EcoReview
Part of the solution.

Environmental Product Declaration
Declaration according to
EN 15804+A2 &
NMD Assessment Method 1.2

Environmental Product Declaration

According to EN 15804+A2

(conform NMD Assessment Method 1.2)

ADFIL
Construction Fibres

Product Declaration	Durus Easyfinish, Part of Concrete Mixture		
Unit (DU or FU)	1 kg	**LCA study by**	EcoReview B.V.
Declared by	Adfil N.V.	**Calculation number**	2025.086.
Owner of Declaration	Adfil N.V.	**Issue Date**	26-09-2025
Verifier	Advieslab VOF	**Expiry Date**	26-09-2030

General Information

Owner of Declaration

Name	Adfil N.V.
Street	Industriestraat 39
Postal Code	9240
City	Zele
Contact	Els van Nimmen
Phone	0032 473 74 10 40

Declaration for

Calculation Number	2025.086.
Issue Date	26-09-2025
Expiry Date	26-09-2030
Product	Durus Easyfinish, Part of Concrete Mixture
Declared / Functional Unit	1 kg
Reference Service Life	100 years
Scalable product	Not applicable
Geographical Representation	Produced (A1-A3) Adfil in Zele, Belgium
Product Description	Durus Easyfinish are synthetic fibres which are used as fibre reinforcement in concrete structures.

Declaration Information

This Environmental Product Declaration is in accordance with EN 15804+A2. This certificate is based on an LCA-dossier developed according to ISO14040:2006, ISO14044:2006 and EN15804+A2 and the NMD Assessment Method 1.2. EPD of construction products may not be comparable if they do not comply to comparable norms and standards. Substances of Very High Concern (SVHC) that are listed on the 'Candidate List of Substances of Very High Concern for authorization' are declared when contents exceed the limits for registration with ECHA.

This LCA study was conducted by: Roel van Oosterhout, EcoReview B.V.

Demonstration of Verification

Statement	CEN standard EN15804 serves as the core PCR. Verification of the claim and data was carried out independently.
Verifier	External
Name	Anne Kees Jeeninga, Advieslab VOF
Signature	

LCA Information

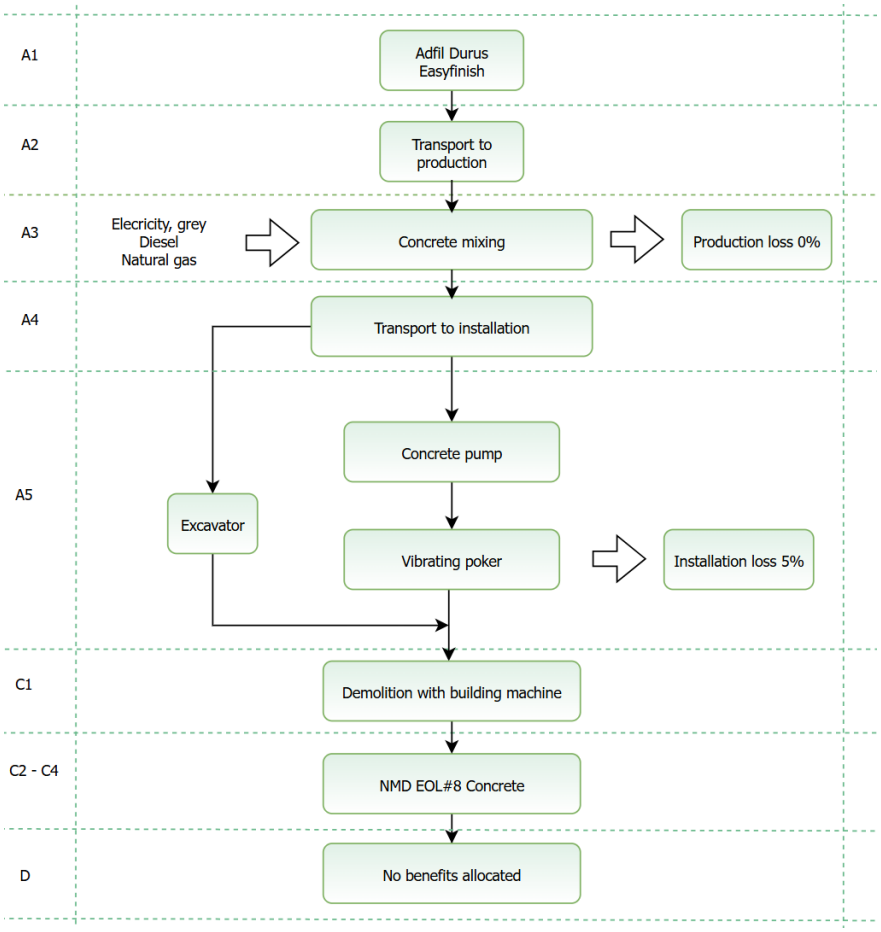
LCA Standard	ISO 14040:2006
Product Category Rules (PCR)	EN 15804+A2 + NMD Assessment Method 1.2
Additional PCR	NL PCR Cement (04-2023)
Standard Database (EN15804+A1)	Ecoinvent 3.6 + NMD 3.11
Standard Database (EN15804+A2)	Ecoinvent 3.9.1. + NMD 3.11
Char. Method (EN15804+A2)	EF 3.1
System Model	Allocation, cut-off by classification
LCA Software	SimaPro 9.6.0.1
Year of Data Collection	2024

