ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	Etex Building Performance International
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ETE-20250127-CCA1-EN
Issue date	24.10.2022
Valid to	23.10.2027

Bluclad Windlock / Bluclad Renderboard

Etex

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General Information

Etex

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-ETE-20250127-CCA1-EN

This declaration is based on the product category rules:

Fibre cement / Fibre concrete, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

24.10.2022

Valid to

23.10.2027

Dipl.-Ing. Hans Peters
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Bluclad Windlock / Bluclad Renderboard

Owner of the declaration

Etex Building Performance International
Rue Marcel Demonque 500
84915 Avignon Cedex 9
France

Declared product / declared unit

The functional unit is 1 m^2 of Bluclad Windlock / Bluclad Renderboard of 10mm thickness.
The EPD also has an annexe which describes the impacts for 1m^2 Bluclad Windlock / Bluclad Renderboard for the other existing thicknesses (6 mm, 8 mm, 12 mm).

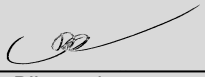
Scope:

The life cycle assessment is based on the production data of Bluclad Windlock / Bluclad Renderboard of the year 2019 at the two Etex production sites in Gresik and Karawang, both located in Indonesia. The average of the data collected from both plants has been used in this LCA study.
The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025:2011
☐ internally ☒ externally



Vito D'Incognito,
(Independent verifier)

Product

Product description/Product definition

Bluclad Windlock and Bluclad Renderboard are cellulose reinforced fibre cement boards. The main difference between the products is that Bluclad Renderboard has an additional hydrophobic layer.

Bluclad Windlock / Bluclad Renderboard boards are highly durable and suitable for external and internal applications. The boards are manufactured using the Hatschek technology and then autoclaved, which ensures optimal dimensional stability and mechanical resistance. The boards are available with squared edges. For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies.

- The product needs a declaration of performance taking into consideration EN 12467:2013+A2:2018, Fibre cement flat sheets and the CE-marking.
- For the application and use the respective national provisions apply.

Application

The Bluclad Windlock / Bluclad Renderboard boards are suitable for internal and external applications.

- Inner wall: non-load-bearing partition wall, retaining wall, timber frame wall, steel frame wall.
- Interior floor: finishing backer and loadbearing plate on load-bearing floors and floating floors
- Interior ceiling: suspended ceilings, pool ceilings
- Outdoor: wall and ceiling cladding in the not directly exposed outdoor area.

Manufacturing Process

Bluclad Windlock / Bluclad Renderboard fibre cement boards are manufactured largely in accordance with an automated winding process, the Hatschek process: the raw materials are mixed with water to prepare a homogenous mixture. Rotating screen cylinders are immersed in this fibre cement pulp which drains internally. The screen surface is covered in a thin film of fibre cement which is transferred onto an infinite conveyor belt from where it is conveyed to a format roller or forming drum which is gradually covered in an increasingly thicker layer of fibre cement. Once the requisite material thickness is achieved, the still moist and malleable fibre cement layer (fibre cement fleece) is separated and removed from the forming drum. The fibre cement fleece is cut to size. Leftovers are returned to the production process preventing any waste from being incurred. The sheets are then laid on templates and steam-hardened in an autoclave. The Bluclad Windlock / Bluclad Renderboard boards are then calibrated, sanded and for the Bluclad Renderboard boards, a hydrophobic layer is applied at both sides.

The quality management system of the production facilities is certified according to *ISO 9001;2015.*

Installation

The Bluclad Windlock / Bluclad Renderboard boards are mainly fixed with screws on a metal or wooden substructure. The joints are treated with a jointing compound, a reinforcement tape is used over the edges and the boards are finished with a finishing compound.

Environment and health during manufacturing

Environmental, occupational health and safety management system at the Bluclad Windlock / Bluclad Renderboard production plants are in accordance with the following standards:
ISO 14001;2015
ISO 45001;2018

Condition of use

Maintenance requirement will depend on the specific design and application. Usually Bluclad Windlock / Bluclad Renderboard won't change the composition of the materials and thus no maintenance is needed.

