

FH200 BLOCKS AND DIFFERENTIAL SWITCHES

PEP ecopassport®
Product Environmental Profile



Product Environmental Profile - PEP Ecopassport.
Document in compliance with ISO 14025: 2006 "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.

"other points or for example a QR code or link to ABB website, where more information on the topic"



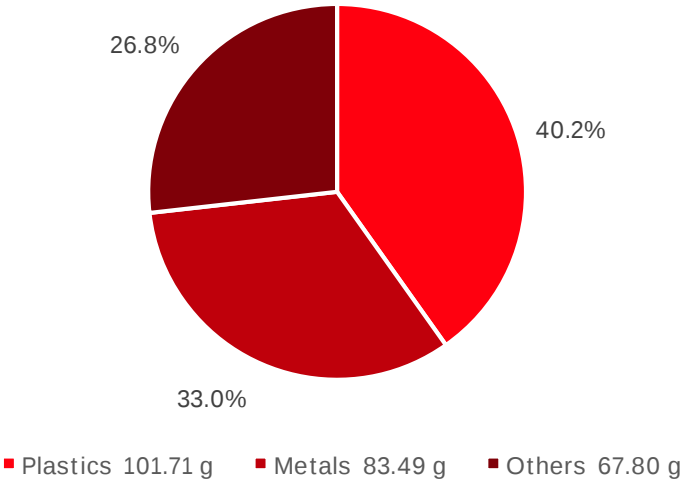
General Information

Reference product	2CSF202006R1630 FH202 AC-63/0.03
Description of the product	The RCCBs FH200 series assures protection to people and installations against fault current to earth. A large offer for standard instantaneous and selective AC and A types is completed with some configurations for special applications.
Functional unit	The functional unit is to protect the installation against overloads and short circuits and protect people and premises at risk of fire or explosion against insulation defects in a circuit with rated voltage U_e 230V, rated current $I_n = 63A$, with $N_p = 2$ poles, a rated breaking capacity $I_{cn} = 6kA$, the sensitivity $S = 30mA$, and the differential protection type T_p AC, in the Household/Commercial application areas, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Other products covered	FH200 environmental homogeneous family: Family: FH200 Sizes: 2 and 4 poles Rated Current [A]: 25, 40, 63 Rated Sensitivity [A]: 0.03, 0.1, 0.3 Type of differential protection: A, AC

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Constituent Materials



Total weight in reference product included packaging (g)	253	g
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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%
Polyamide PA6 part, glass filled	24.2	steel	19.4	Packaging - Carton and corrugated carton box	19.6
Polyphenylene sulfide part, glass filled, with PTFE	5.5	brass	7.4	Magnetic core	3.6
Polyamide PA66 part, glass filled	5.1	Copper	4.1	Magnetic relay	2.3
Polyphenylene sulfide part, glass filled	2.9	Stainless steel	1.6	Cellulose part	0.6
other plastics	2.5	other metals	0.5	Other	0.7

Total weight of the reference product 203 g plus packaging is 253g.

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Additional Environmental Information

Manufacturing	The manufacturing stage includes the production and transportation to the manufacturer's last logistic platform of FH200 and its packaging. The production occurs at the ABB factory located in Santa Palomba (RM).
Distribution	The transport from ABB Santa Palomba factory to Vignate, Milan was taken into account. For the distribution of the product from Vignate to the final customer, the intracontinental transport scenario provided by PCR-ed4-EN-2021 09 06 standard was adopted, considering the European macro-area.
Installation	The installation phase only implies manual activities and no energy is consumed. This phase also includes the disposal of the packaging of the product. Statistical average data from Eurostat databases were considered for the disposal of the product and its packaging.
Use	FH200 dissipate some electricity due to power losses. The average power loss of the switch has been calculated as follow: - Nominal current load rate as 15% (Household / Commercial); - RSL of 20 years; - Functioning time of 30% of the RSL (α). No maintenance is planned for the product.
End of life	As the end-of-life treatment is inherently unknown, the default scenario from the reference PCR was used. This includes the default assumption of transportation of 1000 km by lorry and the assumption that the product components are disposal of via landfill (P.E.P. Association, PCR-ed4-EN-2021 09 06, page 25/78).
Benefits and loads beyond the system boundaries	The potential benefits derives from the impacts prevented by recycling and waste to energy recovery of the packaging in the installation phase

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Environmental Impacts

Reference lifetime	20 years
Product category	Differential circuit-breakers
Installation elements	No installation materials are required in the life cycle of the product.
Use scenario	The calculation of the use stage electricity consumption from the average power consider the following assumptions: - Nominal current load rate as 15% (Household / Commercial); - RSL of 20 years; - Functioning time of 30% of the RSL. No maintenance is planned for the product
Geographical representativeness	Europe
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

