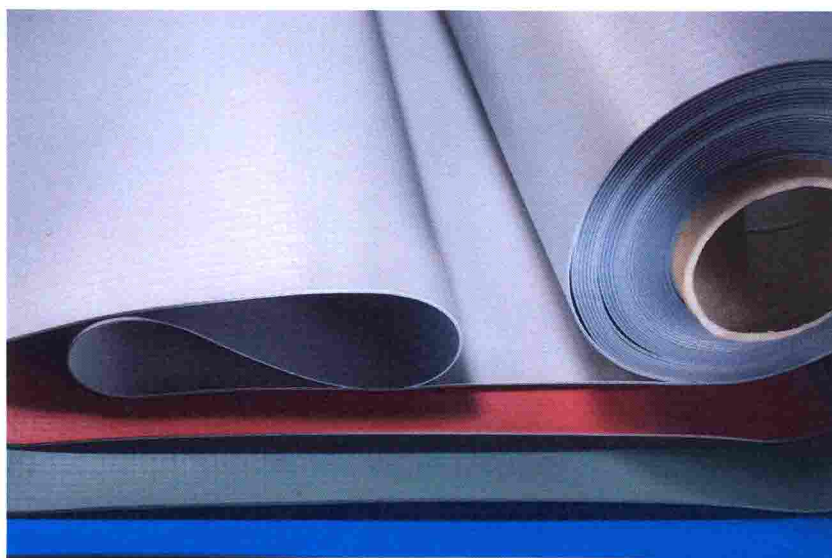


ENVIRONMENTAL PRODUCT DECLARATION

In agreement with ISO 14025:2006,
PRODUCT CATEGORY RULES AND PCR BASIC MODULE 2012:01 Ver. 1.1.
CONSTRUCTION PRODUCTS AND CPC Division 54 CONSTRUCTION SERVICES



ENVIRONMENTAL PRODUCT DECLARATION OF HETEROGENEOUS WATERPROOFING MEMBRANES

S-P-00451
Czech Republic

REV. 0 Date 27th May 2013
Number: 3013EPD-13-0248

fatra



**EPD[®]****fatra****Cendec[®]**

Organization:	Fatra, a.s.	Registration No. / VAT 27465021 / CZ27465021
Address	tř. T. Bati 1541 763 61 Napajedla Czech Republic	
Statutory body	Ing. Petr Bláha, head of Fatra,a.s.	
EPD representative	Ing. Jitka Hudečková Manager for certification process,	
Contact	Phone: +420 577502345 E-mail: jhudeckova@fatra.cz	www.fatra.cz

Product:	Heterogeneous waterproofing membranes
Use:	PVC Waterproofing membranes for roofing and insulations of ground and underground constructions
Product lifetime /years/:	The products are under warranty for 20 years.
Hazardous substance contents:	Yes/No
UN CPC:	369 Other plastics products





1 PROGRAMME RELATED INFORMATION

1.1 NAME OF THE PROGRAMME AND PROGRAMME OPERATOR

Programme operator for this EPD is Cendec® with affiliation to International EPD®system. Cendec® is Czech Type III environmental declaration operator which is affiliated to the International EPD®system by Memorandum of Understanding signed January 10th 2013.

International EPD®system	Cendec®
International EPD Consortium (IEC)	Center for Environmental Declarations
Postal address: Vasagatan 15-17, SE-111 20 Stockholm, Sweden	Postal address: Šárecká 5, 160 00 Prague 6, Czech Republic
E-mail: info@environdec.com	E-mail: info@cendec.cz
WWW: www.environdec.com	WWW: www.cendec.cz

1.2 THE REFERENCE PCR DOCUMENT

The reference documents for this EPD are General Programme Instructions (IEC 2008) and Product Category Rules for CPC Division (not available): Construction Products and CPC Division 54: Construction Services (2012:01, version 1.1). Product Category Rules (PCR) are specified for certain information modules "cradle-to-gate", so called core modules. The structure and aggregation level of the core modules is defined by the United Nation Statistics Division - Classification Registry CPC codes (<http://unstats.un.org>).

1.3 REGISTRATION NUMBER

The registration number of this EPD is: 3013EPD-13-0248

1.4 DATE OF PUBLICATION AND VALIDITY

The publication date of this EPD is: 27.5.2013

This EPD is valid until: 27.5.2016

1.5 GEOGRAPHICAL SCOPE OF APPLICATION OF EPD

The geographical scope of this EPD is fully international.

