-life (A5)	8
End of life (C1, C2, C3, C4, D)	9
Life cycle assessment information	10
Declared Unit	10
Allocation	10
System boundary	10
Data collection period	10
Data quality	11
Assumptions and estimates	12
Calculation rules	13
Geographic representativeness	13
Additional information	13
Life cycle assessment (LCA) – Results	14
ULTIMATEX DJ and ULTIMATEX DJL Woven Polyester Multifilament Geotextile	15
Verification	19
EPD Contributors	19
Normative references	20
EPD Certification	22

Manufacturer

ViaCon Polska Sp. z o.o., a subsidiary of the ViaCon Group—a leading European provider of innovative infrastructure solutions—specializes in designing, producing, and installing steel structures and flexible infrastructure solutions across Central and Eastern Europe. The company offers innovative, durable, cost-efficient, and environmentally sustainable solutions, including: bridge and culvert solutions, soil stabilization systems, geotechnical solutions, stormwater management systems, drainage systems and custom engineering solutions.



Distinguished by advanced manufacturing capabilities and an experienced in-house engineering team, ViaCon Polska delivers customized solutions tailored to client needs. Its certifications, including EN 1090 Factory Production Control, ISO 9001 Quality Management,

ISO 14001 Environmental Management and ISO 45001 Occupational Health and Safety Management Systems, ensure high standards and sustainability in its operations.

Serving both public and private sectors, ViaCon Polska has completed numerous projects, from large-scale bridges to complex drainage systems. With the resources and expertise of the ViaCon Group, it is a trusted partner in creating modern, sustainable infrastructure.

Scope of this EPD

This Environmental Product Declaration (EPD) covers two woven polyester multifilament geotextile products marketed by ViaCon under the ULTIMATEX brand:

- ULTIMATEX DJL
- ULTIMATEX DJ

The environmental profile declared in this EPD is based on primary data collected from a specific manufacturing facility located in South Korea, operating under ViaCon's quality standards and technical specifications. The LCA dataset reflects the actual production processes, material sources, and energy consumption of this facility, as documented in the underlying LCA study.

This declaration is valid exclusively for products manufactured using the production system (including material sources and process parameters) as documented in the LCA study.

This EPD follows a cradle-to-gate system boundary (Modules A1–A3), transport to the distribution warehouse (Module A4), construction installation (Module A5), end-of-life Modules C1–C4 and Module D, in accordance with EN 15804+A2.

ViaCon Polska Sp. z o.o. is the owner of this EPD and is responsible for its correct application in the market.

Product description

ULTIMATEX DJL and ULTIMATEX DJ

ULTIMATEX DJL and ULTIMATEX DJ are high-strength woven geotextiles (woven geosynthetics) produced under ViaCon's quality standards and technical specifications at a manufacturing facility located in South Korea. The products are manufactured from multifilament polyester yarn using an industrial weaving process that ensures high mechanical performance and dimensional stability. Both variants share identical production technology and differ in fabric weight/specification only.

ULTIMATEX DJ/DJL geotextiles are characterised by high tensile strength of up to 1,200 kN/m and elongation of ~10–12%. The products are water-permeable, allowing free drainage while retaining soil particles, thereby enabling both filtration and separation functions. In the case of woven geotextiles, mechanical parameters are considered primary, and hydraulic properties are of secondary importance.

The products are intended for use in the following application areas:

- Transportation infrastructure construction (motorways, roads, access roads, car parks, airports, railway tracks, cycle paths, pavements, and driveways);
- Hydraulic engineering (flood embankments, water reservoirs, coastal and riverbank reinforcement, ports);
- Land drainage and agricultural engineering (land reclamation);
- and others.

The products primarily fulfil the following technical functions in construction:

- Separation – acting as a separating layer between soil strata of different gradation, preventing intermixing of soil layers and preserving the structural integrity of the construction;
- Reinforcement – due to low elongation at break, providing additional bearing capacity and increasing both the load-bearing capacity and the long-term durability of the structure.

