

NUTEK NON-METALLIC BOXES

PEP ecopassport®

Product Environmental Profile



Document in compliance with ISO 14025: 2010 "Environmental labels and declarations. Type III environmental declarations"

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ABB Purpose & Embedding Sustainability

ABB is committed to continually promoting and embedding sustainability across its operations and value chain, aspiring to become a role model for others to follow.

With its ABB Purpose, ABB is focusing on reducing harmful emissions, preserving natural resources and championing ethical and humane behavior.



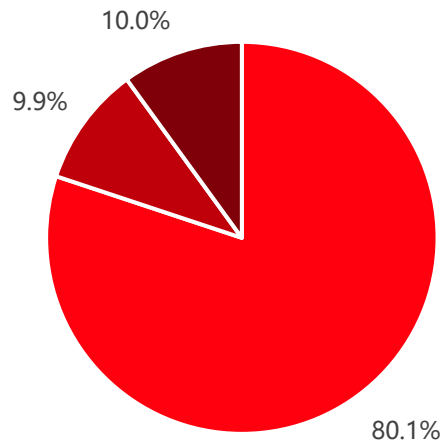
General Information

Reference product	Product F-WSW
Description of the product	NuTek Non-Metallic Boxes is a leading brand for non-metallic thermoplastic boxes used exclusively for wood-frame residential construction. The NuTek Non-Metallic Boxes family belong to the “Other Cable Management Products” category indicated in the PSR-0003-ed2.
Functional unit	<p>The function unit is to connect a workstation remote from the wall to the energy and communication networks for 20 years, via non-metallic sheathed cables.</p> <p>The products are eligible to bear the CSA Mark shown with adjacent indicators ‘C’ and ‘US’ for Canada and US or with adjacent indicator ‘US’ for US only or without either indicator for Canada only.</p> <p>The reference flow is one piece of F-WSW box (reference product) with a weight of 0.1184 kg and its packaging of 0.0133 kg.</p> <p>The NuTek Non-Metallic Boxes family belong to the “Other Cable Management Products” category indicated in the PSR-0003-ed2, in particular the sub-category “Non-equipped service poles, service posts, multi-outlets extensions and floor boxes”.</p>
Other product covered	F-WSW, FWOCT, WSW, 2-F-WSW, F-WSW-UPC, WOCT, 2-WSW, WSW-UPC, FWRD, 3-WSW

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	2/18



Constituent Materials



■ Plastics 105.56 g ■ Metals 13.05 g ■ Others 13.19 g

**Total weight of
Reference product**

131.8

g

Plastics as % of weight		Metals as % of weight		Others as % of weight	
Name and CAS number	Weight%	Name and CAS number	Weight%	Name and CAS number	Weight%
PPE+PS	74.13	Steel	9.90	Label	0.03
PVC	5.84	-	-	Carton	4.82
PE	0.12	-	-	Wood	5.16
-	-	-	-	-	-

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	3/18



Additional Environmental Information

Manufacturing	The manufacturing stage includes the production and transportation to the manufacturer's last logistic platform of NuTek Non-Metallic Boxes and its packaging. The production occurs at the ABB factory located in Pointe-Claire (CA).
Distribution	The transport from ABB CA factory to storage (Bromont) site was taken into account. For the distribution of the product from storage to the final customer, secondary data for the distance has been used for lorry and a weighted average has been computed relative to distances with a cut-off about 20%.
Installation	Two steel screws are required for the installation of the product.
Use	No material and energy consumption occur during the use stage. No maintenance happens during the use phase, the environmental impacts linked to this procedure have been considered equal to zero in the respective results section.
End of life	The default end-of-life scenario provided by the PCR document has been adopted for the the NuTek Non-Metallic Boxes (100% incineration).
Benefits and loads beyond the system boundaries	No benefits and loads beyond the system boundaries has been considered.

