Environmental Product Declaration

In accordance with ISO 14025 for:

TRONT Fourà model

from Vibram



Programme:	The International EPD [®] System, <u>www.environdec.com</u>
Programme operator:	EPD International AB
EPD registration number:	S-P-02759
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Programme information

	The International EPD [®] System
Programme:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
	www.environdec.com info@environdec.com

Product category rules (PCR): Rubber articles for footwear, registration number PCR 2021:04, version 1.0, UN CPC code: 3627

PCR review was conducted by: The Technical Committee of the International EPD® System. Chair of the PCR review: Gorka Benito

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

 \Box EPD process certification \boxtimes EPD verification

Third party verifier: Vito D'Incognito, Independent approved verifier

In case of accredited certification bodies: Accredited by: <name of the accreditation body and accreditation number, where applicable>.

In case of recognised individual verifiers: Approved by: The International EPD[®] System

Procedure for follow-up of data during EPD validity involves third party verifier:

 \boxtimes Yes \Box No

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable.





Company information

<u>Owner of the EPD:</u> Vibram S.p.A., +39 0331 999 777, <u>vibram@vibram.com</u>, Via Colombo, 5 - 21041 Albizzate (Varese), Italia

Contact person:

Marco Guazzoni, <u>marco.guazzoni@vibram.com</u>, +39 0331 999 741, Via Colombo, 5 - 21041 Albizzate (Varese), Italia

<u>Description of the organisation</u>: Vibram S.p.A. is an Italian company, based in Albizzate (Varese)-Italy, that both manufactures and licenses the production of Vibram high performance rubber outsoles for footwear. The company is named after its founder, Vitale Bramani, who is credited with inventing the first rubber lug soles. Vibram soles were first used on mountaineering boots, replacing the commonly used leather soles fitted with hobnails or steel cleats. The soles, produced by Vibram, are called Vibram soles, Vibram rubber, or simply Vibram. Vibram is currently the world leader in the production and sale of high performance rubber soles, targeted to the outdoor, work, recreation, fashion, repair and orthopaedic markets. Vibram produces more than 45 million soles every year, develops 150 models each season, and it is present in more than 120 countries all over the world. It has more than 1,000 business partners and more than 4 million online visits. More than 1 million kilometres of testing grant the soles high performances.



In 2017 the company launched a Sustainable Development Plan – Vibram The Sustainable Way – through which the company has defined actions and goals for its improvement in terms of both environmental and social aspects as well as economic ones. This commitment strengthens the values of responsibility in which the company has always believed in relation to its community, the planet and consequently future generations. Vibram's sustainability policies aim to obtain the first certified products in the industrial sector of soles and to support eco-design policies for new products and for the Albizzate plant according to the targets identified by the SDGs.

<u>Product-related or management system-related certifications:</u> The Albizzate site is part of high tracking and standardization policies in order to guarantee quality and traceability. In particular, the Albizzate site has ISO 9001, 14001 and OHSAS 18001 and ISO 50001 certifications.

<u>Name and location of production site:</u> Production facility in Albizzate - Vibram headquarters, Via Cristoforo Colombo, 5, 21041 Albizzate (Varese) - Italy





Product information

Product name: Tront compound Fourà model

Product identification: part of the family Vibram XS TREK

Customer code: 01203

<u>Product description</u>: Tront compound is part of the XS TREK family. Vibram XS TREK is a technical compounds family that allow adequate performance for multisport, outdoor, mountain bike, snow sports, and water sports. Its principal characteristics are flexibility and wet traction. The Vibram XS TREK compound allows the compound to be used for outdoor high performance application. Used in a wide range of designs, Vibram XS TREK provides customers with the freedom to optimize the performance of the sole with respect to the specific application. In particular, the model Fourà is a rubber sole made of Vibram® TRONT compound, equipped with reinforcement of the toes, an undercut heel and sculpted sole border. It has a high anti-slip capacity, with great adhesion on uneven ground and it is particularly recommended for trekking shoes. The Tront sole can be also used for other outdoor uses providing major durability to common footwear.

UN CPC code: 3627

Geographical scope: Global

LCA information

Declared unit: A pair of soles, size 42 EU, weighting 0.375 kg

<u>Reference service life</u>: Not applicable. The LCA covers cradle-to-gate analysis, up to the point of distribution. The downstream phase was not considered in the study because there is not protocol able to evaluate these phases in a standardized and unambiguous way.

Time representativeness: the LCA covered 2019 data

Database(s) and LCA software used: Ecoinvent 3.6 cut-off by classification, unit, Software Open LCA 1.10.3

<u>System diagram</u>: transport up to the point of sale was modelled, while use and end-of-life stages were not included in the analysis.





Description of system boundaries: cradle-to-gate, up to the point of distribution.