Product material declaration

Material	Share by mass	Role
Polyester multifilament yarn	~91%	Product
Steel core tube	~9%	Functional packaging

The products are primarily composed of multifilament polyester yarn woven on industrial looms at the South Korean production facility. The finished fabric is wound directly onto a steel core tube during the weaving process, forming the final roll product ready for sale. The steel core tube is included within the system boundary of this EPD and is classified as functional packaging in accordance with EN 15804+A2. Its average mass is approximately 0.098 kg per 1 kg of finished geotextile. Its production is included in modules A1–A3, transport to the ViaCon Polska distribution warehouse in Rydzyna, Poland in module A4, and end-of-life treatment in module A5. Net recycling benefits from steel scrap recovery are reported in module D. The polyester multifilament yarn used is produced from virgin (fossil-based) raw materials. No recycled content is used. Recycled content: 0%.

Substances, REACH – Very high concern

The products do not contain any REACH SVHC (Substances of Very High Concern) in amounts greater than 0.1% (1,000 ppm).

Product life cycle

Raw material supply and transport (A1, A2)

Modules A1 and A2 cover the extraction, processing, and delivery of raw materials to the production facility in South Korea. The primary raw material is polyester multifilament yarn, sourced from a supplier in China. Transport to the production facility is multimodal: ocean freight by container ship followed by road freight by lorry. Steel core tubes are sourced from a local supplier and delivered by road. Auxiliary packaging materials — polypropylene film, adhesive tape, and printed labels — are delivered by light van from local suppliers. No plastic stretch film or wooden pallets are used for packaging of the finished product for export.

Manufacturing (A3)

The manufacturing process begins with the receipt of polyester multifilament yarn from the external supplier, where incoming material undergoes quality control inspection to ensure it meets the required specifications. The yarn packages are then manually loaded onto creel frames in the creeling stage, preparing them for continuous feeding into the subsequent process steps.

In the warping stage, a large number of individual yarns are arranged in parallel and wound onto warp beams, which are subsequently mounted onto the industrial weaving looms. The weaving stage follows, where warp and weft yarns are interlaced on the looms to produce the woven geotextile fabric. As the fabric is formed, it is wound directly onto a steel core tube, so no separate winding operation is required.

The finished rolls proceed to quality inspection, where each batch is verified against the required mechanical and dimensional specifications. In the final stage, the rolls are packaged manually using PP (polypropylene) film; no powered packaging machinery is used. The PP film has an average mass of approximately 0.003 kg per 1 kg of finished geotextiles and is classified as packaging material. Given its very low mass (~0.3% by mass), its contribution to all impact categories is below the EN 15804+A2 cut-off threshold and it is excluded from the A5 inventory while its production is included in modules A1–A3.

No heat setting, thermal stabilisation, surface coating, or chemical impregnation is applied at any stage of the process. The facility produces exclusively Ultimatex woven geotextiles, with the DJ and DJL variants sharing all production lines.

Energy for the production process is supplied entirely from the South Korean national electricity grid, covering the weaving lines as well as general facility utilities including lighting, ventilation, and space heating. Internal material handling is carried out using diesel-powered forklifts.

Production waste arising from the weaving process is managed according to its type: yarn waste from creeling and warping operations is collected and sent for recycling, while fabric waste from start-up runs, off-specification material, and trimming is disposed of to landfill. Supplier packaging materials — including cardboard, spool cores, and wooden pallets — are collected by a designated recycling company, while stretch film and own packaging waste are sent to landfill.