1.6 INFORMATION ABOUT THE YEAR OR REFERENCE PERIOD OF THE UNDERLYING DATA TO THE EPD

The reference period to this EPD is year 2011. Data shown below refers to 2011 and have been collected directly from the Fatra, a.s. Other general data used were taken from the ILCD and Ecoinvent database.

1.7 REFERENCE TO THE WEBSITE

More information related to The International EPD® System programme is available at www.environdec.com. More information related to Czech type III environmental declaration programme is available at www.cendec.cz





2 PRODUCT RELATED INFORMATION

Trade name of product: **heterogeneous waterproofing membranes Fatrafol 810, 810/V, 807, 807/V, 814, 818/V, Ekoplan 819/V**

Fatrafol 810, 810/V, Ekoplan 819/V are identified first of all for making the one-layer coating coverings of flat roofs.

FATRAFOL 814 is identified for waterproofing of not gated terraces of dwelling houses and balconies as treat-type- layer.

The **FATRAFOL 807/V** membrane is identified for adhesion systems. The membrane can be adhered directly onto a construction of a roofing mantle, which fulfils requirements for flatness (fibre-cement plates /under „cetris“ name/, vibrated concrete, etc.), possibly onto a suitable waterproof layer beginning treated by heat.

FATRAFOL 818/V (818/V-UV) is identified for providing the one layer coating of flat roof coverings being loaded with aggregates, functional or vegetative layers. It is not suitable for mechanical anchoring of the coating coverings without added loading layer.

Unequivocal identification of the product according to the CPC classification system:

CONSTRUCTION PRODUCTS AND CPC Division 54 CONSTRUCTION SERVICES, 369 other plastics products

2.1 SPECIFICATION OF THE COMPANY

The Heterogeneous PVC waterproofing membranes are produced in Fatra, a.s. třída Tomáše Bati 1541, 763 61 Napajedla, Czech Republic.

Registration No. / VAT No.: 27465021 / CZ27465021

The company is recorded in the Company Register kept by the Regional Court in Brno, Section B, File 4598.

Main activity of the Company is production of PVC based floor coverings and Waterproofing membranes. Fatra, a.s. is a company having ISO 9001: quality certificate and ISO 14001 – environmental certificate. For Fatrafol 810, 810/V, 807, 807/V Fatra has BRE certificate.

2.2 TECHNICAL DESCRIPTION OF THE PRODUCT

This EPD covers all Fatra, a.s. PVC heterogeneous waterproofing membranes names FATRAFOL 810/V, 807/V, 818/V, 814, Ekoplan 819/V and Fatrafol 810, 807 produced by the same technological procedure.

2.3 DECLARED UNIT

According to the EN 15804 and PCR (IEC 2012) the declared unit is 1 m² of floor coverings.