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	4/18



Environmental Impacts

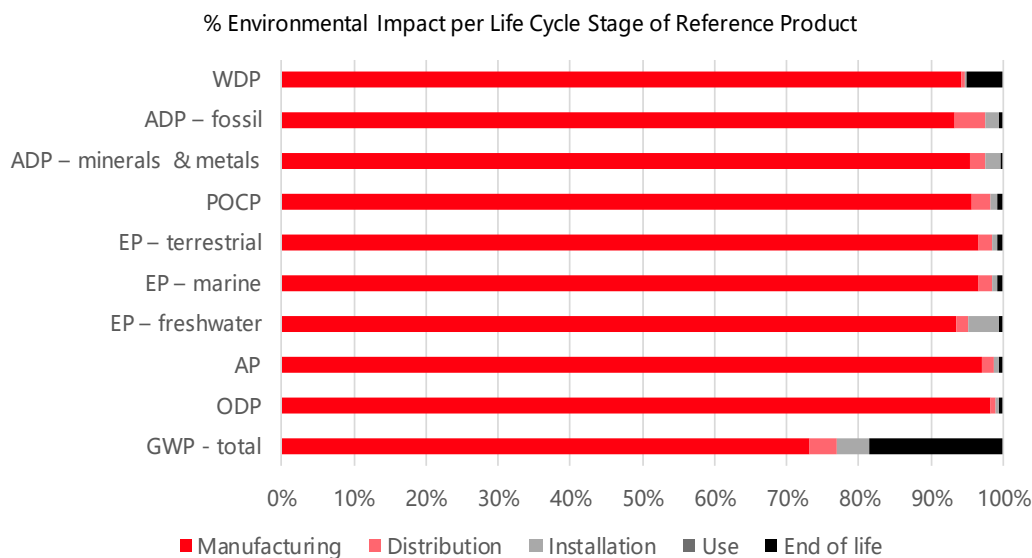
Reference lifetime	20 years
Product category	PCR-ed4-EN-2021 09 06 PSR-0003-ed2-EN-2023 06 06
Installation elements	Two steel screws are required for the installation of the product.
Use scenario	No material and energy consumption occur during the use stage. No maintenance phase is planned for the the NuTek Non-Metallic Boxes.
Geographical representativeness	Global
Technological representativeness	Technological representativeness refers to the specific production process for primary data.
Software and database used	SimaPro 9.5 and ecoinvent 3.9.1

Energy model used

Manufacturing	The energy-related processes used for the inputs of the manufacturing stage are those included in the ecoinvent 3.9.1 datasets selected for the analysis.
Installation	No energy consumption occur during the installation stage.
Use	No energy consumption occur during the use stage.
End of life	The energy-related processes used for the inputs of the end-of-life stage are those included in ecoinvent 3.9.1