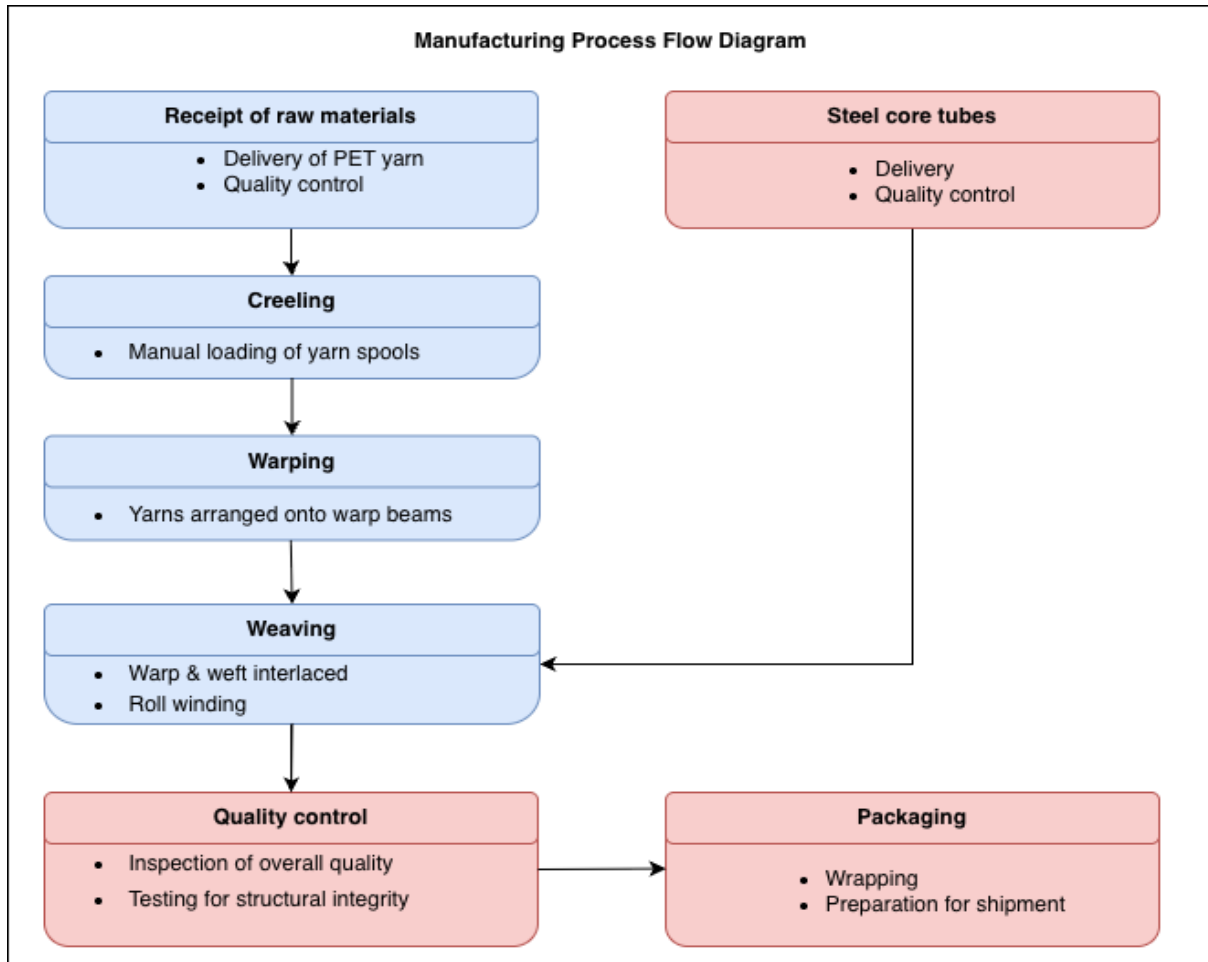


Figure 2 – Diagram of the manufacturing process

Transport to distribution warehouse (A4)

Module A4 covers the transport of finished ULTIMATEX geotextile rolls from the production facility in South Korea to the ViaCon Polska distribution warehouse in Rydzyna, Poland. Transport beyond the warehouse gate is not included in the declared scope of module A4.

Transport is multimodal. The products are shipped by ocean freight (container ship) from South Korea to a Polish seaport (~20,000 km), followed by road freight by lorry to the ViaCon Polska warehouse in Rydzyna (~400 km).

Construction and packaging end-of-life (A5)

Module A5 covers the installation of the geotextiles at the construction site and the end-of-life management of the steel core tube as functional packaging.

Installation is modelled as mechanical handling of the geotextile roll using an excavator (10 minutes per 400 kg roll), with manual unrolling. End-of-life of the steel core tube is modelled as transport to a scrap collection point (20 km by lorry, 3.5–7.5t), followed by scrap metal collection and sorting (90% recycling, 10% residual to landfill). Net recycling benefits from steel scrap recovery are reported in Module D.

PP film outer packaging (~0.003 kg per 1 kg of geotextile, ~0.3% by mass) is excluded from the A5 inventory under the EN 15804+A2 cut-off criterion; its contribution to all impact categories is below 1% and this exclusion is documented in the LCA study.

