Product Environmental Profile

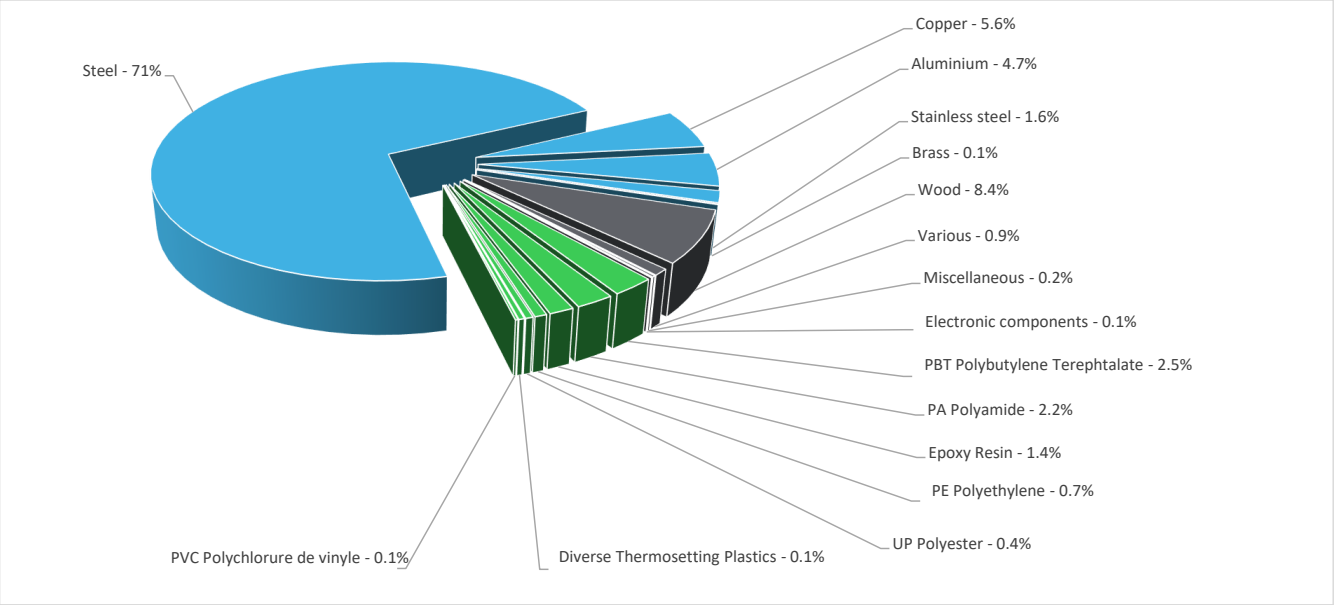
FBX-C/CCT1-Gas Insulated Switchgear up to 24 kV

General information

Reference product	FBX-C/CCT1-Gas Insulated Switchgear up to 24 kV
Description of the product	The main purpose of the FBX-C/CCT1 – insulated Secondary Distribution Switchboard range is transmission and distribution of electrical energy for applications such as public distribution networks, industrial installations, wind farms, etc.
Functional unit	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage U and rated current In. This protection is ensured in accordance with the following parameters: U=Rated voltage(V)=24 kV In= Rated current(A)=630A IK=IK07 in accordance with the standard IEC 62262 IP=IP65, IP67 in accordance with the standard IEC 60529 during 20 years in accordance with IEC 62271-200, IEC 60694, IEC 62271-100, IEC 62271-102, IEC 62271-103

Constituent materials

Reference product mass	295963 g	including the product, its packaging and additional elements and accessories



	Plastics	7.4%
	Metals	83.0%
	Others	9.6%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website

https://www.se.com/ww/en/work/support/green-premium/

Additional environmental information

End Of Life*	Recyclability potential:	**89%**	Recyclability rate has been calculated based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).

**There are two products, VPI62406 and EMS58352, that are not included in the PEP calculation but are included in the product to be considered for recycling process*

Environmental impacts

Reference service life time	20 years
Installation elements	No special installation components need during installation phase, but transport of packaging to disposal and disposal of packaging accounted for during installation.
Use scenario	Product dissipation is 63.97 W with Loading rate is 30% and service uptime percentage is 100%
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production
Geographical representativeness	Germany 50%,Europe 25% France 23% and Austria 2%

	[A1 - A3]	[A5]	[B6]	[C1 - C4]
Energy model used	France	Electricity Mix; Production mix; Low voltage; GE	Electricity Mix; Production mix; Low voltage; GE	Electricity Mix; Production mix; Low voltage; GE
		Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27
		Electricity Mix; Production mix; Low voltage; FR	Electricity Mix; Production mix; Low voltage; FR	Electricity Mix; Production mix; Low voltage; FR
		Electricity Mix; Production mix; Low voltage; AUS	Electricity Mix; Production mix; Low voltage; AUS	Electricity Mix; Production mix; Low voltage; AUS

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.schneider-electric.com/contact