Scope of Declaration

Lifecycle Stage	Module	Declared	Description
Production stage	A1	X	Raw Material supply
	A2	X	Transport
	A3	X	Manufacturing
Construction stage	A4	X	Transport
	A4	X	Installation
Use stage	B1	X	Use
	B2	X	Maintenance
	B3	X	Repair
	B4	X	Replacement
	B5	X	Refurbishment
	B6	X	Operational Energy Use
	B7	X	Operational Water Use
End-of-Life stage	C1	X	Deconstruction
	C2	X	Transport
	C3	X	Waste Processing
	C4	X	Disposal
Benefits and loads beyond the system boundaries	D	X	Reuse, Recycle, Recycling potential

X = Module Declared
MND = Module Not Declared

Process Diagram



Detailed Product Description

General Product Information

Adfil Durus® EasyFinish is an innovative synthetic macro fibre designed to enhance the performance, durability, and ease of finishing in concrete applications. It provides a high-performance alternative to traditional steel reinforcement by improving crack resistance, impact strength, and overall toughness of concrete while offering superior workability and finishability.

EasyFinish synthetic fibres are engineered with dimensions of 40 mm in length and a 0.7 mm equivalent diameter, featuring a density of 0.922 kg/m^3. These fibres are EN 14889-2 certified, ensuring compliance with industry standards for quality and performance.

The fibres are extruded from high-quality polypropylene (PP) polymers, ensuring optimal strength, flexibility, and chemical resistance. These fibres are non-corrosive, lightweight, and easy to integrate into various concrete mixes, leading to significant reductions in labour and transportation costs. The product is certified with CE, ATG, and SECO certificates.

The polypropylene granules and additives are gravimetrically dosed and mixed in the extrusion feed hopper. This composition is melted and blended into a homogeneous polymer mixture. After filtration and dosing, the liquid polymers are extruded through a die plate, forming the fibres. To enhance the mechanical strength of the fibres, they are drawn and hardened in multiple steps. In the next stage, the fibre's surface is shaped. Subsequently, the fibres are bundled and cut to length simultaneously. Edge trimming waste is re-ground and fed back into the extruder. In the final process step, the fibres are packed into paper bags. A certain amount of production waste is generated afterward, which is not recycled within the product system boundaries but used in another production process within Adfil. Finally, the bags are stacked on pallets, wrapped with PE stretch film, and covered with a protective hood to prepare the products for shipping.