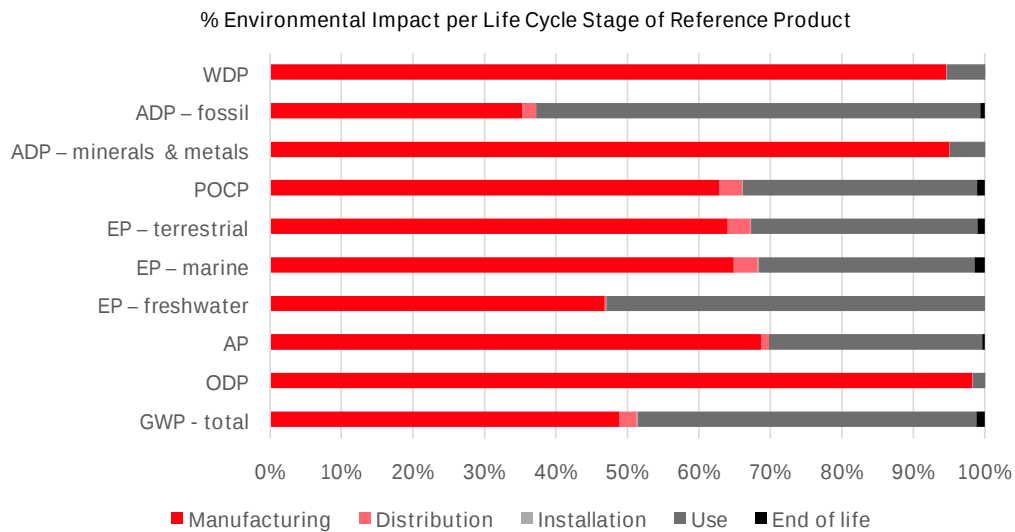
Energy model used

Manufacturing	ABB GO energy mix 2022. The energy-related processes used for the remaining inputs are those included in the ecoinvent v3.9.1 datasets.
Installation	No energy consumption occur during the installation stage.
Use	Electricity, low voltage {RER} market group for electricity, low voltage Cut-off, S
End of life	The energy-related processes used for the inputs of the end-of-life stage are those included in the ecoinvent datasets selected for the analysis.

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Common base of mandatory indicators

* if indicator is "0*", it represents less than 0,01% of the total life cycle of the reference flow



Environmental impact indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
GWP-total	kg CO ₂ eq.	5.83E+00	2.85E+00	1.41E-01	1.09E-02	2.76E+00	6.79E-02	-3.27E-02
GWP-fossil	kg CO ₂ eq.	5.71E+00	2.77E+00	1.40E-01	2.28E-03	2.73E+00	5.77E-02	-2.76E-02
GWP-biogenic	kg CO ₂ eq.	1.09E-01	7.33E-02	5.00E-05	8.65E-03	1.72E-02	1.02E-02	-4.55E-03
GWP-luluc	kg CO ₂ eq.	1.19E-02	5.10E-03	6.74E-05	1.24E-06	6.71E-03	2.21E-05	-5.50E-04
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.	3.09E-06	3.04E-06	2.99E-09	0*	5.12E-08	9.44E-10	-8.13E-10
ODP = Depletion potential of the stratospheric ozone layer								
AP	H+ eq.	5.17E-02	3.55E-02	5.67E-04	9.68E-06	1.54E-02	1.87E-04	-1.11E-04
AP = Acidification potential, Accumulated Exceedance								
EP-freshwater	kg P eq.	5.03E-04	2.35E-04	1.10E-06	0*	2.66E-04	3.69E-07	-2.02E-06
EP-marine	kg N eq.	6.42E-03	4.17E-03	2.14E-04	1.05E-05	1.94E-03	9.43E-05	-9.14E-05
EP-terrestrial	mol N eq.	7.14E-02	4.57E-02	2.31E-03	3.21E-05	2.26E-02	7.56E-04	-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 NMVOC eq.	1.76E-02	1.11E-02	5.72E-04	1.04E-05	5.78E-03	1.93E-04	-6.06E-05
POCP = Formation potential of tropospheric ozone								
ADP-minerals & metals	kg Sb eq.	6.68E-04	6.35E-04	4.42E-07	0*	3.26E-05	1.36E-07	-9.59E-08
ADP-fossil	MJ	9.85E+01	3.48E+01	1.95E+00	2.29E-02	6.12E+01	6.33E-01	-3.57E-01
ADP-minerals & metals = Abiotic depletion potential for non-fossil resources ADP-fossil = Abiotic depletion for fossil resources potential								
WDP	m ³ eq. depr.	1.31E+01	1.24E+01	7.79E-03	0*	6.96E-01	4.64E-03	-1.56E-02
WDP = Water Deprivation potential								