2.4 DESCRIPTION OF UNDERLYING LCA-BASED INFORMATION

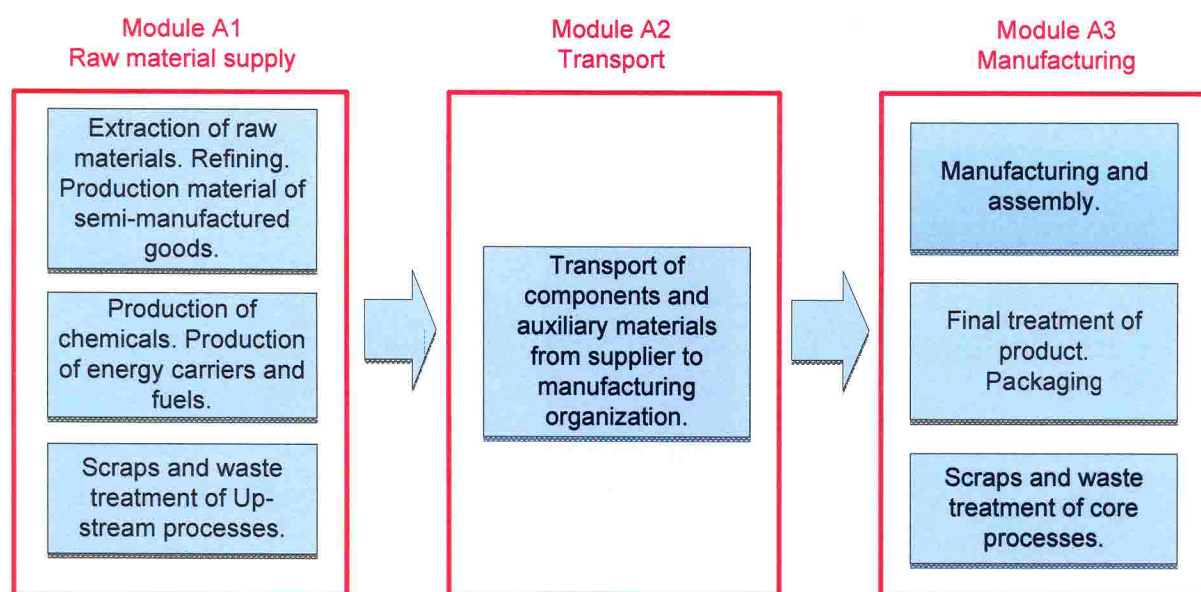
2.4.1 SYSTEM BOUNDARIES

System boundaries of this EPD are cradle to gate. Based on EN 15804 The International EPD® system has adopted an LCA calculations procedure which is separated into different life cycle stages, so called modules A1, A2 and A3:

- Module A1: Upstream processes including energy production
- Module A2: Transport of inputs to producer
- Module A3: Core processes including infrastructure and waste processing

Schematic description of system boundaries consisting of up-stream module processes, core processes and down-stream processes is shown on following figure.

Figure 1 System boundaries



Based on PCR (IEC 2012) the downstream module was not included into system boundaries. Transport of final product to a customer is also excluded.

2.4.2 DATA QUALITY

All relevant data are of specific quality. Data used for calculation were relevant for year 2011. Data set needed for calculation is complete.

2.4.3 LCA STUDY

The LCA calculations rules used for this declaration follow the overall requirements for The International EPD® System. These rules follow the international standards ISO 14040 and ISO 14044 with respect to EN 15806. The product system for this LCA has been described by using specific data when available; generic data have been used in accordance with PCR (IEC 2012) and GPI (IEC 2008) requirements. Underlying LCA study used for this EPD was complete and covering all relevant inputs. For LCA study site specific data from producer were used. The LCA was conducted in year 2013. Underlying LCA study was elaborated by LCA studio, www.lcastudio.cz (Kocí 2013).





2.5 CONTENT OF MATERIALS AND CHEMICAL SUBSTANCES

The heterogeneous waterproofing membranes consist of polyvinyl chloride, stabilizers, low-temperature and polymeric plasticisers, etc. and dispersing agent and glass and/or other material based textile mesh. Detailed composition of product is Fatra, a.s. secret and cannot be published.

The packaging for transport is PE film.

3 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

All environmental performance is reported per declared unit 1 m² of ground coverings.

3.1 USE OF NATURAL RESOURCES

Following tables report the main consumption of resources for Heterogeneous waterproofing membranes life cycle. Dominant material resource used is crude oil. Use of resources in kg/D.U and in MJ/D.U. is expressed. All energy data are expressed as net caloric value.

Table 1 Resource consumption (kg) associated with heterogeneous waterproofing membranes Ekoplan 819V 1,2mm production. Data are referred to D.U.

kg	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	1,15	1,16	7,24E-03	-1,43E-02
Hard coal (resource)	0,45	0,48	7,92E-05	-2,41E-02
Lignite (resource)	1,19	1,33	0,0005	-0,14
Natural gas (resource)	1,10	1,19	0,001	-0,09
Peat (resource)	7,58E-04	8,12E-04	7,63E-07	-5,46E-05
Uranium (resource)	1,29E-05	1,48E-05	8,35E-09	-1,97E-06
Water, l	860	1044	2	-186

Table 2 Resource (MJ) and electricity consumption associated with heterogeneous waterproofing membranes Ekoplan 819V 1,2 mm production. Data are referred to D.U.

MJ	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	48,9	49,2	0,31	-0,60
Hard coal (resource)	12,0	12,7	0,002	-0,66
Lignite (resource)	13,7	15,4	0,005	-1,68
Natural gas (resource)	54,8	58,8	0,03	-3,98
Peat (resource)	6,37E-03	6,82E-03	6,41E-06	-4,60E-04
Uranium (resource)	16,6	17,5	0,004	-0,99
Renewable energy resources	2,07	2,19	0,01	-0,13
Primary energy from geothermics	5,34E-03	7,46E-03	1,13E-05	-2,13E-03
Primary energy from hydro power	0,40	0,47	4,47E-04	-6,99E-02
Primary energy from solar energy	0,36	0,39	1,29E-02	-4,80E-02
Primary energy from wind power	0,28	0,29	0,0002	-0,0094
Electricity, MJ				3,12





