



Pushbutton Contact Block

Representative product	10250T2 (Pushbutton Contact Block) PSR Product Category: Other Equipment (Passive product - non-continuous operation)
Description of the product	A contact block is the device that contains the electrical contacts. The contact block considered for the study is Eaton 10250T2 pushbutton contact block, 10250T series. These are standard contact blocks with pressure terminal having standard contact configuration of 2NO (Normally Open) with 30.5 mm type and used for heavy-Duty application.
Homogeneous Environmental Families Covered	-
Functional unit	Switch on and off electrical power supply of the control circuit with an electrical and/or mechanical control during 20 years of lifetime.
Company information	Eaton Corporation – Haina, Lot#32, Parque Industrial Itabo-PIISA, Carretera Sanchez Km 18.5, 33166-6503, Haina, Dominican Republic. Email: productstewardship-es@eaton.com

Constituent Materials			
Reference product mass	4.46E-02kg (including packaging)		
Category PEP Material	Materials	Mass (kg)	Percentage (%)
Plastics	Nylon	1.43E-02	32.0%
Others	Cardboard	1.15E-02	25.8%
Metals	Copper	8.00E-03	17.9%
Metals	Steel	3.99E-03	8.9%
Metals	Zinc	3.43E-03	7.7%
Plastics	Polyoxymethylene	2.36E-03	5.3%
Others	Paper	8.82E-04	2.0%
Others	Glue	1.09E-04	0.2%
Metals	Silicon	6.78E-05	0.2%
Total		4.46E-02	100%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) without any exemption and the product doesn't contain any substance listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information

Manufacturing	The reference product is assembled at an Eaton plant holding management system certifications according to ISO 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.
Installation	The installation of the product does not require any additional energy source and no waste other than the obsolete product packaging is generated during this step.
Use	The product does not have maintenance during operation.
End of life	The recyclability rate of the overall product is 75.5% if it is properly dismantled prior to shredding. The rate is calculated based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental Impacts

The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e., "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life. System modelling was carried out using the commercial LCA software EIME v5.9.4 with database version CODDE-2022-01.

Manufacturing Phase	The product is assembled as well as packed at Eaton plant in Haina, DR. The product is then transported from Eaton's manufacturing facility in Haina to Eaton warehouse in Duncan (2730 km by Ship), and from there to Eaton warehouse in Fontana (2180 km by Road). Energy model used: USA
Distribution Phase	Distribution of the product with its packaging from the Eaton's last logistics platform to the installation place in North America (2248 km by Road) is considered as per PCR rules.
Installation Phase	Product is installed in North America. Only treatment of packaging waste is considered in this phase. Energy model used for treatment of packaging: Europe
Use Phase	PSR Product Category: Other Equipment (Scenario: Passive product - non-continuous operation) Reference lifetime: 20 Years Energy model used: USA Usage profile: The product has an average power loss of 0.0356 W in an active mode with 30% of the loading rate. For 30% of the use time rate, total losses are 1.873 kWh over 20 years. Product do not require any maintenance/replacement during useful life.
End of life Phase	Product disposed with WEEE guidelines. Energy model used: Europe

Environmental Impact Indicators: Mandatory

Environmental impact indicators	Units	Total	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B6) *	End of Life (C1-C4)
Resource use, minerals and metals (ADPe)	kg Sb eq.	1.98E-05	1.77E-05	2.69E-10	4.97E-10	4.13E-08	2.05E-06
Resource use, fossils (ADPf)	MJ	2.74E+01	4.31E+00	9.53E-02	1.58E-01	2.17E+01	1.08E+00
Acidification Potential (AP)	mole of H ⁺ eq.	9.49E-03	3.53E-03	4.33E-05	6.28E-05	5.42E-03	4.36E-04
Eutrophication, freshwater (EpF)	kg P eq.	7.36E-05	4.26E-06	2.56E-09	9.78E-08	1.58E-06	6.77E-05
Eutrophication marine (Epm)	kg N eq.	1.23E-03	4.74E-04	2.03E-05	2.62E-05	6.45E-04	6.67E-05
Eutrophication, terrestrial (Ept)	mol N eq.	1.22E-02	3.44E-03	2.23E-04	1.53E-04	7.56E-03	7.83E-04
Climate change-Total (GWP)	kg CO ₂ eq.	1.48E+00	3.72E-01	6.84E-03	2.33E-02	1.02E+00	4.98E-02
Climate change-Biogenic (GWPb)	kg CO ₂ eq.	7.57E-03	4.70E-03	0.00E+00	5.98E-04	1.08E-03	1.19E-03
Climate change-Fossil (GWPf)	kg CO ₂ eq.	1.47E+00	3.67E-01	6.84E-03	2.27E-02	1.02E+00	4.86E-02
Climate change-Land use and land use change (GWPlu)	kg CO ₂ eq.	6.05E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-08
Ozone depletion (ODP)	kg CFC-11 eq.	3.18E-08	2.19E-08	1.05E-11	9.12E-10	4.35E-09	4.62E-09
Photochemical ozone formation - human health (POCP)	kg NMVOC eq.	3.62E-03	1.17E-03	5.61E-05	4.26E-05	2.14E-03	2.10E-04
Water use (WU)	m ³ eq.	5.52E-01	4.71E-01	2.60E-05	5.83E-03	3.68E-02	3.86E-02