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Common base of mandatory indicators

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Inventory flows indicator – Resource use indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
PERE	MJ	1.79E+01	4.18E+00	3.03E-02	0.00E+00	1.37E+01	1.01E-02	-3,05E-02
PERM	MJ	1.03E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4,18E-02
PERT	MJ	1.90E+01	5.21E+00	3.03E-02	0*	1.37E+01	1.01E-02	-7,23E-02
PENRE	MJ	1.11E+02	3.71E+01	1.99E+00	2.51E-02	7.14E+01	6.45E-01	-4,14E-01
PENRM	MJ	2.85E+00	2.85E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0,00E+00
PENRT	MJ	1.14E+02	3.99E+01	1.99E+00	2.51E-02	7.14E+01	6.45E-01	-4,14E-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 resources

Inventory flows indicator – Indicators describing the use of secondary materials, water, and energy resources

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
SM	kg	0.00E+00	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	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	3.37E-01	2.87E-01	2.20E-04	0*	4.93E-02	1.20E-04	-4.52E-04

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	Bene- fits
Hazardous waste disposed	kg	2.11E-03	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non- hazardous waste disposed	kg	2.30E-04	2.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed	kg	2.01E-06	2.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Common base of mandatory indicators

* if indicator is "0*", it represents less than 0,01% of the total life cycle of the reference flow

Inventory flows indicator – Output flow indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
Components for re-use	kg	3.13E-03	3.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	4.07E-02	0.00E+00	0.00E+00	4.07E-02	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.47E-03	0.00E+00	0.00E+00	4.47E-03	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	7.60E-02	0.00E+00	0.00E+00	7.60E-02	0.00E+00	0.00E+00	0.00E+00

Inventory flow indicator – other indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
Biogenic carbon content of the product	kg of C	2.20E-05	2.20E-05	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	2.19E-02	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Optional indicators

* if indicator is "0*", it represents less than 0,01% of the total life cycle of the reference flow

Environmental indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
No Environmental indicators used								

Extrapolation Factors

For other products than the Reference product covered by this PEP, the environmental impacts for each phase of the lifecycle are obtained by a linear correlation with respect to weight for the production, distribution and end-of-life phase and with respect to average power loss for the use phase. Each environmental indicator value shall be calculated using the following formulas:

For the manufacturing stage, distribution stage and end-of-life stage: $y = ax_1 + b$
where x_1 is the weight of the product

For the use stage: $y = ax_2 + b$
where x_2 is the average power loss of the product