End of life (C1, C2, C3, C4, D)

The end-of-life scenario for the woven polyester geotextiles reflects the realistic pathway for geosynthetics embedded in civil engineering works. After a service life of 100 years, the product is removed together with mixed construction and demolition waste and is not subject to material-specific separate collection or recycling in practice. Accordingly, 100% landfill is assumed for the geotextile product itself.

The steel core tube remains at the construction site after the geotextile is unrolled and installed. As functional packaging, its end-of-life is accounted for in Module A5, not in the end-of-life modules. Its collection, transport to a scrap collection point (20 km by lorry), and recycling (90% recycling rate, 10% residual to landfill) are modelled in Module A5. Net recycling benefits from steel scrap recovery are reported in Module D.

Table 2. End-of-life scenario for ULTIMATEX woven Polyester geotextiles marketed by ViaCon Polska Sp. z o.o.

Material	Material recovery	Recycling	Landfilling
Polyester geotextile	0%	0%	100%

*End-of-life treatment of the steel core tube (functional packaging) is modelled in Module A5 (90% recycling, 10% landfill). Net recycling benefits from steel scrap recovery are reported in Module D.

Life cycle assessment information

Declared Unit

The declared unit is 1 kg of finished woven polyester geotextiles (ULTIMATEX DJL or ULTIMATEX DJ), ready for sale and supplied by ViaCon Polska Sp. z o.o. The product is delivered wound on a steel core tube (approximately 0.098 kg per 1 kg of finished geotextile), which is classified as functional packaging in accordance with EN 15804+A2. The steel core tube remains within the system boundary; its production and transport are included in modules A1–A3 and A4, and its end-of-life treatment is included in module A5. Net recycling benefits from steel scrap recovery are reported in module D.

Allocation

The allocation is made in accordance with the provisions of EN 15804+A2. The manufacturing facility produces exclusively ULTIMATEX woven geotextiles; the DJ and DJL variants share all production lines and differ only in fabric weight. No allocation between product types is therefore required. Energy, water, and waste flows from the manufacturing stage are fully attributed to the declared product group. Production waste streams are modelled individually: polyester yarn waste from creeling and warping operations is sent for recycling, while fabric waste from start-up runs and trimming is disposed of to landfill. No recycled input materials are used in production; therefore, the allocation provision of EN 15804+A2 for recycled content is not applicable.

The steel core tube is classified as functional packaging and is included within the system boundary. Its end-of-life treatment is modelled in module A5. Net recycling benefits from steel scrap recovery are reported in module D.

System boundary

The life cycle analysis (LCA) of the declared products covers product stage – modules A1–A3, transport to the ViaCon Polska distribution warehouse in Rydzyna, Poland – module A4, end of life – modules C1–C4 and benefits and loads beyond the system boundary – module D (cradle-to-gate with options) in accordance with EN 15804+A2. Energy and water consumption, emissions as well as information on generated wastes were inventoried and were included in the calculations. It can be assumed that the total sum of omitted processes does not exceed 5% of all impact categories. In accordance with EN 15804+A2, machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA. Module A5 covers the installation of the geotextiles at the construction site and the end-of-life management of the steel core tube as functional packaging in accordance with EN 15804+A2.

Data collection period

Primary data provided by the production site and ViaCon Polska Sp. z o.o. covers a period from 01.01.2025 to 31.12.2025 (1 year). The life cycle assessments were prepared for Poland and Europe as reference area.

Data quality

For foreground data, the LCA study relies on high-quality primary data gathered by the manufacturing facility and by ViaCon for the year 2025, including all materials used and average transport distances for material supplies. 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. No specific data collected is older than five years and no generic datasets used are older than ten years. The representativeness, completeness, reliability, and consistency are judged as good.

Assumptions and estimates

Primary data for the manufacturing stage were collected from the production facility for the full calendar year 2025. For life cycle stages and processes where primary data were unavailable, reasonable assumptions and secondary data were applied in accordance with EN 15804+A2 and industry best practices. Transport distances for material supplies and waste management were based on supplier-declared distances and facility records. Background processes were modelled using generic datasets from the ecoinvent 3.9.1 database.