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	5/18

Common base of mandatory indicators



Environmental impact indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
GWP-total	kg CO ₂ eq	1.35E+00	9.90E-01	5.07E-02	6.04E-02	0.00E+00	2.51E-01
GWP-fossil	kg CO ₂ eq	1.32E+00	9.95E-01	5.07E-02	2.85E-02	0.00E+00	2.51E-01
GWP-biogenic	kg CO ₂ eq	2.40E-02	-8.11E-03	1.87E-05	3.19E-02	0.00E+00	2.19E-04
GWP-luluc	kg CO ₂ eq	3.86E-03	3.79E-03	2.52E-05	3.80E-05	0.00E+00	5.24E-06
GWP-fossil = Global Warming Potential fossil fuels GWP-biogenic = Global Warming Potential biogenic GWP-luluc = Global Warming Potential land use and land use change							
ODP	kg CFC-11 eq.	1.05E-07	1.03E-07	8.36E-10	5.00E-10	0.00E+00	5.95E-10
ODP = Depletion potential of the stratospheric ozone layer							
AP	H+ eq	1.50E-02	1.46E-02	2.22E-04	1.31E-04	0.00E+00	7.56E-05
AP = Acidification potential, Accumulated Exceedance							
EP-freshwater	kg P eq	2.72E-04	2.54E-04	4.13E-06	1.14E-05	0.00E+00	1.76E-06
EP-marine	kg N eq	4.45E-03	4.30E-03	8.14E-05	2.93E-05	0.00E+00	3.78E-05
EP-terrestrial	mol N eq	4.41E-02	4.26E-02	8.70E-04	2.95E-04	0.00E+00	3.33E-04
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment EP-terrestrial = Eutrophication potential, Accumulated Exceedance							
POCP	kg NMVOCeq.	1.19E-02	1.14E-02	3.13E-04	1.25E-04	0.00E+00	8.97E-05
POCP = Formation potential of tropo-sphéric ozone							
ADP-minerals & metals	kg Sb eq.	7.21E-06	6.89E-06	1.38E-07	1.55E-07	0.00E+00	3.05E-08
ADP-fossil	MJ	1.70E+01	1.58E+01	7.42E-01	3.08E-01	0.00E+00	1.03E-01
ADP-minerals & metals = Abiotic depletion potential for non-fossil resources ADP-fossil = Abiotic depletion for fossil resources potential							
WDP	m ³ e depr.	6.53E-01	6.15E-01	3.78E-03	9.77E-04	0.00E+00	3.31E-02
WDP = Water Deprivation potential							

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	6/18

Common base of mandatory indicators

Inventory flows indicator – Resource use indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
PERE	MJ	1.99E+00	1.94E+00	9.40E-03	2.98E-02	0.00E+00	4.62E-03
PERM	MJ	2.28E-01	2.19E-01	0.00E+00	9.97E-03	0.00E+00	0.00E+00
PERT	MJ	2.22E+00	2.16E+00	9.40E-03	3.97E-02	0.00E+00	4.62E-03
PENRE	MJ	1.38E+01	1.26E+01	7.42E-01	3.08E-01	0.00E+00	1.03E-01
PENRM	MJ	3.20E+00	3.20E+00	0.00E+00	3.33E-04	0.00E+00	0.00E+00
PENRT	MJ	1.70E+01	1.58E+01	7.42E-01	3.08E-01	0.00E+00	1.03E-01

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 re-sources

Inventory flows indicator – Indicators describing the use of secondary materials, water, and energy re-sources

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	2.14E-02	2.02E-02	1.18E-04	8.63E-05	0.00E+00	1.03E-03

SM = Use of secondary material

RSF = Use of renewable secondary fuels

NRSF = Use of non-renewable secondary fuels

FW = Use of net fresh water

Inventory flows indicator – Waste category indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
Hazardous waste disposed	kg	3.99E-05	3.26E-05	4.68E-06	2.01E-06	0.00E+00	5.96E-07
Non-hazardous waste disposed	kg	1.71E-01	9.04E-02	6.47E-02	5.93E-03	0.00E+00	1.04E-02
Radioactive waste disposed	kg	1.52E-05	1.47E-05	1.62E-07	2.56E-07	0.00E+00	5.79E-08

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	7/18

Common base of mandatory indicators

Inventory flows indicator – Output flow indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
Component for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	8.34E-03	6.31E-03	0.00E+00	2.04E-03	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	1.50E+00	7.52E-04	0.00E+00	9.02E-02	0.00E+00	1.41E+00

Inventory flows indicator – Other indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
Biogenic carbon content of the product	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	kg of C	6.88E-03	6.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00

The data quality rating (DQR) has been performed following the indication provided in PCR-ed4-EN-2021, § 2.9.3. All the processes contributing to at least 80% of the reference indicators (total global warming, abiotic resource depletion – mineral, eutrophication, use of total non-renewable primary energy, and non-hazardous waste disposal) on the whole life cycle of the product are included in the Data Quality Rating. The global data quality for all processes considered is between “satisfactory” and “very good” levels.