*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5, B7) are equal to zero. Hence, they are not listed in the table.

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Total	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B6)*	End of Life (C1-C4)
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.62E+00	-1.57E-01	1.27E-04	1.01E-02	2.73E+00	3.77E-02
Use of renewable primary energy resources used as raw material	MJ	4.47E-01	4.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	3.06E+00	2.90E-01	1.27E-04	1.01E-02	2.73E+00	3.77E-02
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.68E+01	3.75E+00	9.53E-02	1.58E-01	2.17E+01	1.08E+00
Use of non renewable primary energy resources used as raw material	MJ	5.63E-01	5.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	2.74E+01	4.31E+00	9.53E-02	1.58E-01	2.17E+01	1.08E+00
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of freshwater	m ³	1.29E-02	1.10E-02	6.04E-07	1.36E-04	8.56E-04	8.98E-04
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	3.38E-02	0.00E+00	0.00E+00	7.39E-03	0.00E+00	2.64E-02
Materials for energy recovery	kg	1.14E-03	0.00E+00	0.00E+00	8.77E-04	0.00E+00	2.61E-04
Exported Energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hazardous waste disposed	kg	1.40E+00	1.35E+00	0.00E+00	1.64E-04	2.00E-02	3.22E-02
Non hazardous waste disposed	kg	9.50E-01	7.13E-01	2.40E-04	4.89E-02	1.51E-01	3.70E-02
Radioactive waste disposed	kg	1.05E-04	4.50E-05	1.71E-07	5.91E-06	2.85E-05	2.55E-05
Biogenic carbon content of the product	kg 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 C	7.28E-03	7.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5, B7) are equal to zero. Hence, they are not listed in the table.

Environmental Impact Indicators: Optional

Environmental impact indicators	Units	Total	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B6) *	End of Life (C1-C4)
Ecotoxicity, freshwater	CTUe	3.57E+01	1.60E+01	4.60E-03	1.41E-01	1.22E+01	7.27E+00
Human toxicity, cancer	CTUh-c	2.46E-07	2.23E-07	1.20E-13	4.82E-09	1.20E-10	1.85E-08
Human toxicity, non-cancer	CTUh-nc	6.70E-08	5.68E-08	1.30E-11	9.02E-11	5.05E-09	4.97E-09
Ionising radiation, human health	kBq U235 eq.	5.50E+00	4.63E+00	1.66E-05	6.38E-04	8.61E-01	4.27E-03
Land use	--	1.56E-01	1.02E-03	0.00E+00	0.00E+00	1.37E-02	1.41E-01
EF-particulate Matter	Disease occurrence	6.50E-08	2.44E-08	3.52E-10	4.33E-10	3.66E-08	3.23E-09
Total Primary Energy	MJ	3.04E+01	4.60E+00	9.55E-02	1.68E-01	2.45E+01	1.11E+00

*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5, B7) are equal to zero. Hence, they are not listed in the table.

Disclaimer

This Product Environmental Profile and its content is based on information available to us. It refers to the product at the date of issue. We make no express or implied representations or warranties with respect to the information contained herein.

Registration N°	EATO-00072-V01.01-EN	Drafting rules	PCR-ed4-EN-2021 09 06
Verifier accreditation N°	VH47	Supplemented by	PSR-0005-ed2-EN-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	X	External	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)			
PEPs 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: 2010 « Environmental labels and declarations. Type III environmental declarations »			