

Environmental Profile

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

Ecochain v3.5.64



Product: 3003843 - PE Eccentric Reducer 75x56
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	1.00E-1	1.31E-2	7.65E-3	1.21E-1	1.34E-3	6.38E-2	7.44E-4	-6.45E-2	1.23E-1
GWP-f	kg CO2 eq	1.14E-1	1.31E-2	6.55E-3	1.34E-1	1.34E-3	4.46E-2	7.44E-4	-7.46E-2	1.06E-1
GWP-b	kg CO2 eq	-1.41E-2	7.41E-6	5.53E-4	-1.35E-2	8.15E-7	1.93E-2	5.58E-7	1.02E-2	1.60E-2
GWP-luluc	kg CO2 eq	9.76E-5	4.79E-6	5.53E-4	6.55E-4	4.75E-7	7.85E-6	1.07E-8	-9.53E-5	5.68E-4
ODP	kg CFC11 eq	7.16E-9	2.99E-9	6.57E-10	1.08E-8	3.09E-10	1.14E-9	1.59E-11	-4.21E-9	8.07E-9
AP	mol H+ eq	4.53E-4	9.16E-5	2.64E-5	5.71E-4	7.65E-6	4.69E-5	3.79E-7	-2.48E-4	3.78E-4
EP-fw	kg P eq	2.47E-6	1.05E-7	1.02E-7	2.67E-6	1.10E-8	2.30E-7	4.92E-10	-1.84E-6	1.08E-6
EP-m	kg N eq	8.63E-5	3.05E-5	4.46E-6	1.21E-4	2.74E-6	1.41E-5	2.68E-7	-4.88E-5	8.95E-5
EP-T	mol N eq	9.44E-4	3.37E-4	5.01E-5	1.33E-3	3.02E-5	1.55E-4	1.54E-6	-5.51E-4	9.66E-4
POCP	kg NMVOC eq	3.97E-4	9.47E-5	1.56E-5	5.07E-4	8.62E-6	4.86E-5	6.03E-7	-2.24E-4	3.41E-4
ADP-mm	kg Sb eq	1.56E-6	3.26E-7	1.59E-7	2.04E-6	3.47E-8	1.87E-7	3.80E-10	-5.37E-7	1.73E-6
ADP-f	MJ	3.81E+0	1.99E-1	8.62E-2	4.09E+0	2.06E-2	1.41E-1	1.16E-3	-2.14E+0	2.12E+0
WDP	m3 depriv.	8.24E-2	5.96E-4	3.05E-2	1.13E-1	6.32E-5	2.65E-3	5.31E-6	-5.47E-2	6.15E-2
PM	disease inc.	4.81E-9	1.14E-9	2.65E-10	6.21E-9	1.21E-10	7.62E-10	7.96E-12	-2.72E-9	4.38E-9
IR	kBq U-235 eq	3.71E-3	8.69E-4	8.04E-5	4.66E-3	9.01E-5	4.42E-4	5.40E-6	-1.96E-3	3.24E-3
ETP-fw	CTUe	2.04E+0	1.60E-1	1.36E-1	2.33E+0	1.67E-2	1.68E-1	1.02E-3	-1.14E+0	1.38E+0
HTP-c	CTUh	4.09E-11	5.85E-12	7.25E-12	5.40E-11	5.95E-13	1.93E-11	2.81E-14	-2.53E-11	4.86E-11
HTP-nc	CTUh	8.62E-10	1.89E-10	1.50E-10	1.20E-9	1.99E-11	2.41E-10	6.49E-13	-5.62E-10	9.00E-10
SQP	Pt	1.81E+0	1.64E-1	1.57E-2	1.99E+0	1.76E-2	1.11E-1	2.97E-3	-2.98E+0	-8.54E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.25E-1	2.79E-3	2.98E-1	6.26E-1	2.96E-4	6.78E-3	4.59E-5	-5.25E-1	1.08E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.25E-1	2.79E-3	2.98E-1	6.26E-1	2.96E-4	6.78E-3	4.59E-5	-5.25E-1	1.08E-1
PENRE	MJ	4.09E+0	2.11E-1	9.40E-2	4.39E+0	2.19E-2	1.51E-1	1.23E-3	-2.31E+0	2.26E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.09E+0	2.11E-1	9.40E-2	4.39E+0	2.19E-2	1.51E-1	1.23E-3	-2.31E+0	2.26E+0
PET	MJ	4.41E+0	2.14E-1	3.92E-1	5.02E+0	2.22E-2	1.57E-1	1.28E-3	-2.83E+0	2.37E+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	1.34E-3	2.20E-5	7.24E-4	2.08E-3	2.33E-6	7.98E-5	1.43E-6	-1.01E-3	1.16E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.61E-7	4.95E-7	8.38E-8	1.44E-6	5.27E-8	2.41E-7	1.39E-9	-8.01E-7	9.34E-7
NHWD	kg	6.54E-3	1.18E-2	8.16E-4	1.92E-2	1.28E-3	6.89E-3	5.11E-3	-3.04E-3	2.94E-2
RWD	kg	4.04E-6	1.35E-6	8.94E-8	5.49E-6	1.40E-7	5.68E-7	7.58E-9	-1.85E-6	4.35E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777