Table 3 Resource consumption (kg) associated with heterogeneous waterproofing membranes Fatrafol 818V-UV 1,5 mm production. Data are referred to D.U.

kg	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	1,17	1,18	6,75E-03	-1,45E-02
Hard coal (resource)	0,37	0,39	1,56E-04	-2,45E-02
Lignite (resource)	1,11	1,25	0,0011	-0,14
Natural gas (resource)	1,07	1,16	0,001	-0,09
Peat (ressource)	1,60E-04	2,15E-04	7,27E-07	-5,55E-05
Uranium (resource)	8,22E-06	1,02E-05	1,82E-08	-2,00E-06
Water, l	1354	1540	3	-189

Table 4 Resource (MJ) and electricity consumption associated with heterogeneous waterproofing membranes Fatrafol 818V-UV 1,5 mm production. Data are referred to D.U.

MJ	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	49,6	49,9	0,29	-0,61
Hard coal (resource)	9,5	10,2	0,004	-0,67
Lignite (resource)	13,1	14,8	0,013	-1,70
Natural gas (resource)	54,4	58,5	0,02	-4,05
Peat (resource)	1,35E-03	1,81E-03	6,11E-06	-4,70E-04
Uranium (resource)	11,6	12,6	0,008	-1,00
Renewable energy resources	3,29	3,41	0,01	-0,13
Primary energy from geothermics	1,95E-04	2,35E-03	1,06E-05	-2,17E-03
Primary energy from hydro power	0,25	0,32	6,65E-04	-7,10E-02
Primary energy from solar energy	0,50	0,54	1,24E-02	-4,87E-02
Primary energy from wind power	0,30	0,31	0,0002	-0,0096
Electricity, MJ				3,17

Table 5 Resource consumption (kg) associated with heterogeneous waterproofing membranes Fatrafol 814 production. Data are referred to D.U.

kg	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	2,01	2,03	1,03E-02	-2,33E-02
Hard coal (resource)	0,54	0,58	2,60E-04	-3,93E-02
Lignite (resource)	1,78	2,00	0,002	-0,23
Natural gas (resource)	1,77	1,91	0,001	-0,15
Peat (ressource)	3,00E-04	3,88E-04	1,12E-06	-8,92E-05
Uranium (resource)	1,29E-05	1,60E-05	3,05E-08	-3,21E-06
Water, l	2256	2554	5	-303





Table 6 Resource (MJ) and electricity consumption associated with heterogeneous waterproofing membranes Fatrafol 814 production. Data are referred to D.U.

MJ	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	85,2	85,7	0,44	-0,99
Hard coal (resource)	14,2	15,3	0,007	-1,08
Lignite (resource)	21,0	23,7	0,023	-2,74
Natural gas (resource)	86,8	93,2	0,04	-6,50
Peat (resource)	2,52E-03	3,26E-03	9,39E-06	-7,50E-04
Uranium (resource)	18,0	19,6	0,014	-1,61
Renewable energy resources	5,33	5,52	0,02	-0,21
Primary energy from geothermics	1,44E-03	4,91E-03	1,63E-05	-3,48E-03
Primary energy from hydro power	0,43	0,54	1,08E-03	-1,14E-01
Primary energy from solar energy	0,86	0,92	1,88E-02	-7,82E-02
Primary energy from wind power	0,50	0,52	0,0004	-0,0153
Electricity, MJ				5,09

Table 7 Resource consumption (kg) associated with heterogeneous waterproofing membranes Fatrafol 810,810/V 1,5 mm production. Data are referred to D.U.

kg	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	1,23	1,24	7,14E-03	-1,43E-02
Hard coal (resource)	0,53	0,55	1,51E-04	-2,41E-02
Lignite (resource)	1,19	1,33	0,001	-0,14
Natural gas (resource)	1,13	1,22	0,001	-0,09
Peat (resource)	6,23E-04	6,77E-04	7,70E-07	-5,46E-05
Uranium (resource)	1,28E-05	1,47E-05	1,75E-08	-1,97E-06
Water, l	1267	1450	3	-186

Table 8 Resource (MJ) and electricity consumption associated with heterogeneous waterproofing membranes Fatrafol 810,810/V 1,5 mm production. Data are referred to D.U.