Excluded lifecycle stages: use and end-of-life stages, because there is not protocol able to evaluate these phases in a standardized and unambiguous way

Name and contact information of LCA practitioner (Carlo Brondi <u>carlo.brondi@stiima.cnr.it</u>, Davide Rovelli <u>davide.rovelli@stiima.cnr.it</u>, Elisabetta Abbate <u>elisabetta.abbate@stiima.cnr.it</u>); name and contact information of the organisation carrying out the underlying LCA study: STIIMA (Institute of Intelligent Industrial Technologies and Systems for Advanced Manufacturing)

<u>Additional information</u>: Allocations to TRONT Fourà product are performed on a mass basis. The gross amount of TRONT Fourà production includes a percentage relative to defective soles and scraps, which is eventually translated into an amount of wasted rubber. Further allocation on direct energy used have been based on worked items. No Cut off rules have been applied. A quality check based on pedigree matrix has been applied.

Content declaration

Product

Materials / chemical substances referred to one pair of soles	[kg]	%
Synthetic rubber	0.27	72.4%
Natural rubber	0.021	5.7%
Silica	0.06	16.1%
Chemicals	0.018	4.8%
Sulphur	0.004	1%

All materials are in compliance with Regulation (EC) No 1907/2006 of the European parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Packaging

<u>Distribution packaging:</u> carton board box, 33.5 g per pair of soles <u>Consumer packaging:</u> This stage of the life cycle of the soles was not monitored

Recycled material

<u>Provenience of recycled materials (pre-consumer or post-consumer) in the product:</u> no recycled material is used for the sole.



Environmental performance

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
	Fossil	kg CO₂ eq.	1.38E+00	6.14E-01	2.94E-02	2.02E+00
	Biogenic	kg CO₂ eq.	2.80E-02	1.69E-03	1.90E-04	2.99E-02
Global warming potential (GWP)	Land use and land transformati on	kg CO2 eq.	2.50E-03	3.02E-05	1.04E-05	2.54E-03
	TOTAL	kg CO₂ eq.	1.41E+00	6.16E-01	2.96E-02	2.06E+00
Acidification potential (AP)		kg SO₂ eq.	7.13E-03	5.70E-04	1.30E-04	7.83E-03
Eutrophication potential (EP)		kg PO₄³- eq.	1.23E-03	1.30E-04	2.68E-05	1.39E-03
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	6.14E-03	6.30E-04	1.60E-04	6.93E-03
Abiotic depletion pote Elements	ntial –	kg Sb eq.	6.24E-05	2.03E-06	8.11E-07	6.52E-05
Abiotic depletion potential – Fossil fuels		MJ, net calorific value	3.08E+01	1.11E+01	4.46E-01	4.23E+01
Water scarcity potentia	al	m³ eq.	6.65E+01	4.72E+01	1.09E+00	1.15E+02

Use of resources

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	1.03E-02	4.47E+00	6.38E-03	4.48E+00
	Used as raw materials	MJ, net calorific value	9.43E-01	5.92E-05	0.00E+00	9.43E-01
TOTAL		MJ, net calorific value	9.54E-01	4.47E+00	6.38E-03	5.43E+00
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	8.01E-01	1.11E+01	4.55E-01	1.24E+01
	Used as raw materials	MJ, net calorific value	3.12E+01	4.33E-03	0.00E+00	3.12E+01
	TOTAL	MJ, net calorific value	3.20E+01	1.11E+01	4.55E-01	4.36E+01
Secondary materia	al	kg	2.42E-02	5.30E-04	7.53E-05	2.48E-02
Renewable secondary fuels		MJ, net calorific value	NA	NA	NA	NA
Non-renewable secondary fuels		MJ, net calorific value	NA	NA	NA	NA
Net use of fresh w	vater	m³	1.55E+00	1.10E+00	2.54E-02	2.67E+00





Waste production and output flows Waste production

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Hazardous waste disposed	kg	1.70E-05	1.27E-05	1.18E-06	3.10E-05
Non-hazardous waste disposed	kg	1.22E-01	3.06E-02	2.16E-02	1.74E-01
Radioactive waste disposed	kg	5.68E-05	6.56E-06	3.08E-06	6.64E-05

Output flows

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	3.51E-02	0	3.51E-02
Materials for energy recovery	kg	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0

The result tables shall only contain values or the letters "INA" (Indicator Not Assessed). It is not possible to specify INA for mandatory indicators. INA shall only be used for voluntary parameters that are not quantified because no data is available.