Information on LCA-model

This EPD is focused on the use Adfil Durus Easyfinish in a concrete mixture. For the production of Adfil Easyfinish, primary data (category 1) supplied by Adfil was used. For the concrete mixing parts of the lifecycle, data from category 3 data on concrete production described in "H42 Betonconstructies - Betonitems Betonmortel Version 7 (SGS Search Consultancy, 2025)" was used.

In the aforementioned category 3 report, a specific concrete mixture is defined by the name of C35/45 CEM I + PP-fibres 2 kg/m3. This is a concrete mixture with polypropylene fibres in the mixture and is the only one of its kind in the H42 report. We assumed that the density of this specific mixture (2353,2 kg/m^3) would be most representative for calculation used in this LCA-study. All modelling steps from A2-D were based on data points form this H42 report.

Components (> 1%)

The division of components described below is indented to enable users of this EPD to understand the composition of the product for safe and effective installation, use and disposal of the product.

Component	Mass %
EasyFinish Fibre Mixture	100%

Example Image

Figure: Representation of product.

Results EN15804+A1

Set 1	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D	A1-D
ECI A1	euro	**0,19**	**0,00**	**0,00**	**0,20**	**0,00**	**0,01**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,21**
ECI A1	euro	1,94E-01	2,66E-03	8,28E-05	1,97E-01	8,06E-04	1,05E-02	9,60E-04	7,98E-04	1,81E-04	7,30E-06	0,00E+00	2,10E-01
Core Impact Indicators													
ADPE	kg Sb eq	2,22E-05	5,64E-07	1,45E-09	2,28E-05	1,71E-07	1,16E-06	1,88E-08	1,69E-07	7,96E-09	4,82E-10	0,00E+00	2,43E-05
ADPF	kg Sb eq	3,64E-02	1,62E-04	9,70E-06	3,66E-02	4,92E-05	1,86E-03	6,18E-05	4,87E-05	1,22E-05	7,04E-07	0,00E+00	3,86E-02
GWP1	kg CO2 eq	2,28E+00	2,21E-02	1,12E-03	2,30E+00	6,69E-03	1,20E-01	9,06E-03	6,62E-03	1,73E-03	5,17E-05	0,00E+00	2,45E+00
ODP1	kg CFC-11 eq	1,29E-07	3,92E-09	1,31E-10	1,33E-07	1,19E-09	7,55E-09	1,59E-09	1,18E-09	1,98E-10	1,72E-11	0,00E+00	1,45E-07
POCP	kg C2H4	1,72E-03	1,33E-05	2,17E-07	1,73E-03	4,04E-06	9,06E-05	2,79E-06	4,00E-06	9,90E-07	5,51E-08	0,00E+00	1,84E-03
AP	kg SO2 eq	6,69E-03	9,71E-05	1,97E-06	6,79E-03	2,94E-05	3,71E-04	3,74E-05	2,91E-05	7,95E-06	3,78E-07	0,00E+00	7,26E-03
EP	kg PO4--- eq	6,63E-04	1,91E-05	3,58E-07	6,82E-04	5,78E-06	4,11E-05	7,83E-06	5,72E-06	1,76E-06	7,29E-08	0,00E+00	7,45E-04
Toxicity Indicators for Dutch Market													
HTP	kg 1,4-DB eq	3,86E-01	9,30E-03	1,32E-04	3,95E-01	2,82E-03	2,16E-02	2,78E-03	2,79E-03	4,35E-04	2,34E-05	0,00E+00	4,26E-01
FAETP	kg 1,4-DB eq	1,09E-02	2,71E-04	3,68E-06	1,12E-02	8,22E-05	5,91E-04	5,33E-05	8,14E-05	8,17E-06	5,54E-07	0,00E+00	1,20E-02
MAETP	kg 1,4-DB eq	2,59E+01	9,76E-01	1,34E-02	2,69E+01	2,96E-01	1,46E+00	1,76E-01	2,93E-01	3,05E-02	1,98E-03	0,00E+00	2,91E+01
TETP	kg 1,4-DB eq	4,87E-03	3,29E-05	4,02E-06	4,91E-03	9,96E-06	2,53E-04	2,69E-05	9,86E-06	4,85E-06	5,87E-08	0,00E+00	5,21E-03