MJ	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	52,1	52,4	0,30	-0,60
Hard coal (resource)	12,6	13,3	0,004	-0,66
Lignite (resource)	13,9	15,5	0,013	-1,68
Natural gas (resource)	56,3	60,3	0,03	-3,98
Peat (resource)	5,23E-03	5,69E-03	6,47E-06	-4,60E-04
Uranium (resource)	13,3	14,2	0,008	-0,99
Renewable energy resources	3,77	3,89	0,01	-0,13
Primary energy from geothermics	4,56E-03	6,68E-03	1,13E-05	-2,13E-03
Primary energy from hydro power	0,41	0,47	6,62E-04	-6,99E-02
Primary energy from solar energy	0,48	0,51	1,23E-02	-4,80E-02
Primary energy from wind power	0,36	0,37	0,0002	-0,0094



Electricity, MJ				3,12
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Table 9 Resource consumption (kg) associated with heterogeneous waterproofing membranes Fatrafol 807,807/V production. Data are referred to D.U.

kg	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	1,54	1,70	1,27E-03	-1,62E-01
Hard coal (resource)	0,45	0,48	1,71E-04	-2,79E-02
Lignite (resource)	1,42	1,52	0,001	-0,10
Natural gas (resource)	1,51E-03	1,58E-03	7,31E-07	-6,33E-05
Peat (resource)	2,13E-05	2,36E-05	2,01E-08	-2,28E-06
Uranium (resource)	1,35E+03	1,56E+03	3,26E+00	-2,15E+02
Water, l	1,50	1,51	0,01	-0,02

Table 10 Resource (MJ) and electricity consumption associated with heterogeneous waterproofing membranes Fatrafol 807,807/V production. Data are referred to D.U.

MJ	Suma	Module A1	Module A2	Module A3
Crude oil (resource)	63,6	64,1	0,29	-0,70
Hard coal (resource)	11,9	12,7	0,005	-0,77
Lignite (resource)	17,5	19,5	0,015	-1,94
Natural gas (resource)	69,2	73,8	0,02	-4,61
Peat (resource)	1,27E-02	1,32E-02	6,14E-06	-5,30E-04
Uranium (resource)	17,5	18,7	0,009	-1,14
Renewable energy resources	4,10	4,23	0,01	-0,15
Primary energy from geothermics	1,22E-02	1,47E-02	1,06E-05	-2,47E-03
Primary energy from hydro power	0,74	0,82	7,12E-04	-8,09E-02
Primary energy from solar energy	0,56	0,60	1,25E-02	-5,55E-02
Primary energy from wind power	0,56	0,57	0,0002	-0,0109
Electricity, MJ				3,62

3.2 POTENTIAL ENVIRONMENTAL IMPACTS

Characterization factors are those prescribed in the CML 2001 methodology for calculating environmental impact as required by EPD® programme in GPI (IEC 2008). This methodology is fully developed and used at an European level due to the reliability of its data and its scientific bases which are supported in the methodology and procedures established by Guinée et al. (Guinée 2001). The environmental impacts per declared unit are presented in following tables:

Table 11 Impact category results of environmental results of heterogeneous waterproofing membranes Ekoplan 819/V 1,2mm production life cycle. Data are referred to D.U.

Ekoplan 819/V 1,2mm	Total	A1	A2	A3
Abiotic Depletion (ADP elements) [kg Sb-Equiv.]	1,66E-05	1,70E-05	9,16E-10	-4,15E-07





Abiotic Depletion (ADP fossil) [MJ]	61,5	69,2	0,3	-8,0
Acidification Potential (AP) [kg SO ₂ -Equiv.]	0,050	0,052	9,01E-05	-1,72E-03
Eutrophication Potential (EP) [kg Phosphate-Equiv.]	0,005	4,40E-03	1,87E-05	2,13E-04
Global Warming Potential (GWP 100 years) [kg CO ₂ -Equiv.]	7,4	6,7	0,02	0,7
Ozone Layer Depletion Potential (ODP, steady state) [kg R11-Equiv.]	1,30E-07	1,29E-07	4,69E-13	3,74E-10
Photochem. Ozone Creation Potential (POCP) [kg Ethene-Equiv.]	0,011	0,011	1,07E-05	-6,97E-05

Table 12 Impact category results of environmental results of heterogeneous waterproofing membranes Fatrafol 818V 1,5mm production life cycle. Data are referred to D.U. Fatrafol 818V-UV 1,5mm

