

Environmental Profile

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

Ecochain v3.5.64



Product: 3003841 - PE Eccentric Reducer 56x50
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	7.64E-2	1.05E-2	6.15E-3	9.31E-2	1.08E-3	5.32E-2	5.98E-4	-5.31E-2	9.48E-2
GWP-f	kg CO2 eq	9.06E-2	1.05E-2	5.26E-3	1.06E-1	1.08E-3	3.57E-2	5.98E-4	-5.93E-2	8.44E-2
GWP-b	kg CO2 eq	-1.42E-2	5.95E-6	4.45E-4	-1.38E-2	6.55E-7	1.75E-2	4.49E-7	6.20E-3	9.91E-3
GWP-luluc	kg CO2 eq	6.87E-5	3.85E-6	4.44E-4	5.17E-4	3.82E-7	6.27E-6	8.58E-9	-6.38E-5	4.60E-4
ODP	kg CFC11 eq	5.57E-9	2.41E-9	5.28E-10	8.50E-9	2.49E-10	8.93E-10	1.28E-11	-3.28E-9	6.38E-9
AP	mol H+ eq	3.57E-4	7.36E-5	2.12E-5	4.52E-4	6.15E-6	3.68E-5	3.04E-7	-1.92E-4	3.03E-4
EP-fw	kg P eq	1.88E-6	8.42E-8	8.18E-8	2.05E-6	8.88E-9	1.83E-7	3.95E-10	-1.32E-6	9.20E-7
EP-m	kg N eq	6.67E-5	2.45E-5	3.59E-6	9.48E-5	2.20E-6	1.10E-5	2.15E-7	-3.78E-5	7.05E-5
EP-T	mol N eq	7.35E-4	2.71E-4	4.03E-5	1.05E-3	2.42E-5	1.21E-4	1.24E-6	-4.26E-4	7.67E-4
POCP	kg NMVOC eq	3.15E-4	7.61E-5	1.25E-5	4.04E-4	6.93E-6	3.80E-5	4.84E-7	-1.76E-4	2.73E-4
ADP-mm	kg Sb eq	1.24E-6	2.62E-7	1.28E-7	1.63E-6	2.79E-8	1.46E-7	3.05E-10	-4.25E-7	1.38E-6
ADP-f	MJ	3.04E+0	1.60E-1	6.93E-2	3.27E+0	1.66E-2	1.12E-1	9.31E-4	-1.71E+0	1.69E+0
WDP	m3 depriv.	6.57E-2	4.79E-4	2.45E-2	9.07E-2	5.08E-5	2.12E-3	4.27E-6	-4.11E-2	5.17E-2
PM	disease inc.	3.77E-9	9.18E-10	2.13E-10	4.90E-9	9.74E-11	6.00E-10	6.40E-12	-2.05E-9	3.56E-9
IR	kBq U-235 eq	2.92E-3	6.99E-4	6.46E-5	3.68E-3	7.24E-5	3.48E-4	4.34E-6	-1.47E-3	2.64E-3
ETP-fw	CTUe	1.40E+0	1.29E-1	1.09E-1	1.63E+0	1.35E-2	1.32E-1	8.21E-4	-7.76E-1	1.00E+0
HTP-c	CTUh	3.31E-11	4.70E-12	5.83E-12	4.36E-11	4.79E-13	1.53E-11	2.26E-14	-2.02E-11	3.92E-11
HTP-nc	CTUh	6.74E-10	1.52E-10	1.21E-10	9.47E-10	1.60E-11	1.91E-10	5.22E-13	-4.21E-10	7.34E-10
SQP	Pt	1.62E+0	1.32E-1	1.26E-2	1.76E+0	1.42E-2	8.82E-2	2.39E-3	-2.23E+0	-3.65E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.79E-1	2.24E-3	2.40E-1	5.21E-1	2.38E-4	5.40E-3	3.69E-5	-3.86E-1	1.40E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.79E-1	2.24E-3	2.40E-1	5.21E-1	2.38E-4	5.40E-3	3.69E-5	-3.86E-1	1.40E-1
PENRE	MJ	3.27E+0	1.70E-1	7.56E-2	3.51E+0	1.76E-2	1.19E-1	9.88E-4	-1.84E+0	1.81E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.27E+0	1.70E-1	7.56E-2	3.51E+0	1.76E-2	1.19E-1	9.88E-4	-1.84E+0	1.81E+0
PET	MJ	3.54E+0	1.72E-1	3.15E-1	4.03E+0	1.78E-2	1.25E-1	1.03E-3	-2.23E+0	1.95E+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	1.05E-3	1.77E-5	5.82E-4	1.65E-3	1.87E-6	6.36E-5	1.15E-6	-7.37E-4	9.83E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.74E-7	3.98E-7	6.73E-8	1.14E-6	4.24E-8	1.90E-7	1.12E-9	-6.35E-7	7.38E-7
NHWD	kg	5.05E-3	9.52E-3	6.56E-4	1.52E-2	1.03E-3	5.48E-3	4.10E-3	-2.39E-3	2.34E-2
RWD	kg	3.19E-6	1.09E-6	7.19E-8	4.35E-6	1.13E-7	4.46E-7	6.09E-9	-1.39E-6	3.52E-6
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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