In the end-of-life stage (modules C1–C4), the woven polyester geotextiles are assumed to be removed together with bulk construction and demolition waste, without separate collection or treatment. Accordingly, module C1 is declared as zero, as no dedicated deinstallation process is required and the associated energy use is negligible. Transport to the nearest waste disposal facility is assumed at 50 km (module C2). The geotextiles are disposed of to landfill (100% landfill, module C4); no recycling or energy recovery is assumed for the product itself, and module C3 is declared as zero.

The steel core tube is separated from the geotextile at the point of installation and is classified as packaging waste. Transport to a scrap collection point is assumed at 20 km by lorry (3.5–7.5t). A recycling rate of 90% is assumed, with 10% residual to landfill, based on European steel recovery statistics. These flows are modelled in module A5. Net recycling benefits from steel scrap recovery are reported in module D. The transport distance of 20 km is a generic scenario assumption representative of typical European construction site conditions.

The total contribution of omitted processes is estimated not to exceed 5% of the overall impacts for any category. No significant data gaps were identified, and all estimates are considered conservative and representative for the declared products and reference area. The difference between the total input mass modelled in the system and the declared unit (1 kg of geotextile as supplied) is due to process losses during manufacturing and the inclusion of additional materials within the system boundary, such as functional packaging (steel core tube), which are not part of the declared unit mass.

Calculation rules

LCA was performed using OpenLCA software in accordance with EN 15804+A2:2019/AC:2021. Characterisation factors: EF 3.1 (as required by EN 15804+A2/AC:2021). Background data: ecoinvent 3.9.1, system model: Allocation, cut-off by classification.

Geographic representativeness

The product is manufactured in South Korea. The declared market is Poland and Europe.

Additional information

Electricity: the market for electricity, medium voltage process from ecoinvent version 3.9.1 (geography: KR – South Korea) was used with Total GWP of 0.700 kg CO₂e/kWh.

Life cycle assessment (LCA) – Results

Table 3 System boundary for the environmental characteristic of the product.

Environmental assessment information (MD – Module Declared, MND – Module Not Declared, MNR – Module Not Relevant)																
Product stage			Construction process		Use stage							End of life				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport to distribution warehouse *	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
MD	MD	MD	MD	MD	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MD	MD	MD	MD	MD

* Module A4 covers transport to the ViaCon Polska distribution warehouse in Rydzyna, Poland, not to the final construction site.

ULTIMATEX DJ and ULTIMATEX DJL Woven Polyester Multifilament Geotextiles

Disclaimers (EN 15804+A2:2019/AC:2021): (1) GWP – The sub-indicators GWP-fossil, GWP-biogenic, and GWP-luluc shall not be summed to a single GWP total for comparative purposes without additional context. (2) ADP – The results for abiotic resource depletion for non-fossil resources are based on characterisation factors with limited data quality; results should be interpreted with caution. (3) WDP – Water deprivation is a geographically dependent indicator; the value reported reflects the reference region and may not be representative of local conditions. (4) PM – The potential incidence of disease due to particulate matter emissions is expressed as a characterisation factor-based indicator and does not represent actual disease incidence. (5) IRP – The results for ionising radiation potential may not reflect actual radiological exposure or risk to the public.

Table 4. Life cycle assessment (LCA) results of the **ULTIMATEX** Woven Polyester Multifilament Geotextiles marketed by ViaCon Polska Sp. z o.o. – environmental impacts (DU: 1 kg)