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	8/18

Optional indicators

Environmental indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life
Total use of primary energy during the life cycle	MJ	1.92E+01	1.80E+01	7.51E-01	3.48E-01	0.00E+00	1.08E-01
Emissions of fine particles	Incidence of diseases	9.55E-08	8.73E-08	5.22E-09	2.39E-09	0.00E+00	5.88E-10
Ionizing radiation, human health	kBq U235 eq.	5.92E-02	5.72E-02	6.81E-04	1.04E-03	0.00E+00	2.29E-04
Ecotoxicity (freshwater)	CTU _e	3.78E+01	3.59E+01	3.94E-01	1.66E-01	0.00E+00	1.34E+00
Human toxicity, carcinogenic effects	CTUh	1.57E-09	1.36E-09	2.20E-11	1.62E-10	0.00E+00	2.49E-11
Human toxicity, non-carcinogenic effects	CTUh	1.36E-08	1.19E-08	5.41E-10	3.33E-10	0.00E+00	8.42E-10
Impact related to land use/soil quality	Pt	5.47E+00	4.47E+00	7.52E-01	2.02E-01	0.00E+00	4.81E-02

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	9/18

Extrapolation Factors

The PEP can cover products different from the reference product if they belong to a homogeneous environmental family. This means that the group of products must satisfy the following characteristics:

- same function;
- same product standard;
- same manufacturing technology: the same type of materials and same manufacturing processes.

The NuTek Boxes product family satisfy these conditions, so extrapolation rules were applied to assess the environmental impact of the products belonging to the family presented in the table below, following the PCR indication.

To determinate the environmental impacts associated with each product, the multiplication factor must be multiplied by the impacts of the reference product. Each environmental indicator value for each phase shall be calculated using the following formulas:

$$y = a * x$$

Where:

- y is the impact chosen category;
- x is the impact chosen category of reference product;
- a is the multiplication factor;

The calculation of the coefficients a for the Use Stage was not performed because the selected parameters do not affect the values for this stage.

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	10/18

Name	Weight (kg)	Composition		
		PEP Material Category	Material	Weight (kg)
FWSW (reference product)	0.1184	Metal	Steel	0.0131
		Plastic	PPE+PS	0.0977
		Plastic	PVC	0.0077
FWOCT	0.1401	Metal	Steel	0.0131
		Plastic	PPE+PS	0.1189
		Plastic	PVC	0.0082
WSW	0.1033	Metal	Steel	0.0131
		Other	Label	0.0010
		Plastic	PPE+PS	0.0893
2-FWSW	0.1646	Metal	Steel	0.0214
		Plastic	PPE+PS	0.1270
		Plastic	PVC	0.0163
F-WSW-UPC	0.1098	Metal	Steel	0.0131
		Plastic	PPE+PS	0.0880
		Plastic	PVC	0.0077
		Other	Label	0.0010
WOCT	0.1011	Metal	Steel	0.0131
		Plastic	PPE+PS	0.0880
2-WSW	0.1484	Metal	Steel	0.0214
		Plastic	PPE+PS	0.1270
WSW-UPC	0.0944	Metal	Steel	0.0131
		Plastic	PPE+PS	0.0803
		Other	Label	0.0010
FWRD	0.1893	Metal	Steel	0.0114
		Plastic	PPE+PS	0.1520
		Plastic	PVC	0.0260
3-WSW	0.1665	Metal	Steel	0.0328
		Plastic	PPE+PS	0.1337