Environment and health during use

When the boards are used as designed, the current state of knowledge indicates that there is no risk involved for the environment or health.

Water

All ingredients are firmly bound in the matrix. The boards are insensitive to moisture and no ingredients which could be hazardous to water are expected to be washed out in the event of extraordinary effects by water.

Mechanical destruction

In case of mechanical destruction, no risks are expected to occur in terms of environment and human health.

Technical Data

The safety of a building is directly linked to the quality of the materials employed in its construction. The use of standardized materials and proper handling procedures is one of the ways construction industries ensure a building's safety.
Etex on-site laboratories perform chemical and mechanical tests guaranteeing compliance of the final products to technical standard requirements. Technical product specification is set by European standard *EN 12467:2013 + A2:2018* 'Fibre-cement flat sheets'.

Constructional data

Name	Value	Unit
Thermal conductivity ISO 13787	25	W/(mK)
Sound absorption	NA	%
Gross density EN 12467	1200	kg/m^3
Compressive strength	-	N/mm^2
Flexural strength EN 12467	7	N/mm^2
Modulus of elasticity	7000	N/mm^2
Moisture content at 23 °C, 80% humidity EN 12467	0.4	M.-%
Soak dry test EN 12467	Passed (50 Cycles)	
Strength classification EN 12467	Class 2	
Impermeability test EN 12467	Passed	
Fire reaction classification EN 13501-1	A1	
Freeze-Thaw EN 12467	Passed (100 Cycles)	10-6K-1
Warm water test EN 12467	Passed	
Durability EN 12467	Category A	

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to *EN 12467:2013+A2:2018,* Fibre cement flat sheets.

Base materials/Ancillary materials

Main raw materials used (in weight percentages):
Portland Cement- 25-45 %
Sand M32- 35-50 %
Cellulose - <10 %
others - <10 %
This product/article/at least one partial article contains substances listed in the candidate list (date: 24.10.2022) exceeding 0.1 percentage by mass: no.

Reference service life

Bluclad Windlock / Bluclad Renderboard is a rather new product on the market (produced since 2017), and there is not yet extensive evidence regarding its reference service life. However based on the internal experience with other fibre cement products in various applications it is assumed that upon condition that the product is used in accordance with the recommended installation guidelines, it is feasible to assume that this product lasts for 60 years unless it is used in aggressive environments or fully exposed applications.

LCA: Calculation rules

Declared Unit

The functional unit is 1 m^2 of Bluclad Windlock / Bluclad Renderboard of 10 mm thickness.

Name	Value	Unit
Declared unit	1	m^2
Area density with 10 mm thickness	14.6	kg/m^2

The data provided in the EPD, relate to the data of Bluclad Renderboard, which is considered to be representative of Bluclad Windlock and it represents the 'worst case scenario'. Also, the data are the average derived from the two production sites in Gresik and Karawang in Indonesia. Hence a variability study was conducted whose results displayed that there is little to no difference between the results based on average data and the data specific to the production sites.

System boundary

This study takes into account the mandatory life cycle stages of the *EN15804+A2* for a cradle-to-grave LCA study, being modules A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, B6, B7, C1, C2, C3, C4 and D.
Life cycle stages:

- **Product stage**: production of raw materials (A1), transport of raw materials to manufacturing site (A2), production of final product (A3);
- **Construction process stage:** transport to construction site (A4), construction/installation process (A5);
- **Use stage:** use (B1), maintenance (B2), repair (B3), replacements (B4), refurbishment (B5), operational energy use (B6), operational water use (B7);
- **End-of-life stage:** deconstruction/demolition (C1), transport to end-of-life treatment (C2), waste processing (C3) and final disposal (C4)
- **Benefits and loads beyond the system boundaries:** reuse, recovery, recycling potential (D)

Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product´s lifespan: Europe

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

The biogenic carbon content quantifies the amount of biogenic carbon in a construction product leaving the factory gate. There is biogenic carbon content in the product due to the use of cellulose. The uptake of biogenic CO_2 within the pallets and the carton is reported in module A3 and the release in module A5. The table below shows the biogenic carbon content per functional unit.

