

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.64



Product: 3003839 - PE Eccentric Reducer 160x110
Unit: 1 piece
Manufacturer: Wavin - IT - SM Maddalena

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 24-11-2022
End of validity: 24-11-2027
Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - IT - SM Maddalena (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					D Reuse- Recovery- Recycling- potential											

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.36E-1	5.65E-2	3.32E-2	5.26E-1	5.82E-3	2.70E-1	3.22E-3	-2.80E-1	5.24E-1
GWP-f	kg CO2 eq	4.92E-1	5.65E-2	2.84E-2	5.76E-1	5.82E-3	1.93E-1	3.22E-3	-3.21E-1	4.57E-1
GWP-b	kg CO2 eq	-5.60E-2	3.20E-5	2.40E-3	-5.36E-2	3.53E-6	7.70E-2	2.42E-6	4.09E-2	6.43E-2
GWP-luluc	kg CO2 eq	4.01E-4	2.07E-5	2.40E-3	2.82E-3	2.06E-6	3.39E-5	4.62E-8	-3.86E-4	2.47E-3
ODP	kg CFC11 eq	3.05E-8	1.29E-8	2.85E-9	4.63E-8	1.34E-9	4.90E-9	6.88E-11	-1.79E-8	3.47E-8
AP	mol H+ eq	1.94E-3	3.96E-4	1.14E-4	2.45E-3	3.31E-5	2.01E-4	1.64E-6	-1.05E-3	1.64E-3
EP-fw	kg P eq	1.04E-5	4.53E-7	4.41E-7	1.13E-5	4.79E-8	9.91E-7	2.13E-9	-7.62E-6	4.75E-6
EP-m	kg N eq	3.67E-4	1.32E-4	1.93E-5	5.18E-4	1.19E-5	6.04E-5	1.16E-6	-2.07E-4	3.85E-4
EP-T	mol N eq	4.02E-3	1.46E-3	2.17E-4	5.69E-3	1.31E-4	6.64E-4	6.66E-6	-2.33E-3	4.16E-3
POCP	kg NMVOC eq	1.70E-3	4.09E-4	6.75E-5	2.18E-3	3.74E-5	2.08E-4	2.61E-6	-9.53E-4	1.47E-3
ADP-mm	kg Sb eq	6.69E-6	1.41E-6	6.91E-7	8.79E-6	1.50E-7	8.01E-7	1.65E-9	-2.29E-6	7.45E-6
ADP-f	MJ	1.64E+1	8.60E-1	3.73E-1	1.77E+1	8.93E-2	6.10E-1	5.02E-3	-9.23E+0	9.15E+0
WDP	m3 depriv.	3.56E-1	2.58E-3	1.32E-1	4.90E-1	2.74E-4	1.15E-2	2.30E-5	-2.32E-1	2.70E-1
PM	disease inc.	2.05E-8	4.93E-9	1.15E-9	2.65E-8	5.25E-10	3.28E-9	3.45E-11	-1.14E-8	1.90E-8
IR	kBq U-235 eq	1.59E-2	3.76E-3	3.48E-4	2.00E-2	3.90E-4	1.90E-3	2.34E-5	-8.23E-3	1.41E-2
ETP-fw	CTUe	8.37E+0	6.92E-1	5.89E-1	9.65E+0	7.25E-2	7.22E-1	4.43E-3	-4.67E+0	5.78E+0
HTP-c	CTUh	1.73E-10	2.53E-11	3.14E-11	2.30E-10	2.58E-12	8.30E-11	1.22E-13	-1.06E-10	2.10E-10
HTP-nc	CTUh	3.67E-9	8.16E-10	6.52E-10	5.14E-9	8.64E-11	1.04E-9	2.81E-12	-2.35E-9	3.91E-9
SQP	Pt	7.31E+0	7.11E-1	6.80E-2	8.09E+0	7.64E-2	4.78E-1	1.29E-2	-1.19E+1	-3.28E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.32E+0	1.21E-2	1.29E+0	2.62E+0	1.28E-3	2.93E-2	1.99E-4	-2.11E+0	5.43E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.32E+0	1.21E-2	1.29E+0	2.62E+0	1.28E-3	2.93E-2	1.99E-4	-2.11E+0	5.43E-1
PENRE	MJ	1.76E+1	9.13E-1	4.07E-1	1.90E+1	9.48E-2	6.49E-1	5.33E-3	-9.95E+0	9.76E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.76E+1	9.13E-1	4.07E-1	1.90E+1	9.48E-2	6.49E-1	5.33E-3	-9.95E+0	9.76E+0
PET	MJ	1.90E+1	9.25E-1	1.70E+0	2.16E+1	9.61E-2	6.79E-1	5.53E-3	-1.21E+1	1.03E+1
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	5.74E-3	9.50E-5	3.14E-3	8.98E-3	1.01E-5	3.45E-4	6.21E-6	-4.23E-3	5.11E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.63E-6	2.14E-6	3.63E-7	6.14E-6	2.28E-7	1.04E-6	6.03E-9	-3.40E-6	4.01E-6
NHWD	kg	2.75E-2	5.12E-2	3.54E-3	8.23E-2	5.53E-3	2.97E-2	2.21E-2	-1.27E-2	1.27E-1
RWD	kg	1.73E-5	5.86E-6	3.87E-7	2.36E-5	6.07E-7	2.44E-6	3.28E-8	-7.80E-6	1.88E-5
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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