Fatrafol 818V-UV 1,5mm	Total	A1	A2	A3
Abiotic Depletion (ADP elements) [kg Sb-Equiv.]	1,89E-05	1,93E-05	8,84E-10	-4,22E-07
Abiotic Depletion (ADP fossil) [MJ]	76,8	84,6	0,3	-8,2
Acidification Potential (AP) [kg SO ₂ -Equiv.]	0,044	0,046	9,39E-05	-1,74E-03
Eutrophication Potential (EP) [kg Phosphate-Equiv.]	0,004	4,14E-03	1,81E-05	2,16E-04
Global Warming Potential (GWP 100 years) [kg CO ₂ -Equiv.]	6,9	6,2	0,02	0,7
Ozone Layer Depletion Potential (ODP, steady state) [kg R11-Equiv.]	6,38E-08	6,34E-08	5,21E-13	3,80E-10
Photochem. Ozone Creation Potential (POCP) [kg Ethene-Equiv.]	0,009	0,009	1,06E-05	-7,08E-05

Table 13 Impact category results of environmental results of heterogeneous waterproofing membranes Fatrafol 814 production life cycle. Data are referred to D.U.

Fatrafol 814	Total	A1	A2	A3
Abiotic Depletion (ADP elements) [kg Sb-Equiv.]	2,90E-05	2,97E-05	1,36E-09	-6,77E-07
Abiotic Depletion (ADP fossil) [MJ]	130,3	143,0	0,5	-13,1
Acidification Potential (AP) [kg SO ₂ -Equiv.]	0,067	0,069	1,57E-04	-2,80E-03
Eutrophication Potential (EP) [kg Phosphate-Equiv.]	0,007	6,37E-03	2,89E-05	3,47E-04
Global Warming Potential (GWP 100 years) [kg CO ₂ -Equiv.]	11,3	10,1	0,04	1,1
Ozone Layer Depletion Potential (ODP, steady state) [kg R11-Equiv.]	7,12E-08	7,06E-08	8,17E-13	6,11E-10
Photochem. Ozone Creation Potential (POCP) [kg Ethene-Equiv.]	0,014	0,015	1,70E-05	-1,14E-04





Table 14 Impact category results of environmental results of heterogeneous waterproofing membranes Fatrafol 810,810/V 1, 5 mm production life cycle. Data are referred to D.U.

Fatrafol 810,810/V 1,5 mm	Total	A1	A2	A3
Abiotic Depletion (ADP elements) [kg Sb-Equiv.]	3,77E-02	3,77E-02	9,18E-10	-4,15E-07
Abiotic Depletion (ADP fossil) [MJ]	89,7	97,4	0,4	-8,0
Acidification Potential (AP) [kg SO ₂ -Equiv.]	0,049	0,051	1,41E-04	-1,72E-03
Eutrophication Potential (EP) [kg Phosphate-Equiv.]	0,036	3,62E-02	2,29E-05	2,13E-04
Global Warming Potential (GWP 100 years) [kg CO ₂ -Equiv.]	7,7	7,0	0,03	0,7
Ozone Layer Depletion Potential (ODP, steady state) [kg R11-Equiv.]	1,19E-07	1,19E-07	5,25E-13	3,74E-10
Photochem. Ozone Creation Potential (POCP) [kg Ethene-Equiv.]	0,010	0,010	1,34E-05	-6,97E-05

Table 15 Impact category results of environmental results of heterogeneous waterproofing membranes Fatrafol 807 production life cycle. Data are referred to D.U.

Fatrafol 807,807/V	Total	A1	A2	A3
Abiotic Depletion (ADP elements) [kg Sb-Equiv.]	1,31E-05	1,35E-05	8,90E-10	-4,81E-07
Abiotic Depletion (ADP fossil) [MJ]	116,6	126,0	0,3	-9,3
Acidification Potential (AP) [kg SO ₂ -Equiv.]	0,048	0,050	9,56E-05	-1,99E-03
Eutrophication Potential (EP) [kg Phosphate-Equiv.]	0,005	4,51E-03	1,82E-05	2,47E-04
Global Warming Potential (GWP 100 years) [kg CO ₂ -Equiv.]	9,2	8,4	0,02	0,8
Ozone Layer Depletion Potential (ODP, steady state) [kg R11-Equiv.]	2,19E-07	2,19E-07	5,37E-13	4,34E-10
Photochem. Ozone Creation Potential (POCP) [kg Ethene-Equiv.]	0,011	0,011	1,07E-05	-8,07E-05

3.3 OTHER ENVIRONMENTAL INDICATORS

During use phase of vinyl floor coverings no toxic substances are released. The following indicators are also reported in the EPD per declared unit:

Table 16 Other environmental indicators of heterogeneous waterproofing membranes Ekoplan 819/V 1,2 mm production life cycle. Data are referred to D.U.