Impact category	Manu-facturing		Distribution		Use		End of Life	
	a	b	a	b	a	b	a	b
Climate change - Total	1.16E-02	-9.37E-02	5.58E-04	-5.28E-04	1.90E+01	2.19E-02	4.11E-03	-9.71E-01
Climate change - Fossil	1.15E-02	-1.41E-01	5.57E-04	-5.28E-04	1.88E+01	2.17E-02	-3.03E-04	1.34E-01
Climate change - Biogenic standard	1.06E-04	4.64E-02	1.98E-07	-1.88E-07	1.18E-01	1.36E-04	4.41E-03	-1.10E+00
Climate change - Land use and LU change	1.55E-05	1.18E-03	2.68E-07	-2.54E-07	4.62E-02	5.33E-05	-6.40E-08	3.82E-05
Ozone depletion	1.35E-08	-3.84E-07	1.19E-11	-1.13E-11	3.53E-07	4.06E-10	-4.83E-12	2.17E-09
Acidification	1.53E-04	-3.27E-03	2.25E-06	-2.13E-06	1.06E-01	1.22E-04	-5.14E-07	3.17E-04
Eutrophication, freshwater	9.64E-07	-8.58E-06	4.37E-09	-4.15E-09	1.83E-03	2.11E-06	-6.15E-10	5.24E-07
Eutrophication, marine	1.71E-05	-1.69E-04	8.51E-07	-8.06E-07	1.33E-02	1.54E-05	3.49E-06	-7.89E-04
Eutrophication, terrestrial	1.89E-04	-2.06E-03	9.15E-06	-8.68E-06	1.55E-01	1.79E-04	-3.25E-06	1.58E-03
Photochemical ozone formation	4.69E-05	-7.94E-04	2.27E-06	-2.15E-06	3.98E-02	4.58E-05	4.81E-07	7.17E-05
Resource use, minerals and metals	2.82E-06	-7.87E-05	1.76E-09	-1.66E-09	2.25E-04	2.59E-07	-6.26E-10	2.95E-07
Resource use, fossils	1.45E-01	-1.94E+00	7.75E-03	-7.34E-03	4.22E+02	4.86E-01	-2.90E-03	1.37E+00
Water use	5.37E-02	-1.24E+00	3.09E-05	-2.93E-05	4.79E+00	5.52E-03	2.89E-07	4.57E-03
Primary renewable energy (carrier)	1.58E-02	1.69E-01	1.20E-04	-1.14E-04	9.45E+01	1.09E-01	-9.11E-06	1.24E-02
Primary renewable energy (feedstock)	0.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary renewable energy (total)	1.58E-02	1.20E+00	1.20E-04	-1.14E-04	9.45E+01	1.09E-01	-9.11E-06	1.24E-02
Primary non-renewable energy (carrier)	1.54E-01	-1.94E+00	7.88E-03	-7.47E-03	4.92E+02	5.67E-01	-2.86E-03	1.37E+00
Primary non-renewable energy (feedstock)	1.21E-02	-2.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary non-renewable energy (total)	1.66E-01	-2.15E+00	7.88E-03	-7.47E-03	4.92E+02	5.67E-01	-2.86E-03	1.37E+00
Secondary materials	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Renewable secondary fuels	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-renewable secondary fuels	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water (EI3.6)	1.25E-03	-2.86E-02	8.74E-07	-8.28E-07	3.39E-01	3.91E-04	-1.58E-08	1.24E-04
Hazardous waste disposed	9.39E-06	-2.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non hazardous waste disposed	1.02E-06	-2.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed	8.97E-09	-2.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Components for re-use	1.40E-05	-4.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported Energy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Extrapolation Factors

For the weight and average power loss data of the variants, please refer to the table below

Product ID	Product Type	Total Weight [g]	Average power loss [W]
2CSF202003R3250	FH202 AC-25/0.3	253	0.05
2CSF202003R3400	FH202 AC-40/0.3	253	0.11
2CSF202006R1250	FH202 AC-25/0.03	253	0.05
2CSF202003R3630	FH202 AC-63/0.3	253	0.14
2CSF202006R1400	FH202 AC-40/0.03	253	0.11
2CSF202004R1250	FH202 AC-25/0.03	253	0.05
2CSF202006R1630	FH202 AC-63/0.03	253	0.14
2CSF202004R1400	FH202 AC-40/0.03	253	0.11
2CSF202006R2250	FH202 AC-25/0.1	253	0.05
2CSF202004R1630	FH202 AC-63/0.03	253	0.14
2CSF202006R2400	FH202 AC-40/0.1	253	0.11
2CSF202006R2630	FH202 AC-63/0.1	253	0.14
2CSF202006R3250	FH202 AC-25/0.3	253	0.05
2CSF202006R3400	FH202 AC-40/0.3	253	0.11
2CSF202006R3630	FH202 AC-63/0.3	253	0.14
2CSF202002R1250	FH202 AC-25/0.03	253	0.05
2CSF202002R1400	FH202 AC-40/0.03	253	0.11
2CSF202002R1630	FH202 AC-63/0.03	253	0.14
2CSF202102R1250	FH202 A-25/0.03	253	0.05
2CSF202102R1400	FH202 A-40/0.03	253	0.11
2CSF202102R1630	FH202 A-63/0.03	253	0.14
2CSF202122U1400	FH202 A-40/0.03 U CEBEC	253	0.11
2CSF202122U3400	FH202 A-40/0.3 U CEBEC	253	0.11
2CSF202120U1400	FH202 A-40/0.03 U HAF	253	0.11
2CSF202066R1400	FH202 AC-40/0.03	253	0.11
2CSF202066R3630	FH202 AC-63/0.3	253	0.14
2CSF202066R2400	FH202 AC-40/0.1	253	0.11
2CSF202066R1630	FH202 AC-63/0.03	253	0.14
2CSF202102U1250	FH202 A-25/0.03 U	253	0.05
2CSF202066R2630	FH202 AC-63/0.1	253	0.14
2CSF202120R1400	FH202 A-40/0.03	253	0.11
2CSF202066R3400	FH202 AC-40/0.3	253	0.11
2CSF202102U1400	FH202 A-40/0.03 U	253	0.11
2CSF202066R1250	FH202 AC-25/0.03	253	0.05
2CSF202102U1630	FH202 A-63/0.03 U	253	0.14
2CSF202066R2250	FH202 AC-25/0.1	253	0.05
2CSF202066R3250	FH202 AC-25/0.3	253	0.05
2CSF204006R1250	FH204 AC-25/0.03	394	0.09
2CSF204006R1400	FH204 AC-40/0.03	394	0.22
2CSF204006R1630	FH204 AC-63/0.03	394	0.30
2CSF204006R2250	FH204 AC-25/0.1	394	0.09
2CSF204006R2400	FH204 AC-40/0.1	394	0.22
2CSF204006R2630	FH204 AC-63/0.1	394	0.30
2CSF204006R3250	FH204 AC-25/0.3	394	0.09
2CSF204006R3400	FH204 AC-40/0.3	394	0.22
2CSF204006R3630	FH204 AC-63/0.3	394	0.30
2CSF204003R3250	FH204 AC-25/0.3	394	0.09