Mandatory Indicators*		FBX-C/CCT1-Gas Insulated Switchgear up to 24 kV						
Impact indicators	Unit	Total	Manufacturing [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to climate change	kg CO2 eq	6.82E+03	1.34E+03	1.03E+02	2.10E+01	4.07E+03	1.29E+03	-3.23E+03
Contribution to climate change-fossil	kg CO2 eq	6.81E+03	1.31E+03	1.03E+02	3.49E+01	4.07E+03	1.29E+03	-3.18E+03
Contribution to climate change-biogenic	kg CO2 eq	1.39E+01	2.10E+01	0*	0*	3.40E+00	3.37E+00	-4.94E+01
Contribution to climate change-land use and land use change	kg CO2 eq	5.59E-05	4.65E-08	0*	0*	0*	5.58E-05	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.66E-04	1.48E-04	9.12E-05	7.14E-08	2.18E-05	4.23E-06	-5.18E-04
Contribution to acidification	mol H+ eq	4.09E+01	9.87E+00	4.51E-01	2.08E-02	2.80E+01	2.54E+00	-4.28E+01
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	1.41E-01	7.17E-03	0*	1.47E-04	1.43E-02	1.19E-01	-5.91E-03
Contribution to eutrophication marine	kg N eq	4.58E+00	8.78E-01	2.07E-01	8.96E-03	3.03E+00	4.53E-01	-2.01E+00
Contribution to eutrophication, terrestrial	mol N eq	6.23E+01	9.61E+00	2.25E+00	8.76E-02	4.54E+01	4.97E+00	-2.34E+01
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.57E+01	3.54E+00	7.36E-01	3.10E-02	9.73E+00	1.70E+00	-9.41E+00
Contribution to resource use, minerals and metals	kg Sb eq	2.01E-01	1.98E-01	0*	0*	3.27E-04	3.37E-03	-9.47E-01
Contribution to resource use, fossils	MJ	1.93E+05	3.08E+04	1.26E+03	3.39E+01	1.16E+05	4.49E+04	-6.65E+04
Contribution to water use	m3 eq	1.34E+03	6.88E+02	5.25E+00	4.91E-01	1.66E+02	4.78E+02	-2.28E+03

**There are dedicated PEPs available for VPI62406 and EMS58352, hence not consider in this PEP*

Additional indicators for the French regulation are available as well

Inventory flows Indicators		FBX-C/CCT1-Gas Insulated Switchgear up to 24 kV						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.34E+04	5.04E+02	0*	1.05E+02	2.27E+04	8.15E+01	-1.38E+03
Contribution to use of renewable primary energy resources used as raw material	MJ	5.28E+02	5.28E+02	0*	0*	0*	0*	-1.42E+02
Contribution to total use of renewable primary energy resources	MJ	2.39E+04	1.03E+03	0*	1.05E+02	2.27E+04	8.15E+01	-1.52E+03
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.92E+05	3.02E+04	1.26E+03	3.39E+01	1.16E+05	4.49E+04	-6.65E+04
Contribution to use of non renewable primary energy resources used as raw material	MJ	6.33E+02	6.33E+02	0*	0*	0*	0*	6.78E-01
Contribution to total use of non-renewable primary energy resources	MJ	1.93E+05	3.08E+04	1.26E+03	3.39E+01	1.16E+05	4.49E+04	-6.65E+04
Contribution to use of secondary material	kg	6.46E+00	6.46E+00	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of freshwater	m^3	3.16E+01	1.60E+01	1.22E-01	1.14E-02	3.85E+00	1.16E+01	-5.31E+01
Contribution to hazardous waste disposed	kg	1.60E+04	1.57E+04	0*	0*	1.01E+02	2.84E+02	-7.74E+04
Contribution to non hazardous waste disposed	kg	1.53E+03	8.74E+02	0*	2.13E+01	6.20E+02	1.35E+01	-2.77E+03
Contribution to radioactive waste disposed	kg	7.26E-01	6.39E-01	2.06E-02	8.84E-04	6.29E-02	2.61E-03	-1.54E+00
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	2.51E+02	2.84E+00	0*	7.44E+00	0*	2.41E+02	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	1.55E+01	0*	0*	1.55E+01	0*	0*	0.00E+00
Contribution to biogenic carbon content of the product	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00

** represents less than 0.01% of the total life cycle of the reference flow*

Life cycle assessment performed with EIME version v5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.schneider-electric.com/contact

These indicators Climate change-Biogenic (GWPb),Ozone depletion (ODP),Resource use, minerals and metals (ADPe),Water use (WU) are impacting manufacturing phase,these indicators Climate change (GWP),Climate change-Fossil (GWPf),Acidification (AP),Eutrophication marine (Epm),Eutrophication, terrestrial (Ept),Photochemical ozone formation - human health (POCP),Resource use, fossils (ADPf) are impacting in Use phase and few indicators Climate change-Land use and land use change (GWPlu),Eutrophication, freshwater (Epf)are impacting in EOL Phase

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

Registration number :	SCHN-00147-V02.01-EN	*Drafting rules*	PEP-PCR-ed4-2021 09 06
Verifier accreditation N°	VH48	*Supplemented by*	PSR-0005-ed2-2016 03 29
Date of issue	05/2023	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2010

Internal External X

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 : 2010 « Environmental labels and declarations. Type III environmental declarations »

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