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	11/18

MULTIPLICATION FACTORS (a) FOR MANUFACTURING									
	FWOCT	WSW	2-FWSW	F-WSW-UPC	WOCT	2-WSW	WSW-UPC	FWRD	3-WSW
<i>Climate change</i>	1.188	0.896	1.342	0.921	0.897	1.292	0.824	1.580	1.396
<i>Climate change - Fossil</i>	1.190	0.900	1.336	0.929	0.902	1.292	0.834	1.593	1.397
<i>Climate change - Biogenic</i>	1.403	1.293	0.593	2.002	1.599	1.244	2.159	3.157	1.546
<i>Climate change - Land use and LU change</i>	1.177	0.888	1.355	0.947	0.886	1.257	0.835	1.596	1.400
<i>Ozone depletion</i>	1.203	0.844	1.365	0.914	0.834	1.201	0.764	1.699	1.272
<i>Acidification</i>	1.210	0.909	1.312	0.911	0.901	1.298	0.826	1.572	1.378
<i>Eutrophication, freshwater</i>	1.182	0.906	1.354	0.951	0.915	1.311	0.857	1.612	1.443
<i>Eutrophication, marine</i>	1.212	0.911	1.308	0.910	0.903	1.300	0.828	1.569	1.379
<i>Eutrophication, terrestrial</i>	1.212	0.911	1.308	0.909	0.902	1.299	0.827	1.567	1.377
<i>Photochemical ozone formation</i>	1.208	0.904	1.317	0.912	0.896	1.291	0.822	1.578	1.375
<i>Resource use, minerals and metals</i>	1.207	0.892	1.322	0.913	0.883	1.267	0.811	1.596	1.351
<i>Resource use, fossils</i>	1.195	0.893	1.335	0.924	0.892	1.277	0.823	1.606	1.371
<i>Water use (from AWARE)</i>	1.212	0.923	1.301	0.910	0.915	1.318	0.840	1.546	1.402
<i>PERE</i>	1.179	0.912	1.331	0.970	0.904	1.263	0.870	1.601	1.395
<i>PERM</i>	1.322	1.080	1.014	1.588	1.375	1.376	1.658	2.491	1.898
<i>PERT</i>	1.194	0.929	1.299	1.032	0.952	1.274	0.950	1.691	1.446
<i>PENRE</i>	1.192	0.899	1.333	0.929	0.901	1.289	0.833	1.595	1.389
<i>PENRM</i>	1.209	0.867	1.341	0.906	0.854	1.232	0.780	1.648	1.297
<i>PENRT</i>	1.195	0.893	1.335	0.924	0.892	1.277	0.823	1.606	1.371
<i>Use of secondary material</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of non-renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Net use of fresh water</i>	1.202	0.916	1.314	0.917	0.907	1.303	0.837	1.544	1.403
<i>Hazardous waste disposed</i>	1.180	0.911	1.345	0.941	0.908	1.301	0.853	1.537	1.460
<i>Non-hazardous waste disposed</i>	1.187	0.901	1.343	0.941	0.904	1.292	0.846	1.578	1.439
<i>Radioactive waste disposed</i>	1.187	0.895	1.344	0.935	0.904	1.294	0.834	1.626	1.387
<i>Components for re-use</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for recycling</i>	1.131	0.970	1.303	1.096	1.058	1.374	1.104	1.331	1.902
<i>Materials for energy recovery</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Exported energy</i>	1.183	0.872	1.390	0.927	0.854	1.253	0.797	1.599	1.406
<i>Particulate matter</i>	1.203	0.907	1.322	0.926	0.908	1.300	0.840	1.587	1.407
<i>Ionising radiation</i>	1.000	0.896	1.345	0.936	0.906	1.296	0.836	1.629	1.390
<i>Ecotoxicity, freshwater</i>	1.215	0.912	1.304	0.904	0.900	1.298	0.823	1.562	1.371
<i>Human toxicity, cancer</i>	1.172	0.925	1.345	0.930	0.919	1.331	0.861	1.438	1.540
<i>Human toxicity, non-cancer</i>	1.203	0.898	1.326	0.931	0.903	1.287	0.836	1.619	1.387
<i>Land use</i>	1.211	1.009	1.173	1.189	1.075	1.286	1.170	1.804	1.516