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global Warming Potential (Total)	kg CO2 eq.	4,41E+00	1,59E-02	9,77E-02	4,53E+00	3,05E-01	7,06E-02	0,00E+00	0,00E+00	1,17E-02	0,00E+00	2,86E-03	-1,84E-01
Global Warming Potential (Fossil Fuels)	kg CO2 eq.	4,39E+00	1,59E-02	9,55E-02	4,50E+00	3,05E-01	7,06E-02	0,00E+00	0,00E+00	1,17E-02	0,00E+00	2,86E-03	-1,83E-01
Global Warming Potential (Biogenic)	kg CO2 eq.	1,95E-02	5,70E-07	2,13E-03	2,16E-02	-1,50E-05	-2,35E-05	0,00E+00	0,00E+00	9,03E-06	0,00E+00	6,42E-07	-3,60E-04
Global Warming Potential (Land Use and Land Use Change)	kg CO2 eq.	4,09E-03	8,88E-06	5,24E-05	4,15E-03	2,10E-04	1,15E-05	0,00E+00	0,00E+00	5,37E-06	0,00E+00	3,40E-07	-8,17E-05
Global Warming Potential except emissions and uptake of biogenic carbon (GWP-IOBC/GHG)	kg CO2 eq.	4,40E+00	1,59E-02	9,65E-02	4,52E+00	3,05E-01	7,07E-02	0,00E+00	0,00E+00	1,17E-02	0,00E+00	2,86E-03	-1,83E-01
Ozone Depletion Potential	kg CFC-11 eq.	1,59E-05	2,49E-10	1,19E-09	1,59E-05	4,77E-09	1,12E-09	0,00E+00	0,00E+00	2,55E-10	0,00E+00	4,31E-11	-3,51E-09
Acidification Potential	mol H+ eq.	1,87E-02	2,90E-04	3,10E-04	1,93E-02	6,87E-03	2,70E-04	0,00E+00	0,00E+00	2,41E-05	0,00E+00	2,58E-05	-7,80E-04
Abiotic Depletion for Fossil Resources Potential (ADPF)	MJ	9,03E+01	2,09E-01	1,57E+00	9,20E+01	4,00E+00	9,25E-01	0,00E+00	0,00E+00	1,66E-01	0,00E+00	3,69E-02	-1,91E+00
Abiotic Depletion Potential for Non-Fossil Resources (ADPE)	kg Sb eq.	1,58E-05	1,40E-08	4,41E-08	1,58E-05	3,10E-07	6,52E-08	0,00E+00	0,00E+00	2,75E-08	0,00E+00	5,57E-10	-7,04E-07
Eutrophication Potential (Freshwater)	kg P eq.	1,18E-03	7,14E-07	6,61E-05	1,25E-03	1,43E-05	3,48E-06	0,00E+00	0,00E+00	8,08E-07	0,00E+00	1,45E-07	-8,90E-05
Eutrophication Potential (Marine)	kg N eq.	3,79E-03	8,09E-05	1,00E-04	3,97E-03	1,72E-03	1,00E-04	0,00E+00	0,00E+00	6,00E-06	0,00E+00	1,16E-05	-1,70E-04
Eutrophication Potential (Accumulated Exceedance)	mol N eq.	3,67E-02	8,90E-04	1,01E-03	3,86E-02	1,90E-02	1,13E-03	0,00E+00	0,00E+00	6,07E-05	0,00E+00	1,30E-04	-1,84E-03
Formation Potential of Tropospheric Ozone (POCP)	kg NMVOC eq.	2,06E-02	2,50E-04	2,80E-04	2,12E-02	5,28E-03	3,90E-04	0,00E+00	0,00E+00	3,77E-05	0,00E+00	3,79E-05	-8,70E-04
Water Deprivation Potential (WDP)	m³ World eq.	2,09E+00	7,00E-04	2,00E-02	2,11E+00	1,40E-02	2,78E-03	0,00E+00	0,00E+00	8,00E-04	0,00E+00	9,51E-05	-5,09E-02

Table 5. Life cycle assessment (LCA) results of the **ULTIMATEX** Woven Polyester Multifilament Geotextiles marketed by ViaCon Polska Sp. z o.o. – additional impact indicators (DU: 1 kg)