Additional information

- "Vibram The Sustainable Way" is integrated into Vibram's strategy to improve sustainability performance, specifically focusing on those activities and projects that guarantee economic growth, whilst respecting people and the planet. Vibram intends to produce the best soles in the world both in terms of best in performance and in terms of impact on the environment and on people (starting with employees and consumers). The same principles that have guided Vibram over the years and that still shape its current path of sustainability drive the company to create innovative, high quality products, screened through countless tests and are the outcome of inspirational creativity, made to be long-lasting, keeping waste to a minimum and respecting people. More in particular:
 - The Albizzate site has high tracking and standardization policies in order to guarantee quality and traceability throughout its value chain. In particular, the Albizzate site has ISO 9001, 14001 and OHSAS 18001 and ISO 50001 certifications,
 - In its sustainability policy, Vibram impacts 9 out of 17 sustainable development goals of the United Nations 2030 Agenda for Sustainable Development.
 - Vibram organized communication and consultation meetings and activities, focused on sustainability for each stakeholder category. Vibram launched a mapping of suppliers. Vibram published its own ethical code and procurement guidelines which have been shared with the supply chain. Vibram adopted RSLs that go beyond the legal limits (Reach) In the Chinese site, Vibram rolled out a program intended to engage and raise awareness of VTC suppliers and for internal measurement. There are more than +65% of suppliers and outside contractors involved in sustainable procurement policy (2021).
 - Starting with a survey of sustainability awareness for employees, Vibram has since implemented a sustainability training program, and established a corporate volunteering program to inspire and engage its employees globally. In addition, Vibram has published digital and printed material within areas of the corporate sites and organized several teambuilding and theme events.
 - Since 1994, Vibram has realized the "Ecostep" sole, made with at least 30% of production scrap. Vibram has strong commitment to research and innovation, with the dual objective to expand the range of Vibram technologies and consolidating collaboration with other companies, including Timberland, Merrel, New Balance and more.
 - Vibram invented the N-Oil compound that is made from at least 90% natural, petroleumfree ingredients with the same high quality and performance of traditional soles. Five pigments were extracted from industrial waste of natural materials and plants (vegetables and flowers, for example), without the use of solvents or chemicals.
 - o More information is available on https://eu.vibram.com/en/sustainableway/.





References

General Programme Instructions of the International EPD® System. Version 4.0. PCR 2021:04 version 1.0, Rubber articles for footwear, UN CPC code: 3627

Annex 1 – Sensitivity of Environmental performance

Results RSL referred to trekking use¹ - Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
	Fossil	kg CO₂ eq.	9.85E-01	4.39E-01	2.10E-02	1.44E+00
	Biogenic	kg CO₂ eq.	2.00E-02	1.21E-03	1.36E-04	2.14E-02
Global warming potential (GWP)	Land use and land transformati on	kg CO₂ eq.	1.79E-03	2.16E-05	7.44E-06	1.81E-03
	TOTAL	kg CO₂ eq.	1.01E+00	4.40E-01	2.12E-02	1.47E+00
Acidification potential (AP)		kg SO₂ eq.	5.09E-03	4.07E-04	9.29E-05	5.59E-03
Eutrophication potential (EP)		kg PO₄³- eq.	8.79E-04	9.29E-05	1.91E-05	9.91E-04
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	4.39E-03	4.50E-04	1.14E-04	4.95E-03
Abiotic depletion pote Elements	ntial –	kg Sb eq.	4.46E-05	1.45E-06	5.80E-07	4.66E-05
Abiotic depletion potential – Fossil fuels		MJ, net calorific value	2.20E+01	7.90E+00	3.18E-01	3.02E+01
Water scarcity potentia	al	m³ eq.	4.75E+01	3.37E+01	7.79E-01	8.20E+01

Results for RSL referred to casual use² - Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
	Fossil	kg CO₂ eq.	3.07E-01	1.36E-01	6.54E-03	4.50E-01
	Biogenic	kg CO₂ eq.	6.23E-03	3.76E-04	4.22E-05	6.65E-03
Global warming potential (GWP)	Land use and land transformati on	kg CO₂ eq.	5.56E-04	6.71E-06	2.31E-06	5.65E-04
	TOTAL	kg CO₂ eq.	3.13E-01	1.37E-01	6.59E-03	4.57E-01
Acidification potential (AP)		kg SO₂ eq.	1.58E-03	1.27E-04	2.89E-05	1.74E-03
Eutrophication potential (EP)		kg PO₄³- eq.	2.73E-04	2.89E-05	5.95E-06	3.08E-04
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	1.36E-03	1.40E-04	3.56E-05	1.54E-03
Abiotic depletion pote Elements	ntial –	kg Sb eq.	1.39E-05	4.51E-07	1.80E-07	1.45E-05
Abiotic depletion potential – Fossil fuels		MJ, net calorific value	6.84E+00	2.46E+00	9.91E-02	9.40E+00
Water scarcity potential		m³ eq.	1.48E+01	1.05E+01	2.42E-01	2.55E+01

¹ The trekking use corresponds to a yearly 750'000 steps from final user.

² The casual use corresponds to a yearly 225'000 steps from final user.



Annex 2 – Compliance with European and American legislation

- Vibram products are manufactured with specific qualities, technical specifications and commercial characteristics as requested by the governing regulations and/or domestic law, abiding by health and environmental law, consumer and industry protection law, providing restrictions related to using or introducing into the market restricted substances and specifically related, among others, to:
 - Consumer product safety improvement act 2008 (CPSIA), issued by US Consumer product Safety Commission
 - o Safe drinking Water & Toxic enforcement Act (1986)
 - o Regulation (EC) No. 1907/2006 REACH
- Vibram Policy on Restricted Substances is aligned with the Apparel & Footwear International RSL Management Group (AFIRM) Restricted Substances List and the American Apparel & Footwear Association (AAFA) Restricted Substances List. It is based on best practices in industry and includes voluntary reduction in hazardous chemicals.