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Approved	Public	ABBG-00342-V01.02-EN	2	EN	12/18

MULTIPLICATION FACTORS (a) FOR DISTRIBUTION									
	FWOCT	WSW	2-FWSW	F-WSW-UPC	WOCT	2-WSW	WSW-UPC	FWRD	3-WSW
<i>Climate change</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Climate change - Fossil</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Climate change - Biogenic</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Climate change - Land use and LU change</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Ozone depletion</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Acidification</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Eutrophication, freshwater</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Eutrophication, marine</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Eutrophication, terrestrial</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Photochemical ozone formation</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Resource use, minerals and metals</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Resource use, fossils</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Water use (from AWARE)</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>PERE</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>PERM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>PERT</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>PENRE</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>PENRM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>PENRT</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Use of secondary material</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of non-renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Net use of fresh water</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Hazardous waste disposed</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Non-hazardous waste disposed</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Radioactive waste disposed</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Components for re-use</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for recycling</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for energy recovery</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Exported energy</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Particulate matter</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Ionising radiation</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Ecotoxicity, freshwater</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Human toxicity, cancer</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Human toxicity, non-cancer</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436
<i>Land use</i>	1.197	0.886	1.350	0.983	0.901	1.259	0.870	1.689	1.436

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
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MULTIPLICATION FACTORS (a) FOR INSTALLATION									
	FWOCT	WSW	2-FWSW	F-WSW-UPC	WOCT	2-WSW	WSW-UPC	FWRD	3-WSW
<i>Climate change</i>	1.181	1.002	0.998	1.271	1.183	1.177	1.293	1.849	1.401
<i>Climate change - Fossil</i>	1.008	1.000	1.000	1.012	1.008	1.008	1.013	1.036	1.017
<i>Climate change - Biogenic</i>	1.335	1.003	0.996	1.503	1.340	1.329	1.545	2.575	1.744
<i>Climate change - Land use and LU change</i>	1.002	1.000	1.000	1.003	1.002	1.002	1.004	1.010	1.005
<i>Ozone depletion</i>	1.014	1.000	1.000	1.021	1.014	1.014	1.023	1.065	1.031
<i>Acidification</i>	1.012	1.000	1.000	1.017	1.012	1.011	1.019	1.054	1.026
<i>Eutrophication, freshwater</i>	1.002	1.000	1.000	1.003	1.002	1.002	1.003	1.010	1.005
<i>Eutrophication, marine</i>	1.025	1.000	1.000	1.038	1.025	1.025	1.041	1.118	1.056
<i>Eutrophication, terrestrial</i>	1.023	1.000	1.000	1.034	1.023	1.022	1.037	1.106	1.050
<i>Photochemical ozone formation</i>	1.015	1.000	1.000	1.022	1.015	1.014	1.024	1.069	1.033
<i>Resource use, minerals and metals</i>	1.003	1.000	1.000	1.005	1.003	1.003	1.005	1.016	1.007
<i>Resource use, fossils</i>	1.007	1.000	1.000	1.010	1.007	1.007	1.011	1.032	1.015
<i>Water use (from AWARE)</i>	1.155	1.001	0.998	1.233	1.157	1.152	1.252	1.729	1.344
<i>PERE</i>	1.002	1.000	1.000	1.003	1.002	1.002	1.003	1.009	1.004
<i>PERM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>PERT</i>	1.001	1.000	1.000	1.002	1.001	1.001	1.002	1.006	1.003
<i>PENRE</i>	1.007	1.000	1.000	1.010	1.007	1.007	1.011	1.032	1.015
<i>PENRM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>PENRT</i>	1.007	1.000	1.000	1.010	1.007	1.007	1.011	1.032	1.015
<i>Use of secondary material</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of non-renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Net use of fresh water</i>	1.060	1.001	0.999	1.091	1.061	1.059	1.098	1.284	1.134
<i>Hazardous waste disposed</i>	1.006	1.000	1.000	1.009	1.006	1.006	1.010	1.028	1.013
<i>Non-hazardous waste disposed</i>	1.026	1.000	1.000	1.039	1.026	1.025	1.042	1.122	1.058
<i>Radioactive waste disposed</i>	1.003	1.000	1.000	1.004	1.003	1.003	1.005	1.014	1.007
<i>Components for re-use</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for recycling</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for energy recovery</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Exported energy</i>	1.332	1.003	0.996	1.497	1.337	1.325	1.539	2.558	1.736
<i>Particulate matter</i>	1.007	1.000	1.000	1.010	1.007	1.007	1.011	1.032	1.015
<i>Ionising radiation</i>	1.003	1.000	1.000	1.004	1.003	1.003	1.005	1.014	1.006
<i>Ecotoxicity, freshwater</i>	1.048	1.000	0.999	1.072	1.049	1.047	1.079	1.227	1.107
<i>Human toxicity, cancer</i>	1.003	1.000	1.000	1.004	1.003	1.002	1.004	1.012	1.006
<i>Human toxicity, non-cancer</i>	1.045	1.000	0.999	1.068	1.046	1.044	1.073	1.213	1.100
<i>Land use</i>	1.005	1.000	1.000	1.007	1.005	1.005	1.008	1.023	1.011

