

Environmental Profile

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

Ecochain v3.5.64



Product: 3003826 - PE Eccentric Reducer 75x63
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	8.61E-2	1.15E-2	6.75E-3	1.04E-1	1.19E-3	5.75E-2	6.56E-4	-5.76E-2	1.06E-1
GWP-f	kg CO2 eq	1.00E-1	1.15E-2	5.78E-3	1.18E-1	1.18E-3	3.93E-2	6.56E-4	-6.55E-2	9.31E-2
GWP-b	kg CO2 eq	-1.41E-2	6.54E-6	4.88E-4	-1.37E-2	7.19E-7	1.83E-2	4.93E-7	7.97E-3	1.26E-2
GWP-luluc	kg CO2 eq	8.10E-5	4.23E-6	4.88E-4	5.73E-4	4.19E-7	6.91E-6	9.42E-9	-7.75E-5	5.03E-4
ODP	kg CFC11 eq	6.22E-9	2.64E-9	5.80E-10	9.44E-9	2.73E-10	9.95E-10	1.40E-11	-3.66E-9	7.06E-9
AP	mol H+ eq	3.96E-4	8.08E-5	2.33E-5	5.01E-4	6.75E-6	4.09E-5	3.34E-7	-2.15E-4	3.33E-4
EP-fw	kg P eq	2.12E-6	9.24E-8	8.98E-8	2.31E-6	9.75E-9	2.02E-7	4.34E-10	-1.54E-6	9.80E-7
EP-m	kg N eq	7.48E-5	2.69E-5	3.94E-6	1.06E-4	2.41E-6	1.23E-5	2.36E-7	-4.24E-5	7.82E-5
EP-T	mol N eq	8.21E-4	2.97E-4	4.42E-5	1.16E-3	2.66E-5	1.35E-4	1.36E-6	-4.78E-4	8.48E-4
POCP	kg NMVOC eq	3.48E-4	8.36E-5	1.37E-5	4.46E-4	7.61E-6	4.24E-5	5.32E-7	-1.96E-4	3.00E-4
ADP-mm	kg Sb eq	1.37E-6	2.88E-7	1.41E-7	1.79E-6	3.06E-8	1.63E-7	3.35E-10	-4.70E-7	1.52E-6
ADP-f	MJ	3.35E+0	1.76E-1	7.61E-2	3.60E+0	1.82E-2	1.24E-1	1.02E-3	-1.88E+0	1.86E+0
WDP	m3 depriv.	7.24E-2	5.26E-4	2.69E-2	9.98E-2	5.58E-5	2.33E-3	4.68E-6	-4.68E-2	5.55E-2
PM	disease inc.	4.20E-9	1.01E-9	2.33E-10	5.44E-9	1.07E-10	6.66E-10	7.02E-12	-2.33E-9	3.89E-9
IR	kBq U-235 eq	3.24E-3	7.67E-4	7.09E-5	4.08E-3	7.95E-5	3.86E-4	4.76E-6	-1.67E-3	2.88E-3
ETP-fw	CTUe	1.67E+0	1.41E-1	1.20E-1	1.93E+0	1.48E-2	1.47E-1	9.01E-4	-9.34E-1	1.16E+0
HTP-c	CTUh	3.63E-11	5.16E-12	6.40E-12	4.78E-11	5.25E-13	1.69E-11	2.48E-14	-2.23E-11	4.30E-11
HTP-nc	CTUh	7.51E-10	1.67E-10	1.33E-10	1.05E-9	1.76E-11	2.11E-10	5.73E-13	-4.80E-10	7.99E-10
SQP	Pt	1.70E+0	1.45E-1	1.39E-2	1.86E+0	1.56E-2	9.73E-2	2.62E-3	-2.56E+0	-5.81E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.98E-1	2.46E-3	2.63E-1	5.64E-1	2.61E-4	5.96E-3	4.05E-5	-4.47E-1	1.24E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.98E-1	2.46E-3	2.63E-1	5.64E-1	2.61E-4	5.96E-3	4.05E-5	-4.47E-1	1.24E-1
PENRE	MJ	3.60E+0	1.86E-1	8.30E-2	3.86E+0	1.93E-2	1.32E-1	1.08E-3	-2.03E+0	1.99E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.60E+0	1.86E-1	8.30E-2	3.86E+0	1.93E-2	1.32E-1	1.08E-3	-2.03E+0	1.99E+0
PET	MJ	3.89E+0	1.89E-1	3.46E-1	4.43E+0	1.96E-2	1.38E-1	1.13E-3	-2.48E+0	2.11E+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	1.17E-3	1.94E-5	6.39E-4	1.83E-3	2.06E-6	7.01E-5	1.26E-6	-8.50E-4	1.05E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.51E-7	4.37E-7	7.39E-8	1.26E-6	4.65E-8	2.11E-7	1.23E-9	-7.03E-7	8.18E-7
NHWD	kg	5.67E-3	1.05E-2	7.20E-4	1.68E-2	1.13E-3	6.05E-3	4.50E-3	-2.66E-3	2.59E-2
RWD	kg	3.53E-6	1.20E-6	7.89E-8	4.81E-6	1.24E-7	4.96E-7	6.69E-9	-1.59E-6	3.85E-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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