Incineration of paper waste [Waste for recovery]	1,10E-01	kg/D.U.
Landfill of plastic waste [Consumer waste]	9,95E-03	kg/D.U.
Hazardous waste (N) [Hazardous waste for disposal]	1,82E-02	kg/D.U.
Other waste (O) [Waste for disposal]	2,39E-01	kg/D.U.
Paper (unspecified) [Waste for recovery]	4,38E-04	kg/D.U.
Plastic (unspecified) [Waste for recovery]	2,01E-02	kg/D.U.
Steel scrap (St) [Waste for recovery]	9,31E-03	kg/D.U.





Waste incineration of plastics (unspecified) fraction in municipal solid waste (MSW) [Waste for recovery]	2,19E-01	kg/D.U.
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Table 17 Other environmental indicators of heterogeneous waterproofing membranes Fatrafol 818V-UV 1,5 mm production life cycle. Data are referred to D.U.

Incineration of paper waste [Waste for recovery]	1,12E-01	kg/D.U.
Landfill of plastic waste [Consumer waste]	1,01E-02	kg/D.U.
Hazardous waste (N) [Hazardous waste for disposal]	1,85E-02	kg/D.U.
Other waste (O) [Waste for disposal]	2,42E-01	kg/D.U.
Paper (unspecified) [Waste for recovery]	4,45E-04	kg/D.U.
Plastic (unspecified) [Waste for recovery]	2,04E-02	kg/D.U.
Steel scrap (St) [Waste for recovery]	9,46E-03	kg/D.U.
Waste incineration of plastics (unspecified) fraction in municipal solid waste (MSW) [Waste for recovery]	2,22E-01	kg/D.U.

Table 18 Other environmental indicators of heterogeneous waterproofing membranes Fatrafol 814 production life cycle. Data are referred to D.U.

Incineration of paper waste [Waste for recovery]	1,80E-01	kg/D.U.
Landfill of plastic waste [Consumer waste]	1,62E-02	kg/D.U.
Hazardous waste (N) [Hazardous waste for disposal]	2,98E-02	kg/D.U.
Other waste (O) [Waste for disposal]	3,89E-01	kg/D.U.
Paper (unspecified) [Waste for recovery]	7,15E-04	kg/D.U.
Plastic (unspecified) [Waste for recovery]	3,28E-02	kg/D.U.
Steel scrap (St) [Waste for recovery]	1,52E-02	kg/D.U.
Waste incineration of plastics (unspecified) fraction in municipal solid waste (MSW) [Waste for recovery]	3,57E-01	kg/D.U.

Table 19 Other environmental indicators of heterogeneous waterproofing membranes Fatrafol 810,810/V 1,5 mm production life cycle. Data are referred to D.U.

HIF-hetero [Plastics]	1,90E+00	kg/D.U.
Incineration of paper waste [Waste for recovery]	1,10E-01	kg/D.U.
Landfill of plastic waste [Consumer waste]	9,95E-03	kg/D.U.
Hazardous waste (N) [Hazardous waste for disposal]	1,82E-02	kg/D.U.
Other waste (O) [Waste for disposal]	2,39E-01	kg/D.U.
Paper (unspecified) [Waste for recovery]	4,38E-04	kg/D.U.
Plastic (unspecified) [Waste for recovery]	2,01E-02	kg/D.U.
Steel scrap (St) [Waste for recovery]	9,31E-03	kg/D.U.
Waste incineration of plastics (unspecified) fraction in municipal solid waste (MSW) [Waste for recovery]	2,19E-01	kg/D.U.

Table 20 Other environmental indicators of heterogeneous waterproofing membranes Fatrafol 807,807/V production life cycle. Data are referred to D.U.

HIF-hetero [Plastics]	2,20E+00	kg/D.U.
Incineration of paper waste [Waste for recovery]	1,28E-01	kg/D.U.
Landfill of plastic waste [Consumer waste]	1,15E-02	kg/D.U.
Hazardous waste (N) [Hazardous waste for disposal]	2,11E-02	kg/D.U.
Other waste (O) [Waste for disposal]	2,76E-01	kg/D.U.
Paper (unspecified) [Waste for recovery]	5,07E-04	kg/D.U.
Plastic (unspecified) [Waste for recovery]	2,33E-02	kg/D.U.
Steel scrap (St) [Waste for recovery]	1,08E-02	kg/D.U.
Waste incineration of plastics (unspecified) fraction in municipal solid waste (MSW) [Waste for recovery]	2,54E-01	kg/D.U.