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
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MULTIPLICATION FACTORS (a) FOR END OF LIFE									
	FWOCT	WSW	2-FWSW	F-WSW-UPC	WOCT	2-WSW	WSW-UPC	FWRD	3-WSW
<i>Climate change</i>	1.207	0.869	1.354	0.923	0.842	1.216	0.784	1.673	1.282
<i>Climate change - Fossil</i>	1.207	0.855	1.354	0.908	0.842	1.215	0.769	1.674	1.281
<i>Climate change - Biogenic</i>	1.026	17.849	1.666	17.969	0.877	1.418	17.844	1.224	2.120
<i>Climate change - Land use and LU change</i>	1.140	0.552	1.654	0.953	0.541	0.794	0.505	2.249	0.892
<i>Ozone depletion</i>	1.133	0.427	1.739	0.958	0.419	0.606	0.385	2.525	0.648
<i>Acidification</i>	1.186	0.770	1.443	0.925	0.754	1.093	0.695	1.841	1.170
<i>Eutrophication, freshwater</i>	1.131	0.559	1.667	0.959	0.546	0.810	0.515	2.219	0.941
<i>Eutrophication, marine</i>	1.198	0.829	1.388	0.918	0.812	1.175	0.748	1.727	1.251
<i>Eutrophication, terrestrial</i>	1.196	0.824	1.393	0.919	0.808	1.170	0.744	1.733	1.249
<i>Photochemical ozone formation</i>	1.192	0.808	1.411	0.922	0.791	1.147	0.730	1.763	1.231
<i>Resource use, minerals and metals</i>	1.148	0.558	1.636	0.949	0.546	0.796	0.506	2.253	0.869
<i>Resource use, fossils</i>	1.163	0.679	1.538	0.939	0.665	0.971	0.618	2.004	1.069
<i>Water use (from AWARE)</i>	1.114	0.289	1.853	0.969	0.284	0.409	0.260	2.805	0.427
<i>PERE</i>	1.132	0.438	1.734	0.958	0.429	0.623	0.396	2.500	0.672
<i>PERM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>PERT</i>	1.132	0.438	1.734	0.958	0.429	0.623	0.396	2.500	0.672
<i>PENRE</i>	1.163	0.679	1.538	0.939	0.665	0.971	0.618	2.004	1.069
<i>PENRM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>PENRT</i>	1.163	0.679	1.538	0.939	0.665	0.971	0.618	2.004	1.069
<i>Use of secondary material</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Use of non-renewable secondary fuels</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Net use of fresh water</i>	1.115	0.297	1.847	0.968	0.292	0.420	0.267	2.789	0.440
<i>Hazardous waste disposed</i>	1.171	0.728	1.497	0.936	0.711	1.039	0.662	1.909	1.142
<i>Non-hazardous waste disposed</i>	1.144	0.524	1.664	0.954	0.510	0.742	0.475	2.330	0.805
<i>Radioactive waste disposed</i>	1.135	0.456	1.719	0.957	0.446	0.649	0.413	2.462	0.703
<i>Components for re-use</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for recycling</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Materials for energy recovery</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Exported energy</i>	1.209	0.871	1.342	0.910	0.854	1.232	0.784	1.650	1.297
<i>Particulate matter</i>	1.167	0.753	1.489	0.937	0.737	1.081	0.688	1.842	1.213
<i>Ionising radiation</i>	1.135	0.460	1.716	0.957	0.451	0.656	0.417	2.452	0.711
<i>Ecotoxicity, freshwater</i>	1.118	0.328	1.823	0.966	0.322	0.465	0.295	2.724	0.494
<i>Human toxicity, cancer</i>	1.193	0.803	1.412	0.921	0.787	1.140	0.725	1.775	1.218
<i>Human toxicity, non-cancer</i>	1.197	0.807	1.402	0.919	0.790	1.141	0.727	1.777	1.206
<i>Land use</i>	1.148	0.660	1.577	0.948	0.646	0.954	0.093	0.155	1.092