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Extrapolation Factors

2CSF204003R3400	FH204 AC-40/0.3	394	0.22
2CSF204003R3630	FH204 AC-63/0.3	394	0.30
2CSF204004R1250	FH204 AC-25/0.03	394	0.09
2CSF204002R1250	FH204 AC-25/0.03	394	0.09
2CSF204004R1400	FH204 AC-40/0.03	394	0.22
2CSF204002R1400	FH204 AC-40/0.03	394	0.22
2CSF204004R1630	FH204 AC-63/0.03	394	0.30
2CSF204002R1630	FH204 AC-63/0.03	394	0.30
2CSF204066R1250	FH204 AC-25/0.03	394	0.09
2CSF204026R3630	FH204 AC-63/0.3-L	394	0.30
2CSF204066R2250	FH204 AC-25/0.1	394	0.09
2CSF204066R3250	FH204 AC-25/0.3	394	0.09
2CSF204026R3250	FH204 AC-25/0.3-L	394	0.09
2CSF204066R1630	FH204 AC-63/0.03	394	0.30
2CSF204026R1250	FH204 AC-25/0.03-L	394	0.09
2CSF204066R2630	FH204 AC-63/0.1	394	0.30
2CSF204026R1630	FH204 AC-63/0.03-L	394	0.30
2CSF204066R3400	FH204 AC-40/0.3	394	0.22
2CSF204026R3400	FH204 AC-40/0.3-L	394	0.22
2CSF204066R1400	FH204 AC-40/0.03	394	0.22
2CSF204026R1400	FH204 AC-40/0.03-L	394	0.22
2CSF204066R2400	FH204 AC-40/0.1	394	0.22
2CSF204066R3630	FH204 AC-63/0.3	394	0.30
2CSF204102R1250	FH204 A-25/0.03	394	0.09
2CSF204102R1400	FH204 A-40/0.03	394	0.22
2CSF204102R1630	FH204 A-63/0.03	394	0.30
2CSF204120R1400	FH204 A-40/0.03 HAF	394	0.22
2CSF204120R1630	FH204 A-63/0.03 HAF	394	0.30
2CSF204120R3400	FH204 A-40/0.3 HAF	394	0.22
2CSF204120U1400	FH204 A-40/0.03 U HAF	394	0.22
2CSF204102U1250	FH204 A-25/0.03 U	394	0.09
2CSF204102U1400	FH204 A-40/0.03 U	394	0.22
2CSF204102U1630	FH204 A-63/0.03 U	394	0.30
2CSF204122U1400	FH204 A-40/0.03 U CEBEC	394	0.22
2CSF204122U3400	FH204 A-40/0.3 U CEBEC	394	0.22
2CSF302120U1400	FH202 A-40/0.03 U HAF	253	0.11

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Environmental Impact Indicator Glossary

Impact indicators

Indicator	Description	Distribution
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 atmosphere, 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 emissions 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 unsustainable 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 ecosystems, building on the assumption that the less water remaining available per area, the more likely another user will be deprived.	m ³ eq. depr.

Resource use indicators

Indicator	Description	Distribution
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 re-sources (primary energy and primary energy resources used as raw materials)	MJ (lower heating value)

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Engineering safety assessment. LHV MJ/kg

Unified text safety assessment. LHV MJ/kg

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Verifier accreditation number:	VH50	Information and reference documents:	www.pep-ecopassport.org
Date of issue:	03/2024	Validity period:	5 years
Independent verification of the declaration and data, in compliance with ISO 14025: 2006			
Internal: ☐ External: ☒			
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 components of the present PEP may not be compared with components from any other program.			
Document in compliance with ISO 14025: 2006 "Environmental labels and declarations. Type III environmental declarations"			

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