4 ADDITIONAL ENVIRONMENTAL INFORMATION

Fatra, a.s. has established and applied intergrated management system for development, production, sales and services of products. An audit was performed, Report No. 015619. Proof has been furnished that the requirements according to ČSN EN ISO 9001:2000 and ISO 14001:2004 are fulfilled.

Obtained certificates EN ISO 9001 and 14001, and the commitment of whole company's staff to quality give the customers a guarantee of a standard quality of products.

Fatra, a.s. has established and applied an Occupational Health & Safety Management System of Proof has been furnished that the requirements according to OHSAS 18001:1999 are fulfilled. Obtained certificates RESPONSIBLE CARE, in industry. Fatra, a.s. is oriented for enhancement of environmental, health and safety.





5 MANDATORY STATEMENT

5.1 COMPARISONS OF EPDS WITHIN THIS PRODUCT CATEGORY

This EPD® refers to the International System EPD® developed by the International EPD® Consortium (IEC) and is available, on the website, www.environdec.com.

This EPD has been developed according to the PCR Construction products and CPC division 54 construction services; and EN 15804:2011.

EPDs within the same product category but from different programmes may not be comparable.

5.2 VERIFICATION AND REGISTRATION

PCR was prepared by: IVL Swedish Environmental Research Institute, Swedish Environmental Protection Agency, SP Trätek, Swedish Wood Preservation Institute, Swedisol, SCDA, Svenskt Limträ AB, SSAB PCR moderator: Martin Erlandsson, IVL Swedish Environmental Research Institute, Sweden, martin.erlandsson@ivl.se PCR review was conducted by: The International EPD® System Technical Committee		
Independent verification of the declaration data, according to ISO 14025: ☐ Internal ☒ External ☐ EPD proces certification		
Third party verifier: VÚPS, s.r.o. Accreditation number and body: ČIA		

6 VALIDITY OF THE EPD

This EPD is valid for 3 years, i.e. until 27.5.2016. If any change in production causing increase of any environmental impact larger than +/- 5% the EPD shall be adjusted.○

7 REFERENCES

- Guinee, J. (2001). "Handbook on life cycle assessment - Operational guide to the ISO standards." International Journal of Life Cycle Assessment 6(5): 255-255.
- IEC (2008). General Programme Instructions for environmental product declarations, EPD: 44.
- IEC (2012). Product Category Rules: CPC Division (not available): Construction Products and CPC Division 54: Construction Services. Product Category Rules. Stockholm, IEC: 35.
- Kočí, V. (2013). Life Cycle Assessment of PVC floor covering and waterproofing membranes produced by Fatra, a.s. Praha, LCA studio.

Author of this declaration: Vladimír Kočí, PhD



**EPD®****fatra****Cendec®****Independent verification of the declaration and data accordance to ISO 14025:2006**☐ internal☒ external

Programme:	EPD ® system (www.environdec.com)
Verification procedure:	ISO 14025: 2006 Environmental labels and declarations – Type III environmental declarations – principle and procedures General Programme Instructions for Environmental Product Declarations, EPD, version 1.0
Product category rules (PCR):	PCR CONSTRUCTION PRODUCTS AND CPC 54 CONSTRUCTION SERVICES, version 1.1, 2013-02-21

Výzkumný ústav pozemních staveb - Certifikační společnost, s.r.o., (Building Research Institute – Certification Company, Ltd.) – Certification Body for EPD verification no. 3013 accredited by Czech Accreditation Institute made independent verification of EPD in 3rd April 2013 in agreement with ISO 14025:2006. The certificate results from the Final report no. P-3013EPD-13-0248 from 27th May 2013 that includes certification body ascertaining and validity conditions of the certificate.

The verified EPD has reg. no. 3013EPD-13-0248.

Registration number	3013EPD - 13 - 0248 from 27 th May 2013
Certified validity	to 27 th May 2016 Výzkumný ústav pozemních staveb - Certifikační společnost, s.r.o., Pražská 16, 102 21 Praha 10 – Hostivař Czech Republic tel.: +420 271751148 fax: ++420 241017241 e-mail: vlasata@vups.cz
Contact	

27th May 2013
Barbora Vlasatá

**Head of Certification Body**

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No. 2 Certification Body

No. 3 Mgr. Barbora Vlasatá, head of Certification Body

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