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
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MULTIPLICATION FACTORS (a) FOR BIOGENIC CARBON CONTENT									
	FWOCT	WSW	2-FSW	F-WSW-UPC	WOCT	2-WSW	WSW-UPC	FWRD	3-WSW
<i>Biogenic carbon content in the product</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Biogenic carbon content in accompanying packaging</i>	1.398	1.003	0.995	1.592	1.404	1.391	1.639	2.852	1.869

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
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Environmental Impact Indicator Glossary

Impact indicators

Indicator	Description	Unit
Global warming potential (GWP) - total	Indicator of potential global warming caused by emissions to air contributing to the greenhouse effect. The total global warming potential (GWP-total) is the sum of three sub-categories of climate change. GWP-total = GWP-fossil + GWP-biogenic + GWP-land use and land use change	kg CO ₂ eq.
Ozone depletion (ODP)	Emissions to air that contribute to the destruction of the stratospheric ozone layer	kg CFC-11 eq.
Acidification of soil and water (A)	Acidification of soils and water caused by the release of certain gases to the atmospheric, such as nitrogen oxides and Sulphur oxides	H ⁺ eq.
Eutrophication (E)	Indicator of the contribution to eutrophication of water by the enrichment of the aquatic ecosystem with nutritional elements, e.g. industrial or domestic effluents, agriculture, etc. This indicator is divided to three: freshwater, marine and terrestrial.	kg P eq., kg N eq., mole N eq.
Photochemical ozone creation (POCP)	Indicator of emission of gases that affect the creation of photochemical ozone in the lower atmosphere (smog) because of the rays of the sun.	kg NMVOC eq.
Depletion of abiotic resources – elements (ADPe)	Indicator of the depletion of natural non-fossil resources	kg Sb eq.
Depletion of abiotic resources – fossil fuels (ADPf)	The use of non-renewable fossil resources in an unsuitable way (e.g. from material to waste)	MJ (lower heating value)
Water Deprivation potential (WDP)	Deprivation-weighted water consumption. Assesses the potential of water deprivation, to either humans or ecosystem, building on the assumption that the less water remaining available per area, the more likely another user will be deprived.	m ³ e depr.

Resource use indicators

Indicator	Description	Unit
Total use of primary energy	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) + Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ (lower heating value)

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
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Internal



External



Independent verification of the declaration and data, in compliance with ISO 14025:2006

The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)

PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019. The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14025: 2006, "Environmental labels and declarations. Type III environmental declarations".



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