Information on describing the biogenic Carbon Content at factory gate

Name	Value	Unit
Biogenic carbon content in product	0.435	kg C
Biogenic carbon content in accompanying packaging	0.189	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

The following technical scenario information is required for the declared modules and optional for non-declared modules. Modules for which no information is declared can be deleted; additional information can also be listed if necessary.

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment if modules are not declared (MND).

A5 is not declared including the disposal of the packaging material on the construction site, the amounts of packaging materials included in the LCA calculations must be declared as technical scenario information for Module A5.

Transport to the building site (A4)

Name	Value	Unit
Transport Distance (factory to merchant) Transoceanic freight ship	19988	km
Transport Distance (factory to merchant) Truck 16 – 32 t, Euro5	656	km
Transport Distance (factory to merchant) Truck 16 – 32 t, Euro3	66	km
Transport distance (merchant to installation) Truck 16 – 32 t, Euro5	35	km
Transport Distance (merchant to installation) Truck 3.5 – 7.5 t, Euro5	35	km

Installation into the building (A5)

Name	Value	Unit
Auxiliary Steel screws	0.03	kg
Water consumption Tap water	0.00041	m^3
Electricity consumption Electricity, low voltage	0.03617	kWh
Joint mesh tape	0.000858	kg
Primer	0.1040	kg
Finisher	0.220	kg
Installation losses	3	%

Use or application of the installed product (B1)

The Bluclad Windlock / Bluclad Renderboard boards are permanently installed in the building and generally do not require any repair, maintenance or replacement. The only impact during the use phase is that of carbonation, where some CO_2 is adsorbed from the atmosphere over the life of the board. Depending on the application where the boards are used, the degree of carbonation will vary.
The carbonation was calculated to be as follows for the various use scenarios and reported in the B1 module as shown below,

- B1/1 - Outdoor sheltered from rain : -1.768 kg CO_2eq / 1 m²10 mm.
- B1/2 - Indoor without or with 'open' cover such as a paint : -0.943 kg CO_2eq / 1 m²10 mm.
- B1/3 - Indoor under 'closed' cover such as a tile : 0 kg CO_2eq / 1 m²10 mm.

Name	Value	Unit

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Reference service life

The RSL of Bluclad Windlock / Bluclad Renderboard is estimated at 60 years unless it is used in aggressive environments or fully exposed applications

Name	Value	Unit
Life Span according to the manufacturer	60	a
Outdoor environment, (for outdoor applications), e.g. weathering, pollutants, UV and wind exposure, building orientation, shading, temperature	60	-
Indoor environment (for indoor applications), e.g. temperature, moisture, chemical exposure	60	-

End of life (C1-C4)

A conservative approach was used in this study. Although after end-of-life, scenarios where the boards are re-used or recycled are realistic, a scenario with 100% landfill was used.

Name	Value	Unit
Collected separately waste type waste type	-	kg
Collected as mixed construction waste	-	kg
Reuse	-	kg
Recycling Steel Screws	0.0285	kg
Energy recovery Steel Screws	0.0006789	kg
Landfilling Steel screws	0.0008211	kg
Landfilling Fibre cement board	14.83	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

In module D, the benefits and loads beyond the system boundaries are quantified. For recycling, it concerns both loads of the recycling processes and the benefits of the avoided virgin materials, when the recycled components are used for other purposes. In case of incineration, it concerns the benefits from the avoided production of energy grace to energy recovery.

