

Environmental Profile

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

Ecochain v3.5.64



Product: 3003837 - PE Eccentric Reducer 125x90

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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.38E-1	4.31E-2	2.55E-2	4.07E-1	4.48E-3	1.86E-1	2.48E-3	-2.19E-1	3.81E-1
GWP-f	kg CO2 eq	3.66E-1	4.30E-2	2.18E-2	4.31E-1	4.47E-3	1.47E-1	2.48E-3	-2.39E-1	3.46E-1
GWP-b	kg CO2 eq	-2.74E-2	2.44E-5	1.84E-3	-2.56E-2	2.72E-6	3.84E-2	1.86E-6	2.02E-2	3.30E-2
GWP-luluc	kg CO2 eq	2.37E-4	1.58E-5	1.84E-3	2.10E-3	1.58E-6	2.58E-5	3.56E-8	-2.11E-4	1.91E-3
ODP	kg CFC11 eq	2.18E-8	9.86E-9	2.19E-9	3.39E-8	1.03E-9	3.59E-9	5.29E-11	-1.27E-8	2.59E-8
AP	mol H+ eq	1.42E-3	3.02E-4	8.81E-5	1.81E-3	2.55E-5	1.49E-4	1.26E-6	-7.44E-4	1.25E-3
EP-fw	kg P eq	7.22E-6	3.45E-7	3.39E-7	7.90E-6	3.68E-8	7.50E-7	1.64E-9	-4.79E-6	3.91E-6
EP-m	kg N eq	2.59E-4	1.01E-4	1.49E-5	3.74E-4	9.12E-6	4.42E-5	8.93E-7	-1.43E-4	2.86E-4
EP-T	mol N eq	2.86E-3	1.11E-3	1.67E-4	4.14E-3	1.01E-4	4.86E-4	5.12E-6	-1.61E-3	3.13E-3
POCP	kg NMVOC eq	1.25E-3	3.12E-4	5.19E-5	1.61E-3	2.87E-5	1.53E-4	2.01E-6	-6.82E-4	1.12E-3
ADP-mm	kg Sb eq	4.97E-6	1.07E-6	5.32E-7	6.57E-6	1.16E-7	5.91E-7	1.27E-9	-1.65E-6	5.63E-6
ADP-f	MJ	1.25E+1	6.55E-1	2.87E-1	1.34E+1	6.87E-2	4.57E-1	3.86E-3	-6.96E+0	6.97E+0
WDP	m3 depriv.	2.69E-1	1.96E-3	1.02E-1	3.73E-1	2.11E-4	8.73E-3	1.77E-5	-1.61E-1	2.20E-1
PM	disease inc.	1.45E-8	3.76E-9	8.82E-10	1.92E-8	4.04E-10	2.43E-9	2.65E-11	-7.40E-9	1.46E-8
IR	kBq U-235 eq	1.16E-2	2.86E-3	2.68E-4	1.48E-2	3.00E-4	1.41E-3	1.80E-5	-5.53E-3	1.09E-2
ETP-fw	CTUe	4.98E+0	5.27E-1	4.53E-1	5.96E+0	5.58E-2	5.34E-1	3.40E-3	-2.68E+0	3.87E+0
HTP-c	CTUh	1.21E-10	1.93E-11	2.42E-11	1.64E-10	1.98E-12	6.20E-11	9.38E-14	-6.91E-11	1.59E-10
HTP-nc	CTUh	2.61E-9	6.21E-10	5.01E-10	3.74E-9	6.65E-11	7.78E-10	2.16E-12	-1.54E-9	3.04E-9
SQP	Pt	3.84E+0	5.41E-1	5.23E-2	4.44E+0	5.88E-2	3.61E-1	9.91E-3	-6.04E+0	-1.17E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.28E-1	9.18E-3	9.94E-1	1.73E+0	9.85E-4	2.22E-2	1.53E-4	-1.09E+0	6.65E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.28E-1	9.18E-3	9.94E-1	1.73E+0	9.85E-4	2.22E-2	1.53E-4	-1.09E+0	6.65E-1
PENRE	MJ	1.34E+1	6.96E-1	3.13E-1	1.44E+1	7.29E-2	4.87E-1	4.10E-3	-7.51E+0	7.43E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.34E+1	6.96E-1	3.13E-1	1.44E+1	7.29E-2	4.87E-1	4.10E-3	-7.51E+0	7.43E+0
PET	MJ	1.41E+1	7.05E-1	1.31E+0	1.61E+1	7.39E-2	5.09E-1	4.25E-3	-8.60E+0	8.10E+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	4.26E-3	7.24E-5	2.41E-3	6.74E-3	7.77E-6	2.60E-4	4.77E-6	-2.81E-3	4.21E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.48E-6	1.63E-6	2.79E-7	4.39E-6	1.76E-7	7.67E-7	4.64E-9	-2.39E-6	2.95E-6
NHWD	kg	1.85E-2	3.90E-2	2.72E-3	6.02E-2	4.26E-3	2.24E-2	1.70E-2	-8.26E-3	9.56E-2
RWD	kg	1.27E-5	4.46E-6	2.98E-7	1.74E-5	4.67E-7	1.80E-6	2.53E-8	-5.21E-6	1.45E-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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