ECI = Environmental Cost Indicator (Milieukosten Indicator (MKI) in Dutch); ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; POCP = Formation potential of tropospheric ozone photochemical oxidants; AP = Acidification potential of land and water; EP = Eutrophication potential; HTP = Human toxicity potential; FAETP = Freshwater aquatic ecotoxicity potential; MAETP = Marine aquatic ecotoxicity potential; TETP = Terrestrial ecotoxicity potential; ECI = Environmental Costs Indicator; ADPF = Abiotic depletion potential for fossil resources

Results EN15804+A2

Set 2	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D	A1-D
ECI A2	euro	**0,37**	**0,00**	**0,00**	**0,38**	**0,00**	**0,02**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,40**
ECI A2	euro	3,73E-01	4,99E-03	1,59E-04	3,78E-01	1,51E-03	2,03E-02	1,59E-03	1,50E-03	3,85E-04	1,61E-05	0,00E+00	4,03E-01
GWP2	kg CO2 eq	2,27E+00	2,46E-02	1,16E-03	2,29E+00	7,46E-03	1,20E-01	1,02E-02	7,38E-03	1,63E-03	6,08E-05	0,00E+00	2,44E+00
GWP-F	kg CO2 eq	2,37E+00	2,45E-02	1,16E-03	2,40E+00	7,42E-03	1,26E-01	1,01E-02	7,35E-03	1,62E-03	6,08E-05	0,00E+00	2,55E+00
GWP-B	kg CO2 eq	-1,05E-01	3,82E-05	2,39E-07	-1,05E-01	1,16E-05	-5,24E-03	1,05E-05	1,15E-05	7,41E-06	3,48E-08	0,00E+00	-1,10E-01
GWP-L	kg CO2 eq	1,48E-03	8,73E-05	7,61E-08	1,57E-03	2,65E-05	8,17E-05	1,52E-06	2,62E-05	8,61E-07	3,67E-08	0,00E+00	1,70E-03
ODP2	kg CFC11 eq	1,04E-07	4,36E-10	1,13E-10	1,05E-07	1,32E-10	5,33E-09	2,19E-10	1,31E-10	3,58E-11	1,76E-12	0,00E+00	1,10E-07
AP2	mol H+ eq	8,07E-03	1,17E-04	2,47E-06	8,19E-03	3,55E-05	4,51E-04	4,58E-05	3,52E-05	1,00E-05	4,58E-07	0,00E+00	8,77E-03
EP-FW	kg P eq	4,05E-05	2,44E-07	1,66E-08	4,08E-05	7,38E-08	2,08E-06	8,97E-08	7,31E-08	3,06E-08	5,93E-10	0,00E+00	4,31E-05
EP-M	kg N eq	1,43E-03	4,46E-05	8,06E-07	1,48E-03	1,35E-05	9,24E-05	1,94E-05	1,34E-05	4,21E-06	1,75E-07	0,00E+00	1,62E-03
EP-T	mol N eq	1,59E-02	4,75E-04	8,85E-06	1,64E-02	1,44E-04	1,02E-03	2,09E-04	1,43E-04	4,60E-05	1,88E-06	0,00E+00	1,79E-02
POCP2	kg NMVOC eq	6,94E-03	1,62E-04	2,68E-06	7,10E-03	4,92E-05	4,16E-04	6,62E-05	4,87E-05	1,38E-05	6,56E-07	0,00E+00	7,70E-03
ADP-MM	kg Sb eq	2,22E-05	7,67E-08	1,21E-09	2,23E-05	2,32E-08	1,12E-06	6,83E-09	2,30E-08	6,43E-09	8,44E-11	0,00E+00	2,35E-05
ADP-F	MJ	8,33E+01	3,51E-01	1,86E-02	8,37E+01	1,06E-01	4,26E+00	1,36E-01	1,05E-01	2,23E-02	1,51E-03	0,00E+00	8,83E+01
WDP	m3 depriv.	1,52E+00	2,15E-03	1,21E-04	1,52E+00	6,52E-04	7,64E-02	5,41E-04	6,46E-04	1,33E-04	6,80E-05	0,00E+00	1,60E+00
PM	disease inc.	6,92E-08	2,42E-09	7,33E-12	7,16E-08	7,33E-10	4,53E-09	1,52E-10	7,25E-10	2,40E-10	1,00E-11	0,00E+00	7,80E-08
IR	kBq U-235 eq	1,60E-01	1,37E-04	2,07E-05	1,60E-01	4,15E-05	8,03E-03	6,23E-05	4,11E-05	2,38E-05	4,00E-07	0,00E+00	1,68E-01
ETP-FW	CTUe	1,61E+01	2,59E-01	7,25E-03	1,64E+01	7,84E-02	8,57E-01	5,98E-02	7,77E-02	8,34E-03	7,11E-04	0,00E+00	1,74E+01
HTP-C	CTUh	5,86E-10	1,30E-11	5,27E-13	5,99E-10	3,93E-12	3,44E-11	1,88E-11	3,89E-12	5,46E-13	2,59E-14	0,00E+00	6,61E-10
HTP-NC	CTUh	1,67E-08	2,82E-10	4,71E-12	1,70E-08	8,54E-11	8,74E-10	4,88E-11	8,45E-11	1,11E-11	3,24E-13	0,00E+00	1,81E-08
SQP	Pt	1,48E+01	2,77E-01	8,16E-04	1,51E+01	8,39E-02	7,67E-01	1,02E-02	8,31E-02	4,39E-03	3,01E-03	0,00E+00	1,60E+01

