

 <i>Powering Business Worldwide</i>	Product Environmental Profile	
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	Mounting Adapter
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Representative product	Mounting Adapter (M22-A)
Description of the product	It is used as an adapter for contact elements to mount pushbuttons on front panels of machines.
Homogeneous Environmental Families Covered	The PEP concerns all the product offerings covering mounting adapters for 3 or 4 contact elements as well as bulk packaging offerings – M22-A, M22-A4, M22-A-GVP
Functional unit	To allow mounting and connection between pushbutton and contact elements on panel of machine for 20 years at ambient temperature from -25 to +70 °C. Product ensures climatic proofing at constant & cyclic damp heat conditions in accordance with IEC 60068-2-78 and IEC 60068-2-30 respectively.
Company information	Eaton Industries GmbH - Werk Dausenau, Emser Landstraße 2, 56132 Dausenau, Germany Email: productstewardship-es@eaton.com

Constituent Materials			
Reference product mass	5.79E-03 kg (With packaging)		
Category PEP Material	Materials	Mass (kg)	Percentage (%)
Plastic	PA 66	3.47E-03	59.9%
Others	Cardboard	2.17E-03	37.5%
Plastic	PE-LD film	1.54E-04	2.6%
Total		5.79E-03	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 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 requires standard tools which do 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 require maintenance during operation.
End of life	Recyclability of product is 22.1% based on the method of the IEC /TR 62635.

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 v5.9.3 with database version CODDE-2022-01.

Manufacturing Phase	The product is manufactured at Eaton Industries, Dausenau, Germany plant. Energy model used: Europe
Distribution Phase	Distribution of the product in its packaging from the manufacturer's last logistics platform to the installation place is considered as per PCR rules.
Installation Phase	Product is installed in Europe. Only treatment of packaging waste is considered in this phase. Energy model used for treatment of packaging: Europe
Use Phase	Reference lifetime: 20 Years (assumed) Usage profile: No energy consumption by the product during its useful life.
End of life Phase	Product disposed with WEEE guidelines. Energy model used: Europe

Environmental Impact Indicators: Mandatory

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life
Global warming (GWP100)	kg CO ₂ eq.	3.93E-02	3.67E-02	1.36E-03	2.94E-04	0.00E+00	8.68E-04
Ozone layer depletion	kg CFC-11 eq.	4.96E-10	4.67E-10	2.76E-12	6.15E-13	0.00E+00	2.56E-11
Acidification potential	kg SO ₂ eq.	1.42E-04	1.33E-04	6.13E-06	1.37E-06	0.00E+00	8.75E-07
Eutrophication	kg PO ₄ ³⁻ eq.	4.44E-05	4.23E-05	1.41E-06	3.23E-07	0.00E+00	3.29E-07
Photochemical oxidation	kg ethylene eq.	1.03E-05	9.65E-06	4.36E-07	9.92E-08	0.00E+00	9.46E-08
Abiotic depletion (elements)	kg antimony eq.	1.09E-08	1.08E-08	5.46E-11	1.17E-11	0.00E+00	8.18E-12
Abiotic depletion (fossil fuels)	MJ	2.99E-01	2.73E-01	1.92E-02	4.08E-03	0.00E+00	3.29E-03
Water Pollution	m ³	1.76E+00	1.44E+00	2.24E-01	4.78E-02	0.00E+00	4.46E-02
Air pollution	m ³	1.57E+00	1.46E+00	5.59E-02	1.35E-02	0.00E+00	3.68E-02

Environmental Impact Indicators: Optional

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	-1.27E-02	-1.27E-02	2.57E-05	5.72E-06	0.00E+00	4.53E-06
Use of renewable primary energy resources used as raw materials	MJ	3.90E-02	3.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	2.63E-02	2.63E-02	2.57E-05	5.72E-06	0.00E+00	4.53E-06
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	2.51E-01	2.24E-01	1.93E-02	4.10E-03	0.00E+00	4.30E-03
Use of non-renewable primary energy resources used as raw materials	MJ	1.15E-01	1.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3.66E-01	3.38E-01	1.93E-02	4.10E-03	0.00E+00	4.30E-03
Net use of fresh water	m ³	1.25E-02	1.25E-02	1.22E-07	3.18E-08	0.00E+00	6.01E-07

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life
Hazardous waste disposed of	kg	6.35E-03	1.58E-04	0.00E+00	4.98E-09	0.00E+00	6.19E-03
Non-hazardous waste disposed of	kg	6.79E-02	6.78E-02	4.85E-05	2.04E-05	0.00E+00	1.36E-05
Radioactive waste disposed of	kg	1.02E-05	1.01E-05	3.45E-08	7.65E-09	0.00E+00	2.37E-08
Materials for recycling	kg	3.10E-03	8.70E-05	0.00E+00	2.25E-03	0.00E+00	7.67E-04
Materials for energy recovery	kg	8.32E-05	2.28E-05	0.00E+00	6.04E-05	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	MJ	3.92E-01	3.64E-01	1.93E-02	4.11E-03	0.00E+00	4.30E-03

To evaluate the environmental impact of other product covered by this PEP, multiply the impact figures by-

Factors for Manufacturing, Distribution, Installation, Use and End-of-Life Phase:

Product	Phases	Global warming (Kg CO ₂ eq.)	Ozone depletion (kg CFC-11 eq.)	Acidification of soil and water (kg SO ₂ eq)	Eutrophication (kg PO ₄ ³ eq.)	Photochemical Ozone formation (kg ethylene eq.)	Depletion of abiotic resources-elements (kg Sb eq.)	Depletion of abiotic resources - fossil fuels (MJ)	Water pollution (m³)	Air pollution (m³)
M22-A	All phases	1.00								
M22-A4	Manufacturing	1.65	2.11	1.65	1.62	1.64	1.57	1.58	2.36	1.70
	Distribution	1.86								
	Installation	1.76	1.71	1.68	1.66	1.66	1.77	1.77	1.78	1.57
	Use	1.00								
	End of Life	1.59	1.50	1.54	1.57	1.54	1.54	1.53	1.56	1.54
M22A-GVP	Manufacturing	46.60	34.61	46.88	47.79	47.04	49.03	47.88	28.20	45.20
	Distribution	40.27								
	Installation	25.97	26.71	25.76	25.99	25.76	25.82	25.75	25.75	25.90
	Use	1.00								
	End of Life	48.24	51.24	50.00	49.06	50.02	49.91	50.16	49.24	50.01

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-00049-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH47		
Date of issue	08-2022	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 Philippe Osset (SOLINNEN)			
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 »			