

Environmental Profile

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

Ecochain v3.5.64



Product: 3003825 - PE Eccentric Reducer 75x50
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	9.62E-2	1.28E-2	7.50E-3	1.17E-1	1.32E-3	6.18E-2	7.29E-4	-6.42E-2	1.16E-1
GWP-f	kg CO2 eq	1.10E-1	1.28E-2	6.42E-3	1.29E-1	1.32E-3	4.35E-2	7.29E-4	-7.21E-2	1.03E-1
GWP-b	kg CO2 eq	-1.41E-2	7.24E-6	5.42E-4	-1.35E-2	7.99E-7	1.82E-2	5.48E-7	7.94E-3	1.26E-2
GWP-luluc	kg CO2 eq	8.41E-5	4.69E-6	5.42E-4	6.31E-4	4.66E-7	7.65E-6	1.05E-8	-7.90E-5	5.60E-4
ODP	kg CFC11 eq	6.78E-9	2.93E-9	6.44E-10	1.03E-8	3.03E-10	1.09E-9	1.56E-11	-3.98E-9	7.78E-9
AP	mol H+ eq	4.34E-4	8.96E-5	2.59E-5	5.50E-4	7.50E-6	4.50E-5	3.71E-7	-2.33E-4	3.69E-4
EP-fw	kg P eq	2.29E-6	1.02E-7	9.98E-8	2.49E-6	1.08E-8	2.23E-7	4.82E-10	-1.62E-6	1.11E-6
EP-m	kg N eq	8.11E-5	2.98E-5	4.37E-6	1.15E-4	2.68E-6	1.35E-5	2.63E-7	-4.57E-5	8.61E-5
EP-T	mol N eq	8.92E-4	3.29E-4	4.92E-5	1.27E-3	2.96E-5	1.48E-4	1.51E-6	-5.15E-4	9.35E-4
POCP	kg NMVOC eq	3.82E-4	9.26E-5	1.53E-5	4.90E-4	8.45E-6	4.64E-5	5.91E-7	-2.13E-4	3.32E-4
ADP-mm	kg Sb eq	1.50E-6	3.19E-7	1.56E-7	1.98E-6	3.40E-8	1.79E-7	3.72E-10	-5.13E-7	1.68E-6
ADP-f	MJ	3.71E+0	1.94E-1	8.45E-2	3.99E+0	2.02E-2	1.37E-1	1.14E-3	-2.08E+0	2.07E+0
WDP	m3 depriv.	8.01E-2	5.83E-4	2.99E-2	1.11E-1	6.20E-5	2.59E-3	5.20E-6	-5.06E-2	6.26E-2
PM	disease inc.	4.56E-9	1.12E-9	2.59E-10	5.93E-9	1.19E-10	7.32E-10	7.80E-12	-2.47E-9	4.32E-9
IR	kBq U-235 eq	3.55E-3	8.50E-4	7.88E-5	4.48E-3	8.83E-5	4.25E-4	5.29E-6	-1.79E-3	3.21E-3
ETP-fw	CTUe	1.74E+0	1.56E-1	1.33E-1	2.03E+0	1.64E-2	1.61E-1	1.00E-3	-9.63E-1	1.24E+0
HTP-c	CTUh	3.92E-11	5.72E-12	7.11E-12	5.20E-11	5.84E-13	1.86E-11	2.76E-14	-2.37E-11	4.76E-11
HTP-nc	CTUh	8.17E-10	1.85E-10	1.47E-10	1.15E-9	1.96E-11	2.33E-10	6.37E-13	-5.11E-10	8.91E-10
SQP	Pt	1.72E+0	1.61E-1	1.54E-2	1.89E+0	1.73E-2	1.08E-1	2.91E-3	-2.56E+0	-5.42E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.04E-1	2.73E-3	2.92E-1	5.99E-1	2.90E-4	6.59E-3	4.50E-5	-4.49E-1	1.57E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.04E-1	2.73E-3	2.92E-1	5.99E-1	2.90E-4	6.59E-3	4.50E-5	-4.49E-1	1.57E-1
PENRE	MJ	3.98E+0	2.06E-1	9.22E-2	4.28E+0	2.14E-2	1.46E-1	1.21E-3	-2.24E+0	2.20E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.98E+0	2.06E-1	9.22E-2	4.28E+0	2.14E-2	1.46E-1	1.21E-3	-2.24E+0	2.20E+0
PET	MJ	4.28E+0	2.09E-1	3.85E-1	4.88E+0	2.17E-2	1.52E-1	1.25E-3	-2.69E+0	2.36E+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	1.28E-3	2.15E-5	7.10E-4	2.02E-3	2.29E-6	7.75E-5	1.40E-6	-9.09E-4	1.19E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.07E-7	4.84E-7	8.21E-8	1.37E-6	5.17E-8	2.32E-7	1.36E-9	-7.61E-7	8.97E-7
NHWD	kg	6.07E-3	1.16E-2	8.00E-4	1.85E-2	1.25E-3	6.68E-3	5.01E-3	-2.82E-3	2.86E-2
RWD	kg	3.87E-6	1.32E-6	8.77E-8	5.28E-6	1.37E-7	5.45E-7	7.43E-9	-1.70E-6	4.28E-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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