ECI = Environmental Cost Indicator (Milieukosten Indicator (MKI) in Dutch); GWP-total = Climate change; GWP-f = Climate change – Fossil; GWP-b = Climate change – Biogenic; GWP-luluc = Climate change – Land use and LU change; ODP = Ozone depletion; AP = Acidification; EP-fw = Eutrophication, freshwater; EP-m = Eutrophication, marine; EP-T = Eutrophication, terrestrial; POCP = Photochemical ozone formation; ADP-mm = Resource use, minerals and metals; ADP-f = Resource use, fossils; WDP = Water use; PM = Particulate matter; IR = Ionising radiation; ETP-fw = Ecotoxicity, freshwater; HTP-c = Human toxicity, cancer; HTP-nc = Human toxicity, non-cancer; SQP = Land use;

Results Parameters

Parameter	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D	A1-D
Resource Use													
PERE	MJ	3,69E+00	4,96E-03	8,09E-05	3,70E+00	1,50E-03	1,86E-01	1,71E-03	1,49E-03	1,71E-03	1,28E-05	0,00E+00	3,89E+00
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
PERT	MJ	3,69E+00	4,96E-03	8,09E-05	3,70E+00	1,50E-03	1,86E-01	1,71E-03	1,49E-03	1,71E-03	1,28E-05	0,00E+00	3,89E+00
PENRE	MJ	6,02E+01	3,51E-01	2,01E-02	6,06E+01	1,06E-01	4,54E+00	1,36E-01	1,05E-01	2,23E-02	1,51E-03	0,00E+00	6,55E+01
PENRM	MJ	2,87E+01	0,00E+00	0,00E+00	2,87E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,87E+01
PENRT	MJ	8,89E+01	3,51E-01	2,01E-02	8,93E+01	1,06E-01	4,54E+00	1,36E-01	1,05E-01	2,23E-02	1,51E-03	0,00E+00	9,42E+01
PET	MJ	9,26E+01	3,56E-01	2,02E-02	9,30E+01	1,08E-01	4,73E+00	1,38E-01	1,07E-01	2,40E-02	1,53E-03	0,00E+00	9,81E+01
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
SF-R	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
SF-NR	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
FW	m3	2,50E-02	9,03E-05	4,05E-06	2,51E-02	2,74E-05	1,27E-03	1,94E-05	2,71E-05	6,34E-06	1,63E-06	0,00E+00	2,64E-02
Waste Categories													
HWD	kg	1,76E-05	2,24E-06	3,48E-08	1,99E-05	6,78E-07	1,50E-06	8,72E-07	6,71E-07	1,17E-07	8,02E-09	0,00E+00	2,37E-05
NHWD	kg	1,16E-01	2,32E-02	2,47E-05	1,39E-01	7,02E-03	8,46E-03	4,61E-04	6,95E-03	3,16E-03	1,00E-02	0,00E+00	1,75E-01
RWD	kg	1,38E-04	8,03E-08	1,96E-08	1,38E-04	2,43E-08	6,92E-06	4,26E-08	2,41E-08	1,99E-08	2,24E-10	0,00E+00	1,45E-04
Output Flows													
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
MFR	kg	0,00E+00	0,00E+00	1,24E-06	1,24E-06	0,00E+00	6,19E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,30E-06
MER	MJ	0,00E+00	0,00E+00	5,26E-08	5,26E-08	0,00E+00	2,63E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,52E-08
EE-E	MJ	0,00E+00	0,00E+00	3,56E-06	3,56E-06	0,00E+00	1,78E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,74E-06
EE-T	MJ	0,00E+00	0,00E+00	6,14E-06	6,14E-06	0,00E+00	3,07E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,45E-06

