

Environmental Profile

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

Ecochain v3.5.64



Product: 3003835 - PE Eccentric Reducer 110x56
 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.30E-1	4.29E-2	2.55E-2	3.99E-1	4.48E-3	1.81E-1	2.48E-3	-2.23E-1	3.64E-1
GWP-f	kg CO2 eq	3.58E-1	4.29E-2	2.18E-2	4.22E-1	4.47E-3	1.47E-1	2.48E-3	-2.34E-1	3.42E-1
GWP-b	kg CO2 eq	-2.76E-2	2.43E-5	1.84E-3	-2.57E-2	2.72E-6	3.45E-2	1.86E-6	1.12E-2	2.00E-2
GWP-luluc	kg CO2 eq	1.87E-4	1.57E-5	1.84E-3	2.05E-3	1.58E-6	2.55E-5	3.56E-8	-1.49E-4	1.92E-3
ODP	kg CFC11 eq	2.08E-8	9.82E-9	2.19E-9	3.28E-8	1.03E-9	3.47E-9	5.29E-11	-1.21E-8	2.53E-8
AP	mol H+ eq	1.38E-3	3.01E-4	8.81E-5	1.77E-3	2.55E-5	1.44E-4	1.26E-6	-7.02E-4	1.24E-3
EP-fw	kg P eq	6.67E-6	3.43E-7	3.39E-7	7.35E-6	3.68E-8	7.40E-7	1.64E-9	-4.01E-6	4.12E-6
EP-m	kg N eq	2.44E-4	1.00E-4	1.49E-5	3.59E-4	9.12E-6	4.26E-5	8.93E-7	-1.33E-4	2.78E-4
EP-T	mol N eq	2.72E-3	1.11E-3	1.67E-4	3.99E-3	1.01E-4	4.69E-4	5.12E-6	-1.49E-3	3.08E-3
POCP	kg NMVOC eq	1.22E-3	3.11E-4	5.19E-5	1.58E-3	2.87E-5	1.48E-4	2.01E-6	-6.54E-4	1.11E-3
ADP-mm	kg Sb eq	4.86E-6	1.07E-6	5.32E-7	6.46E-6	1.16E-7	5.72E-7	1.27E-9	-1.59E-6	5.56E-6
ADP-f	MJ	1.23E+1	6.53E-1	2.87E-1	1.33E+1	6.87E-2	4.49E-1	3.86E-3	-6.88E+0	6.93E+0
WDP	m3 depriv.	2.66E-1	1.96E-3	1.02E-1	3.70E-1	2.11E-4	8.67E-3	1.77E-5	-1.49E-1	2.30E-1
PM	disease inc.	1.39E-8	3.74E-9	8.82E-10	1.85E-8	4.04E-10	2.36E-9	2.65E-11	-6.56E-9	1.47E-8
IR	kBq U-235 eq	1.12E-2	2.85E-3	2.68E-4	1.44E-2	3.00E-4	1.37E-3	1.80E-5	-4.98E-3	1.11E-2
ETP-fw	CTUe	3.86E+0	5.25E-1	4.53E-1	4.84E+0	5.58E-2	5.18E-1	3.40E-3	-2.00E+0	3.42E+0
HTP-c	CTUh	1.16E-10	1.92E-11	2.42E-11	1.60E-10	1.98E-12	6.08E-11	9.38E-14	-6.39E-11	1.59E-10
HTP-nc	CTUh	2.49E-9	6.19E-10	5.01E-10	3.61E-9	6.65E-11	7.64E-10	2.16E-12	-1.36E-9	3.08E-9
SQP	Pt	3.49E+0	5.39E-1	5.23E-2	4.08E+0	5.88E-2	3.56E-1	9.91E-3	-4.43E+0	6.82E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.53E-1	9.14E-3	9.94E-1	1.66E+0	9.85E-4	2.19E-2	1.53E-4	-7.97E-1	8.82E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.53E-1	9.14E-3	9.94E-1	1.66E+0	9.85E-4	2.19E-2	1.53E-4	-7.97E-1	8.82E-1
PENRE	MJ	1.32E+1	6.93E-1	3.13E-1	1.42E+1	7.29E-2	4.79E-1	4.10E-3	-7.42E+0	7.38E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.32E+1	6.93E-1	3.13E-1	1.42E+1	7.29E-2	4.79E-1	4.10E-3	-7.42E+0	7.38E+0
PET	MJ	1.39E+1	7.02E-1	1.31E+0	1.59E+1	7.39E-2	5.01E-1	4.25E-3	-8.22E+0	8.26E+0
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	4.15E-3	7.21E-5	2.41E-3	6.63E-3	7.77E-6	2.57E-4	4.77E-6	-2.48E-3	4.43E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.32E-6	1.62E-6	2.79E-7	4.22E-6	1.76E-7	7.45E-7	4.64E-9	-2.28E-6	2.86E-6
NHWD	kg	1.70E-2	3.88E-2	2.72E-3	5.85E-2	4.26E-3	2.20E-2	1.70E-2	-7.56E-3	9.43E-2
RWD	kg	1.23E-5	4.44E-6	2.98E-7	1.70E-5	4.67E-7	1.75E-6	2.53E-8	-4.69E-6	1.46E-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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