Name	Value	Unit

LCA: Results

The following tables describe the environmental performance of the 1 m^2 Bluclad Windlock / Bluclad Renderboard of 10 mm thickness.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction 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
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m2 Bluclad Windlock / Bluclad Renderboard (10 mm)

Parameter	Unit	A1	A2	A3	A4	A5	B1/1	B1/2	B1/3	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	3.6E+00	7.94E-01	3.18E+00	4.85E+00	1.67E+00	-1.77E+00	-9.43E-01	0	0	0	0	0	0	0	8.87E-03	1.27E-01	6.29E-05	1.73E+00	-1.38E-01
GWP-fossil	kg CO_2 eq	5.4E+00	7.93E-01	3.67E+00	4.84E+00	9.64E-01	0	0	0	0	0	0	0	0	0	8.79E-03	1.27E-01	6.18E-05	1E-01	-1.37E-01
GWP-biogenic	kg CO_2 eq	-1.8E+00	3.52E-04	-4.93E-01	1.6E-03	7.07E-01	0	0	0	0	0	0	0	0	0	6.15E-05	5.2E-05	1.02E-06	1.63E+00	-1.52E-04
GWP-luluc	kg CO_2 eq	2.37E-03	4.76E-04	7.36E-03	2.69E-03	7.87E-04	0	0	0	0	0	0	0	0	0	2.05E-05	4.45E-05	7.38E-08	5.12E-05	-2.44E-04
ODP	kg CFC11 eq	2.45E-07	1.68E-07	2.11E-07	1.02E-06	9.82E-08	0	0	0	0	0	0	0	0	0	7.4E-10	2.9E-08	2.5E-12	3.32E-08	-1.37E-08
AP	mol H^+ eq	1.88E-02	6.9E-03	1.74E-02	1.02E-01	7.25E-03	0	0	0	0	0	0	0	0	0	5.13E-05	5.21E-04	1.85E-07	7.64E-04	-5.67E-04
EP-freshwater	kg P eq	9.14E-05	7.41E-06	4.61E-04	2.76E-05	3.89E-05	0	0	0	0	0	0	0	0	0	9.39E-07	1E-06	9.24E-09	5.3E-06	-7.15E-06
EP-marine	kg N eq	4.51E-03	2.48E-03	3.66E-03	2.56E-02	1.59E-03	0	0	0	0	0	0	0	0	0	6.51E-06	1.55E-04	2.97E-08	2.69E-04	-1.21E-04
EP-terrestrial	mol N eq	5.18E-02	2.74E-02	4.03E-02	2.85E-01	1.78E-02	0	0	0	0	0	0	0	0	0	8.02E-05	1.71E-03	4.59E-07	3.03E-03	-1.37E-03
POCP	kg NMVOC eq	1.34E-02	7.37E-03	1.12E-02	7.5E-02	5.12E-03	0	0	0	0	0	0	0	0	0	2.04E-05	5.23E-04	9.13E-08	8.44E-04	-4.79E-04
ADPE	kg Sb eq	1.13E-05	1.29E-06	9.76E-07	6.09E-06	7.03E-06	0	0	0	0	0	0	0	0	0	1.2E-08	2.48E-07	1.04E-10	9.95E-08	-1.15E-07
ADPF	MJ	2.78E+01	1.14E+01	4.26E+01	6.64E+01	1.39E+01	0	0	0	0	0	0	0	0	0	1.81E-01	1.92E+00	8.38E-04	2.55E+00	-2.29E+00
WDP	m^3 world eq deprived	1.4E+00	3.85E-02	8.39E-01	1.38E-01	3.73E-01	0	0	0	0	0	0	0	0	0	2.03E-03	5.35E-03	3.28E-06	8E-03	-3.06E-02

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m2 Bluclad Windlock / Bluclad Renderboard (10 mm)

