

Environmental Profile

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

Ecochain v3.5.64



Product: 3003833 - PE Eccentric Reducer 110x75
 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	2.39E-1	3.17E-2	1.88E-2	2.90E-1	3.29E-3	1.43E-1	1.82E-3	-1.63E-1	2.74E-1
GWP-f	kg CO2 eq	2.67E-1	3.17E-2	1.61E-2	3.15E-1	3.29E-3	1.08E-1	1.82E-3	-1.75E-1	2.53E-1
GWP-b	kg CO2 eq	-2.80E-2	1.79E-5	1.36E-3	-2.66E-2	2.00E-6	3.46E-2	1.37E-6	1.14E-2	1.93E-2
GWP-luluc	kg CO2 eq	1.59E-4	1.16E-5	1.36E-3	1.53E-3	1.16E-6	1.89E-5	2.62E-8	-1.35E-4	1.41E-3
ODP	kg CFC11 eq	1.58E-8	7.26E-9	1.61E-9	2.47E-8	7.58E-10	2.60E-9	3.89E-11	-9.22E-9	1.89E-8
AP	mol H+ eq	1.04E-3	2.23E-4	6.47E-5	1.32E-3	1.87E-5	1.08E-4	9.28E-7	-5.38E-4	9.15E-4
EP-fw	kg P eq	5.16E-6	2.54E-7	2.49E-7	5.66E-6	2.71E-8	5.48E-7	1.20E-9	-3.27E-6	2.96E-6
EP-m	kg N eq	1.87E-4	7.41E-5	1.09E-5	2.72E-4	6.71E-6	3.20E-5	6.56E-7	-1.03E-4	2.08E-4
EP-T	mol N eq	2.07E-3	8.18E-4	1.23E-4	3.01E-3	7.39E-5	3.52E-4	3.77E-6	-1.16E-3	2.28E-3
POCP	kg NMVOC eq	9.17E-4	2.30E-4	3.82E-5	1.19E-3	2.11E-5	1.11E-4	1.48E-6	-4.99E-4	8.20E-4
ADP-mm	kg Sb eq	3.63E-6	7.90E-7	3.91E-7	4.81E-6	8.51E-8	4.28E-7	9.31E-10	-1.21E-6	4.12E-6
ADP-f	MJ	9.14E+0	4.82E-1	2.11E-1	9.84E+0	5.05E-2	3.34E-1	2.84E-3	-5.11E+0	5.11E+0
WDP	m3 depriv.	1.97E-1	1.45E-3	7.47E-2	2.73E-1	1.55E-4	6.40E-3	1.30E-5	-1.14E-1	1.66E-1
PM	disease inc.	1.06E-8	2.77E-9	6.48E-10	1.40E-8	2.97E-10	1.77E-9	1.95E-11	-5.26E-9	1.08E-8
IR	kBq U-235 eq	8.46E-3	2.11E-3	1.97E-4	1.08E-2	2.21E-4	1.03E-3	1.32E-5	-3.91E-3	8.12E-3
ETP-fw	CTUe	3.27E+0	3.88E-1	3.33E-1	3.99E+0	4.10E-2	3.87E-1	2.50E-3	-1.74E+0	2.68E+0
HTP-c	CTUh	9.06E-11	1.42E-11	1.78E-11	1.23E-10	1.46E-12	4.53E-11	6.90E-14	-5.16E-11	1.18E-10
HTP-nc	CTUh	1.90E-9	4.57E-10	3.69E-10	2.73E-9	4.89E-11	5.68E-10	1.59E-12	-1.09E-9	2.26E-9
SQP	Pt	3.34E+0	3.98E-1	3.85E-2	3.78E+0	4.32E-2	2.64E-1	7.29E-3	-4.38E+0	-2.84E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.01E-1	6.76E-3	7.31E-1	1.34E+0	7.25E-4	1.62E-2	1.12E-4	-7.72E-1	5.84E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.01E-1	6.76E-3	7.31E-1	1.34E+0	7.25E-4	1.62E-2	1.12E-4	-7.72E-1	5.84E-1
PENRE	MJ	9.80E+0	5.12E-1	2.30E-1	1.05E+1	5.36E-2	3.56E-1	3.01E-3	-5.51E+0	5.45E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.80E+0	5.12E-1	2.30E-1	1.05E+1	5.36E-2	3.56E-1	3.01E-3	-5.51E+0	5.45E+0
PET	MJ	1.04E+1	5.19E-1	9.61E-1	1.19E+1	5.43E-2	3.72E-1	3.13E-3	-6.28E+0	6.04E+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	3.10E-3	5.33E-5	1.78E-3	4.93E-3	5.72E-6	1.91E-4	3.51E-6	-1.95E-3	3.18E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.81E-6	1.20E-6	2.05E-7	3.22E-6	1.29E-7	5.57E-7	3.41E-9	-1.76E-6	2.15E-6
NHWD	kg	1.34E-2	2.87E-2	2.00E-3	4.41E-2	3.13E-3	1.63E-2	1.25E-2	-6.11E-3	7.00E-2
RWD	kg	9.23E-6	3.28E-6	2.19E-7	1.27E-5	3.43E-7	1.31E-6	1.86E-8	-3.69E-6	1.07E-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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