

Environmental Profile

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

Ecochain v3.5.64



Product: 3003840 - PE Eccentric Reducer 160x125
 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 non-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	4.30E-1	5.58E-2	3.27E-2	5.18E-1	5.74E-3	2.67E-1	3.18E-3	-2.76E-1	5.18E-1
GWP-f	kg CO2 eq	4.86E-1	5.57E-2	2.80E-2	5.69E-1	5.74E-3	1.90E-1	3.18E-3	-3.17E-1	4.52E-1
GWP-b	kg CO2 eq	-5.61E-2	3.16E-5	2.36E-3	-5.37E-2	3.48E-6	7.70E-2	2.39E-6	4.09E-2	6.42E-2
GWP-luluc	kg CO2 eq	3.99E-4	2.05E-5	2.36E-3	2.78E-3	2.03E-6	3.35E-5	4.56E-8	-3.86E-4	2.43E-3
ODP	kg CFC11 eq	3.02E-8	1.28E-8	2.81E-9	4.58E-8	1.32E-9	4.84E-9	6.78E-11	-1.77E-8	3.43E-8
AP	mol H+ eq	1.92E-3	3.91E-4	1.13E-4	2.42E-3	3.27E-5	1.99E-4	1.62E-6	-1.04E-3	1.61E-3
EP-fw	kg P eq	1.03E-5	4.47E-7	4.35E-7	1.12E-5	4.72E-8	9.79E-7	2.10E-9	-7.57E-6	4.68E-6
EP-m	kg N eq	3.63E-4	1.30E-4	1.91E-5	5.12E-4	1.17E-5	5.97E-5	1.14E-6	-2.05E-4	3.80E-4
EP-T	mol N eq	3.98E-3	1.44E-3	2.14E-4	5.63E-3	1.29E-4	6.57E-4	6.57E-6	-2.31E-3	4.11E-3
POCP	kg NMVOC eq	1.68E-3	4.04E-4	6.66E-5	2.15E-3	3.68E-5	2.06E-4	2.58E-6	-9.42E-4	1.45E-3
ADP-mm	kg Sb eq	6.61E-6	1.39E-6	6.82E-7	8.68E-6	1.48E-7	7.91E-7	1.62E-9	-2.27E-6	7.35E-6
ADP-f	MJ	1.62E+1	8.49E-1	3.68E-1	1.75E+1	8.81E-2	6.02E-1	4.95E-3	-9.12E+0	9.03E+0
WDP	m3 depriv.	3.51E-1	2.54E-3	1.30E-1	4.84E-1	2.70E-4	1.13E-2	2.27E-5	-2.29E-1	2.66E-1
PM	disease inc.	2.02E-8	4.87E-9	1.13E-9	2.62E-8	5.18E-10	3.24E-9	3.40E-11	-1.13E-8	1.87E-8
IR	kBq U-235 eq	1.57E-2	3.71E-3	3.44E-4	1.98E-2	3.85E-4	1.87E-3	2.31E-5	-8.16E-3	1.39E-2
ETP-fw	CTUe	8.33E+0	6.83E-1	5.81E-1	9.60E+0	7.15E-2	7.13E-1	4.37E-3	-4.65E+0	5.73E+0
HTP-c	CTUh	1.71E-10	2.50E-11	3.10E-11	2.27E-10	2.55E-12	8.19E-11	1.20E-13	-1.05E-10	2.07E-10
HTP-nc	CTUh	3.63E-9	8.05E-10	6.43E-10	5.08E-9	8.53E-11	1.02E-9	2.78E-12	-2.33E-9	3.86E-9
SQP	Pt	7.30E+0	7.01E-1	6.71E-2	8.07E+0	7.54E-2	4.72E-1	1.27E-2	-1.19E+1	-3.31E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.31E+0	1.19E-2	1.27E+0	2.60E+0	1.26E-3	2.89E-2	1.96E-4	-2.11E+0	5.23E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.31E+0	1.19E-2	1.27E+0	2.60E+0	1.26E-3	2.89E-2	1.96E-4	-2.11E+0	5.23E-1
PENRE	MJ	1.74E+1	9.01E-1	4.02E-1	1.87E+1	9.35E-2	6.41E-1	5.25E-3	-9.82E+0	9.63E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.74E+1	9.01E-1	4.02E-1	1.87E+1	9.35E-2	6.41E-1	5.25E-3	-9.82E+0	9.63E+0
PET	MJ	1.87E+1	9.13E-1	1.68E+0	2.13E+1	9.48E-2	6.70E-1	5.45E-3	-1.19E+1	1.02E+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	5.67E-3	9.38E-5	3.10E-3	8.86E-3	9.97E-6	3.40E-4	6.12E-6	-4.19E-3	5.03E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.60E-6	2.11E-6	3.58E-7	6.07E-6	2.25E-7	1.02E-6	5.94E-9	-3.37E-6	3.96E-6
NHWD	kg	2.73E-2	5.05E-2	3.49E-3	8.13E-2	5.46E-3	2.93E-2	2.18E-2	-1.26E-2	1.25E-1
RWD	kg	1.71E-5	5.78E-6	3.82E-7	2.33E-5	5.99E-7	2.41E-6	3.24E-8	-7.73E-6	1.86E-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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