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Potential Incidence of Disease due to PM Emissions	Disease incidence	2,02E-07	1,45E-09	1,20E-09	2,05E-07	1,27E-08	3,71E-09	0,00E+00	0,00E+00	5,87E-10	0,00E+00	7,00E-10	-1,37E-08
Potential Human Exposure Efficiency Relative to U235 (IRP)	kBq U235 eq.	2,50E-01	1,20E-04	2,87E-02	2,79E-01	2,45E-03	6,90E-04	0,00E+00	0,00E+00	2,70E-04	0,00E+00	1,86E-05	-6,67E-03
Potential Comparative Toxic Unit for Ecosystems (ETP-fw)	CTUe	1,83E+01	1,04E-01	2,20E-01	1,86E+01	2,00E+00	4,48E-01	0,00E+00	0,00E+00	8,32E-02	0,00E+00	1,73E-02	-6,58E-01
Potential Comparative Toxic Unit for Humans - Non-Cancer (HTP-nc)	CTUh	3,74E-08	6,93E-11	6,78E-10	3,81E-08	1,47E-09	2,97E-10	0,00E+00	0,00E+00	9,53E-11	0,00E+00	6,43E-12	-1,67E-09
Potential Comparative Toxic Unit for Humans - Cancer (HTP-c)	CTUh	1,56E-09	6,37E-12	3,16E-11	1,60E-09	1,31E-10	4,68E-11	0,00E+00	0,00E+00	4,76E-12	0,00E+00	8,95E-13	-1,16E-09
Potential Soil Quality Index (SQP)	dimensionless	8,69E+00	6,79E-02	2,27E-01	8,98E+00	1,46E+00	1,21E-01	0,00E+00	0,00E+00	8,46E-02	0,00E+00	4,37E-02	-6,11E-01

Table 6. Life cycle assessment (LCA) results of the **ULTIMATEX** Woven Polyester Multifilament Geotextiles marketed by ViaCon Polska Sp. z o.o. – the resource use (DU: 1 kg)

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Total use of non-renewable primary energy resources (PENRT)	MJ	9,03E+01	2,09E-01	1,57E+00	9,20E+01	4,00E+00	9,25E-01	0,00E+00	0,00E+00	1,66E-01	0,00E+00	3,69E-02	-1,91E+00
Total use of renewable primary energy resources (PERT)	MJ	3,62E+00	1,73E-03	3,60E-02	3,66E+00	3,50E-02	1,01E-02	0,00E+00	0,00E+00	2,88E-03	0,00E+00	3,00E-04	-1,95E-01
Use of non-renewable primary energy as energy carrier (PENRE)	MJ	9,03E+01	2,09E-01	1,57E+00	9,20E+01	4,00E+00	9,25E-01	0,00E+00	0,00E+00	1,66E-01	0,00E+00	3,69E-02	-1,91E+00
Use of non-renewable primary energy as raw materials (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non-renewable secondary fuels (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable primary energy as energy carrier (PERE)	MJ	3,62E+00	1,73E-03	3,60E-02	3,66E+00	3,50E-02	1,01E-02	0,00E+00	0,00E+00	2,88E-03	0,00E+00	3,00E-04	-1,95E-01
Use of renewable primary energy as raw materials (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of secondary materials (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water (FW)	m ³	8,70E-02	2,49E-05	1,23E-03	8,82E-02	4,90E-04	9,97E-05	0,00E+00	0,00E+00	2,71E-05	0,00E+00	3,36E-06	-1,37E-03

Table 7. Life cycle assessment (LCA) results of the **ULTIMATEX** Woven Polyester Multifilament Geotextiles marketed by ViaCon Polska Sp. z o.o. – waste categories (DU: 1 kg)

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous Waste Disposed (HWD)	kg	5,42E-03	1,19E-06	2,25E-06	5,42E-03	2,14E-05	6,14E-06	0,00E+00	0,00E+00	1,05E-06	0,00E+00	2,38E-07	-1,63E-05
Non-Hazardous Waste Disposed (NHWD)	kg	5,30E-02	4,42E-06	1,66E-02	6,96E-02	8,70E-05	9,82E-03	0,00E+00	0,00E+00	4,77E-06	0,00E+00	1,00E+00	-4,77E-05
Radioactive Waste Disposed (RWD)	kg	6,17E-05	2,91E-08	7,35E-06	6,91E-05	5,70E-07	1,66E-07	0,00E+00	0,00E+00	6,53E-08	0,00E+00	4,32E-09	-1,68E-06

Table 8. Life cycle assessment (LCA) results of the **ULTIMATEX** Woven Polyester Multifilament Geotextiles marketed by ViaCon Polska Sp. z o.o. – End-of-Life flows categories (DU: 1 kg)

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for Re-Use (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for Recycling (MFR)	kg	0,00E+00	0,00E+00	2,21E-02	2,21E-02	0,00E+00	8,82E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for Energy Recovery (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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported Energy (EEE + 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	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Verification

The external verification of this Environmental Product Declaration (EPD) has been carried out in accordance with ISO 14025.