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; PERM = Use of renewable primary energy resources used as raw materials [MJ]; PERT = Total use of renewable primary energy resources [MJ]; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; PENRM = Use of non-renewable primary energy resources used as raw materials [MJ]; PENRT = Total use of non-renewable primary energy resources [MJ]; PET = Total Energy [MJ]; SM = Use of secondary material [kg]; RSF = Use of renewable secondary fuels [MJ]; NRSF = Use of non-renewable secondary fuels [MJ]; FW = Use of net fresh water [m3]; HWD = Hazardous waste disposed [kg]; NHWD = Non-hazardous waste disposed [kg]; RWD = Radioactive waste disposed [kg]; CRU = Components for re-use [kg]; MFR = Materials for recycling [kg]; EIA = Materials for energy recovery [kg]; EE = Exported energy [MJ]

Biogenic Carbon Content

In the table below, information describing the biogenic carbon content at factory gate (A1-A3) is described.

Biogenic Carbon Content	Amount (in kg C)
Biogenic Carbon in Product	0,00
Biogenic Carbon in Packaging	0,00
Note: 1 kg biogenic carbon (C) is equivalent to 44/12 kg CO_2	

If the mass of biogenic carbon containing materials in the product is less than 5% of the mass of the product, the declaration of biogenic carbon may be omitted (= 0 kg).

If the mass of biogenic carbon containing materials in the packaging is less than 5% of the mass of the product, the declaration of biogenic carbon may be omitted (= 0 kg).

Disclaimers on Indicators

According to EN15804+A2, the following disclaimers shall be made.

Disclaimer	Statement
Disclaimer 1	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 nor due to radioactive waste disposals in underground d facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.
Dislaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

The disclaimers from the table above apply to the relevant core and additional environmental impact indicators defined below and follow the ILCD classification.

ILCD Classification	Indicator	Disclaimer
ILCD Type 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD Type 2	Acidification potential, accumulated exceedance (AP)	None
	Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-FW)	None
	Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-M)	None
	Eutrophication potential, accumulated exceedance (EP-T)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential human exposure efficiency relative to U235 (IR)	1
ILCD Type 3	Abiotic depletion potential for non-fossil resources (ADP-MM)	2
	Abiotic depletion potential for fossil resources (ADP-F)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential comparative toxic unit for ecosystems (ETP-FW)	2
	Potential comparative toxic unit for humans (HTP-C)	2
	Potential comparative toxic unit for humans (HTP-NC)	2
	Potential soil quality index (SQP)	2

References

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