Parameter	Unit	A1	A2	A3	A4	A5	B1/1	B1/2	B1/3	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	6.74E+00	1.39E-01	5.74E+00	6.47E-01	2.46E+00	0	0	0	0	0	0	0	0	0	3.38E-02	2.66E-02	1.5E-04	1.09E-01	0
PERM	MJ	1.57E+01	0	4.38E+00	0	-2.7E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	1.96E+00
PERT	MJ	2.24E+01	1.39E-01	1.01E+01	6.47E-01	-2.4E-01	0	0	0	0	0	0	0	0	0	3.38E-02	2.66E-02	1.5E-04	1.09E-01	1.96E+00
PENRE	MJ	3.41E+01	1.17E+01	5.44E+01	6.65E+01	1.6E+01	0	0	0	0	0	0	0	0	0	2.17E-01	1.93E+00	1.13E-03	2.68E+00	0
PENRM	MJ	2.99E-01	0	2.89E-01	0	-2.87E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	3.65E-02
PENRT	MJ	3.44E+01	1.17E+01	5.47E+01	6.65E+01	1.57E+01	0	0	0	0	0	0	0	0	0	2.17E-01	1.93E+00	1.13E-03	2.68E+00	3.65E-02
SM	kg	5.4E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.37E+00
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FW	m^3	3.15E-02	7.7E-04	1.5E-02	3.33E-03	9.27E-03	0	0	0	0	0	0	0	0	0	1.33E-04	1.39E-04	2.48E-07	2.54E-03	-9.89E-04

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2:
1 m2 Bluclad Windlock / Bluclad Renderboard (10 mm)

Parameter	Unit	A1	A2	A3	A4	A5	B1/1	B1/2	B1/3	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	1.85E-05	2.91E-05	2.93E-05	1.11E-04	1.48E-05	0	0	0	0	0	0	0	0	0	1.21E-07	5.04E-06	1.1E-09	3.03E-06	-5.46E-06
NHWD	kg	3.92E-01	4.49E-01	4.56E-01	1.49E+00	8.87E-01	0	0	0	0	0	0	0	0	0	6.39E-04	9.19E-02	3.74E-06	1.48E+01	-1.43E-02
RWD	kg	9.3E-05	7.51E-05	5.2E-05	4.57E-04	4.79E-05	0	0	0	0	0	0	0	0	0	1.28E-06	1.31E-05	3.38E-09	1.62E-05	-7.42E-06
CRU	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	1.71E+00	0	2.26E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.94E+00
MER	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	2.71E-02	0	3.92E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	-4.19E-01
EET	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional:
1 m2 Bluclad Windlock / Bluclad Renderboard (10 mm)

Parameter	Unit	A1	A2	A3	A4	A5	B1/1	B1/2	B1/3	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease incidence	1.98E-07	6.71E-08	2.37E-07	2.3E-07	5.01E-08	0	0	0	0	0	0	0	0	0	1.34E-10	8.87E-09	8.48E-13	1.49E-08	-6.1E-09
IR	kBq U235 eq	8.03E-02	4.77E-02	3.68E-02	2.87E-01	4.03E-02	0	0	0	0	0	0	0	0	0	1.56E-03	8.4E-03	2.64E-06	1.05E-02	-7.8E-03
ETP-fw	CTUe	8.55E+01	9.96E+00	2.01E+01	4.76E+01	1.73E+01	0	0	0	0	0	0	0	0	0	1.24E-01	1.54E+00	7.23E-04	1.54E+00	-1.9E+00
HTP-c	CTUh	2.68E-09	4.4E-10	1.02E-09	2.34E-09	3.21E-09	0	0	0	0	0	0	0	0	0	3.2E-12	4.32E-11	2.25E-14	3.69E-11	-1.79E-10
HTP-nc	CTUh	6.62E-08	1.12E-08	2.85E-08	4.53E-08	1.89E-08	0	0	0	0	0	0	0	0	0	1.09E-10	1.68E-09	6.65E-13	9.96E-10	-1.83E-09
SQP	SQP	1E+02	7.49E+00	7.8E+01	2.52E+01	9.15E+00	0	0	0	0	0	0	0	0	0	4.42E-02	1.33E+00	6.26E-04	4.85E+00	-3.34E+01

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator 'Potential Human exposure efficiency relative to U235'. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.
Disclaimer 2 – for the indicators 'abiotic depletion potential for non-fossil resources', 'abiotic depletion potential for fossil resources', 'water (user) deprivation potential, deprivation-weighted water consumption', 'potential comparative toxic unit for ecosystems', 'potential comparative toxic unit for humans – cancerogenic', 'Potential comparative toxic unit for humans - not cancerogenic', 'potential soil quality index'. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

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