This EPD is valid for 5 years from the date of issue, provided that no significant changes occur in the product, production process, or background data.

After the validity period, the EPD shall be reviewed and, if necessary, updated and re-verified in accordance with EN 15804 and ISO 14025.

EPD Contributors

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ViaCon Group representative:	Craig Lee (Internal reviewer)
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Note: The sole ownership, and liability of this declaration are with the 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.	

Normative references

- EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products
- ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures
- ISO 21930:2017 Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services
- ISO 14044:2006 Environmental management — Life cycle assessment — Requirements and guidelines
- ISO 15686-1:2011 Buildings and constructed assets — Service life planning — Part 1: General principles and framework
- ISO 15686-8:2008 Buildings and constructed assets — Service life planning — Part 8: Reference service life and service-life estimation
- EN 15942:2012 Sustainability of construction works — Environmental product declarations — Communication format business-to-business
- EN 13249:2016 Geotextiles and geotextile-related products — Characteristics required for use in the construction of roads and other trafficked areas
- EN 13250:2016 Geotextiles and geotextile-related products — Characteristics required for use in railway construction
- EN 13251:2016 Geotextiles and geotextile-related products — Characteristics required for use in earthworks, foundations and retaining structures
- EN 13252:2021 Geotextiles and geotextile-related products — Characteristics required for use in drainage systems
- EN 13253:2016 Geotextiles and geotextile-related products — Characteristics required for use in erosion control works
- EN 13254:2016 Geotextiles and geotextile-related products — Characteristics required for use in the construction of reservoirs and dams
- EN 13255:2016 Geotextiles and geotextile-related products — Characteristics required for use in the construction of canals
- EN 13257:2016 Geotextiles and geotextile-related products — Characteristics required for use in solid waste disposal
- EN 13265:2016 Geotextiles and geotextile-related products — Characteristics required for use in liquid waste containment projects
- EN ISO 10319:2015 Geosynthetics — Wide-width tensile test
- EN ISO 12236:2006 Geosynthetics — Static puncture test (CBR test)
- EN ISO 13433:2006 Geosynthetics — Dynamic perforation test (cone drop test)

- EN ISO 11058:2010 Geotextiles and geotextile-related products — Determination of water permeability characteristics normal to the plane
- EN ISO 12956:2010 Geotextiles and geotextile-related products — Determination of the characteristic opening size
- ISO 20915:2018 Life cycle inventory calculation methodology for steel products
- World Steel Association (2022). Life Cycle Inventory Study Report — 2021 Data Release, Brussels, Belgium
- ecoinvent Association (2023/2024). ecoinvent database v3.9.1, system model: allocation, cut-off by classification, Zurich, Switzerland
- Multicert Sp. z o.o. (2024). General Programme Instructions of the EPD Polska Programme, Warsaw, Poland

EPD Certification



VIACON

CERTIFICATE

TYPE III EPD DECLARATION

(ENVIRONMENTAL PRODUCT DECLARATION)

Reg. No. EPD-P 02.03.2026



This document confirms that the Environmental Product Declaration developed by **ViaCon Polska Sp. z o.o.** for

ULTIMATEX DJ and ULTIMATEX DJL Woven Polyester Geotextile

manufactured in accordance with standards:

EN 13249, EN 13250, EN 13251, EN 13252, EN 13253, EN 13254, EN 13255, EN 13257, EN 13265

meets the requirements of standards **EN 15804:2012+A2:2019/AC:2021** and **ISO 14025**, and that the data contained therein has been prepared correctly.

The Declaration was published on March 31, 2026 and is valid until March 31, 2031, or until it is deregistered or its publication on the website www.epd.org.pl is discontinued.

Authenticity of this certificate can be confirmed in the public register at www.epd.org.pl



Izabela Sztamberek-Sochan, Ph.D.
EPD Polska Verifier



Grzegorz Suwara
CEO Multicert Sp. z o.o.

Warsaw, March 31, 2026